Is Family Structure 'Transmitted' Across Generations?

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This draft: February 23, 2018
First draft: October 30, 2017

Abstract

This paper uses data on female respondents to the National Longitudinal Survey of Youth 1979 cohort and their adult children to analyze the intergenerational correlation of family structure. There are strong associations between several measures of demographic behavior and family structure experiences across generations. Controlling for a rich set of background characteristics and inputs to the production of child outcomes eliminates many of the associations. However, the intergenerational correlation of cohabitation and bearing and raising children in cohabitation is robust to these extensive controls. An analysis of potential explanations for these previously unexplored correlations suggests that they are unlikely to be a result of a causal "transmission" mechanism, but the evidence is only suggestive.

Acknowledgments: I am grateful for support from NICHD grant R01-HD045587. I appreciate helpful comments from Jeff Smith, Jon Gruber, and seminar participants at the Institute for Population Research at the Ohio State University and the Department of Economics at the University of Western Ontario. I am solely responsible for the contents.

1. Introduction

How does the family structure experienced by a child affect the child's demographic behavior as an adult and the resulting family structure experiences of his or her own children? The extent of intergenerational transmission of family structure is an important issue because childhood family structure is strongly associated with cognitive achievement and behavior problems during childhood and with education, earnings, marriage, childbearing and other outcomes in adulthood. Children raised by their married biological parents have better outcomes on average than do children raised by a single parent, cohabiting biological parents, or a biological parent and a stepparent. Children raised in a stable family tend to have better outcomes compared to children who experience instability in family structure. It is far from certain that there is a causal explanation for these associations, but the correlations are strong and in many cases cannot be fully accounted for by controlling for family characteristics and inputs to the production of child outcomes[1].

One interpretation of these patterns is that family structure is a proxy for the family, school, and community resources that influence child and adult outcomes of the next generation.[2] In this view, inputs such as the quantity and quality of parental time, purchased goods and services, and school and neighborhood quality affect child and subsequent adult outcomes. The family structure experienced by a child is influenced by the same underlying factors that affect resources allocated to children: preferences, home and market productivity of parents, family endowments, and public policies. But it is the inputs, not family structure, that determine child outcomes. This view has some *a priori* plausibility. It is difficult to imagine a thought experiment in which a change in family structure can occur *without* changes in resources. For example, a divorce usually is associated with a reduction in the amount of time and money provided by the non-custodial parent. And even if this were not the case, the problems that triggered the divorce are likely to affect children directly.[3] This makes it difficult to determine whether child outcomes are affected by the divorce itself or by the unobserved underlying problems that led to the divorce, or both. Ginther and Pollak (2004) summarize the problem by

[1] See McLanahan, Tesch, and Schneider (2013), McLanahan and Percheski (2008), and Ribar (2015) for recent surveys of the literature on the effects of childhood family structure.

[2] I use the terms resources and inputs interchangeably.

[3] The logic applies to cross-family comparisons as well. How can two families have different structures without any other differences?

noting the difficulty of defining an appropriate counterfactual associated with a change in family structure. I refer to this view as the *proxy argument*.[4]

An alternative view proposed mainly by sociologists and psychologists accepts that family structure is not a direct input to the production of child outcomes, but nevertheless could have direct effects via socialization, or social learning. Socialization theory posits that the association between parental behavior and subsequent child behavior and outcomes is due in part to direct and indirect learning, whether conscious or not, through which children's attitudes and preferences are formed. For example, children might learn from observing parental behavior that marriage is not a necessary prerequisite for childbearing, not living with one's child is a normal behavior for fathers, and cohabiting while raising children is acceptable. Many studies cite socialization as a potential explanation for a causal effect of family structure on the next generation's family structure, conditional on the inputs provided to the child.[5]

Note that socialization theory is distinct from social control theory, which argues that parents influence their children by setting and enforcing rules and monitoring behavior, all of which are more difficult when a parent is absent, or the parental role and authority of a stepparent are ambiguous. Setting and enforcing rules and monitoring behavior are examples of inputs – costly time and effort undertaken deliberately - to the production of child outcomes, rather than socialization. Economic models of intergenerational transmission of preferences are based on the idea that parents invest resources into shaping the attitudes of their children, consistent with social control theory but not with socialization theory, which is more akin to learning by observing.[6]

Many studies in the large literature on intergenerational correlation of family structure attempt to understand the correlation by comparing estimates with and without controlling for

[4] Brown and Flinn (2011), Gayle, Golan, and Soytas (2014), and Tartari (2015) have structurally estimated economic models of family behavior and child outcomes in which family structure is *assumed* to have no direct impact on child outcomes, consistent with the proxy view. The assumption is not tested, however.

[5] For example, see Hofferth and Goldscheider (2010), Kim (2014), Hognas and Carlson (2012), Musick and Mare (2006), and Wu and Thomson (2001). There is a large theoretical literature on socialization within the family (Grusec and Hastings, 2015), but little specific discussion of socialization as a determinant of attitudes toward family structure. A third possible interpretation of the intergenerational correlation in family structure is genetic. See Salvatore, Lonn, Sundquist, Sundquist, and Kendler (2018) for an adoption study of intergenerational transmission of divorce. This study suggests the influence of genetic factors, but does not identify what the factors are.

[6] See, for example, Becker (1993), Bisin and Verdier (2001) and Doepke and Zilibotti (2017). These papers do not consider family structure. Fernandez-Villaverde, Greenwood, and Guner (2014) analyze the determination of attitudes toward pre-marital sex, which is related to family structure.

inputs. This is clearly not a definitive approach, since one can never rule out the possibility of unobserved inputs, even if controlling for observed inputs drives the correlation to zero. The problem is that there are no useful quasi-experiments that could be used to provide identification of a causal effect underlying intergenerational transmission of family structure [7] Identifying the underlying source of intergenerational correlation of family structure is important for policy purposes and for understanding how family structure evolves over time.

I revisit this issue here, using data from the National Longitudinal Survey of Youth 1979 cohort (NLSY79) to estimate the association between the family structure experiences of the children of female NLSY79 respondents and the subsequent demographic behavior of the children in adulthood and the resulting family structure experiences of their own children. Several features of the data make it possible to take a different approach than in previous studies to testing alternative explanations for intergenerational correlation of family structure. The three main contributions of the paper are as follows:

First, I jointly estimate the effects of several measures of family structure. Focusing on the intergenerational correlation of a single aspect of family structure, such as divorce, can be misleading because family structure measures are inter-correlated. For example, cohabitation is relatively unstable and is therefore correlated with family structure instability. Studying cohabitation and family instability separately may fail to reveal important patterns of correlation. Most previous studies have focused on the intergenerational correlation of one aspect of family structure, such as divorce or single parenthood.[8] More importantly, jointly estimating the effects of several measures of family structure suggests a way to distinguish between the proxy and socialization explanations. I use four sets of family structure measures:

[7] Typically there is more than one mechanism through which a given quasi-experiment might operate. For example, Gruber (2004) analyzes the effects of changes in divorce laws on long run educational and other outcomes, but does not attempt to identify the effects of divorce itself, because divorce law likely affects outcomes through marriage incentives and bargaining power as well as through divorce incentives.

[8] For example, on divorce, see Wolfinger (2012) and Sigle-Rushton, Hobcraft, and Kiernan (2005). On single parenthood see Gayle, Golan, and Soytas (2014), Ermisch, Francesconi, and Pevalin (2004), and Musick and Mare (2006). On non-marital childbearing, see Hognas and Carlson (2012). A few studies have analyzed the intergenerational associations of a richer set of family structure measures and family structure transitions: Francesconi, Jenkins, and Siedler (2010), Bjorkland, Ginther, and Sundstrom (2007), and Hofferth and Goldscheider (2010). Hofferth and Goldscheider is the only one of these that focuses on demographic behavior as an outcome. I compare my results to theirs in section 6.

(1) The fraction of childhood spent living with the biological mother and (a) the married biological father, (b) the cohabiting biological father, (c) a married stepfather, (d) a cohabiting stepfather, and (e) no father,[9]
(2) Changes in family structure such as divorce, dissolution of a cohabitation, and entry of a father figure into the child's household,
(3) The mother's union status (married, cohabiting, single) and age at the time of the child's birth, and
(4) The mother's first demographic event (marriage, cohabitation, birth).

For brevity, I refer to these as (1) shares, (2) transitions, (3) birth status, and (4) the first event, respectively. Socialization theory implies that actual family structure experienced by children, as measured by the shares and transitions, will affect a child's attitudes toward family structure and, therefore, the child's subsequent adult choices. Controlling for the shares and transitions, birth status and the first event should be irrelevant because they are snapshots of the mother's behavior at or before the time of the child's birth. They are not family structure *experiences*. If birth status and the first event are associated with a child's subsequent demographic behavior, conditional on the shares and transitions and controlling for inputs, this suggests that they are serving as proxies for unobserved inputs or characteristics (the mother's *type*, for brevity). The events that occurred at or before the child's birth are of course correlated with the subsequent family structure experiences of the child, but the correlations are not perfect, and I show below that it is possible to distinguish their effects. In addition, the CNLSY79 contains a survey question on attitudes of young adults toward having children in a cohabiting relationship. I use this as an alternative outcome measure. If socialization is important, attitudes should be influenced by family structure experiences, rather than by the mother's type.

The second contribution of the paper is to utilize a rich set of prospectively collected measures of inputs provided to children. Most studies of the adult outcomes associated with childhood family structure use retrospective data collected in adulthood, and therefore have relatively little information on inputs provided to the child at each point during childhood. The biannual interview schedule for the NLSY79 respondents and their children, starting from the

[9] The CNLSY79 is a sample of children of the female NLSY79 respondents, so in most cases the child lives with the biological mother. The small fraction of children who do not live with the biological mother are generally not assessed and interviewed.

birth of a child in many cases, provides the opportunity to control for childhood averages of many important inputs, though not all, as discussed below. Studies using other long-term longitudinal data sets such as the Panel Study of Income Dynamics (PSID) and the British Cohort studies have extensive prospectively collected resource measures at one or two points in time, but do not have the depth of information available in the NLSY79.[10] The input measures are described in section 3. Previous studies of intergenerational transmission of family structure using the CNLSY79 (discussed below) have exploited subsets of these input measures, but none have exploited the full set of available variables. The richness of the data on inputs enables a more thorough analysis than heretofore of whether intergenerational correlation of family structure can be accounted for by inputs (Ribar, 2015, emphasizes the importance of this issue).[11]

The third contribution of the paper is to use recent data. Most studies of intergenerational correlation of family structure have used data on cohorts of parents born in the 1940s and 1950s, whose children were born in the 1960s, and 1970s.[12] Demographic behavior has changed in important ways in recent decades: there have been substantial delays and declines in childbearing and marriage, and a large increase in the share of non-marital births, many of which occur in cohabiting relationships. Intergenerational correlation patterns may have changed as a result. One of the main contributions of the paper is to study intergenerational correlation in childbearing and rearing in cohabitations. This was relatively rare for the NLSY79 respondents, but has grown explosively in the last two to three decades. In the early 1980s, when the NLSY79 mothers were beginning to form families, the non-marital share of all births was 15% to single mothers and 6% to cohabiting mothers. At the beginning of the 2010s, when the CNLSY79 sample were forming families, the figures were 18% single mothers and 25% cohabiting mothers (Manning, Brown, and Sykes, 2015). Cohabitation is associated with worse child outcomes compared to marriage (Manning, 2015), although the problem of inferring causality certainly

[10] See Hofferth (2006) for a study using the PSID, and Chase-Lansdale, Kiernan, and Cherlin (1995) for an analysis using the National Child Development Study, a longitudinal British cohort survey of children born in 1958.

[11] An additional strength of the CNLSY79 is that it has data on a large number of potential mediators or channels through which childhood family structure might influence adult family structure. These include the YA's childhood behavior (e.g. delinquency, drugs, smoking, early sexual initiation), cognitive achievement, personality, health, and school progression. In practice, the results were hardly affected by controlling for these variables, suggesting that they are not in fact the relevant channels. These results are not included here, so as to save space.

[12] Exceptions include Amato and Patterson (2017), Hofferth and Goldcheider (2010), Kamp Dush et al. (nd), and Hognas and Carlson (2012). I compare my results to the findings of these studies in section 6.

applies here. To my knowledge, this is the first study to document and analyze intergenerational correlation in cohabitation.

The CNLSY79 does have some potentially important limitations for the purposes of this study. (1) The sample contains children of female NLSY79 respondents, so we have little information on children who do not live with their biological mother. However, almost all children live with their biological mother in early childhood, and most do so throughout childhood, so the scope for selection bias is relatively small. 95% of children live with the biological mother at birth, declining to 84% at age 17 (my calculation from the Current Population Survey [CPS]). Nevertheless, the selected nature of the sample limits generalizability of the results.

(2) The NLSY79 sample, when weighted, is representative of the1957 to 1964 birth cohorts residing in the US in 1979, but their children are not a representative sample from a well-defined population of children. The CNLSY79 sample includes children born from 1970 through 2011, with a mean birth year of 1987. I compare characteristics of the sample by birth year with the characteristics of a sample of all children in these birth cohorts from the CPS. The results (described below) indicate that the characteristics and demographic behavior of the CNLSY79 sample are generally quite similar on average to those of the same birth cohorts in the CPS.

(3) The NLSY79 lacks data on several potentially important inputs. Measures of inputs provided by preschools and schools, and more generally, teacher and school quality, are not available.[13] Preschool and school inputs matter for long run outcomes (Chetty, Friedman, and Rockoff, 2014). There are no data on neighborhood characteristics. County of residence is available in the geocoded version of the NLSY79, but this is much too high a level of aggregation to be of use. Neighborhood effects matter for long run outcomes (Chetty, Hendren, and Katz, 2016). Finally, there are few direct measures of parental time with children. Time diaries in the Child Development Supplements are an important strength of the PSID for analyzing child outcomes (Del Boca, Flinn, and Wiswall, 2014; Hofferth, 2006). I use maternal employment as a proxy for maternal time input, and data on time spent by absent fathers with

[13] The data do include measures of the type of child care (center/preschool, family day care, relative, other family member). There are systematic differences in quality by type of child care, but variation in quality within type dwarfs differences across type (Blau, 2001).

children. In the absence of data on these important inputs, I cannot rule out the possibility that family structure serves as a proxy for these missing inputs, making any inferences about socialization versus proxy effects only suggestive at best.

The empirical results show strong intergenerational correlations of several of the family structure measures described above. Most of these correlations become smaller and statistically insignificant after controlling for the mother's background characteristics and the inputs. The most robust results are a positive intergenerational correlation of cohabitation as the first demographic event and a positive intergenerational correlation of cohabiting with children. The first result is consistent with the proxy view while the second result is consistent with a causal view based on socialization theory. For reasons discussed in Section 5, I interpret the evidence as providing more support for the proxy view, but I readily admit that other interpretations are not implausible.

Following this Introduction, the remaining sections of the paper (2) present a conceptual framework to aid in interpreting the empirical analysis, (3) describe the data and empirical approach, (4) present the main empirical results, (5) present additional results and robustness checks, (6) discuss the results and compare findings to the literature, and (7) present conclusions.

2. Conceptual Framework

The processes through which family structure in childhood influence a child's subsequent demographic behavior and the resulting family structure experiences of his or her own children are complex. I present a very simple abstract overview and discuss the implications for empirical analysis. I ignore dynamic aspects of child development and focus on long run outcomes, consistent with the empirical analysis. I do not present a specific theory of the family formation decision process, since the empirical analysis does not require taking a stand on this.

A child reaches adulthood with a set of skills, characteristics, attitudes, and preferences - her *adult endowment* for brevity - which influence her subsequent demographic behavior. The adult endowment is a function of inputs provided during childhood, conditional on characteristics of the child (gender and birth order, for example) and mother (race, ethnicity, cognitive and non-cognitive skills, and her own family structure experiences in childhood). The inputs enter as the arguments of a child outcome production function, which characterizes the technology that

transforms childhood inputs into the adult endowment (Todd and Wolpin, 2007; Cunha and Heckman, 2008). Let q denote the adult endowment of a child, I a set of inputs provided to the child, X a set of characteristics of the child and mother, and ε a random disturbance. The production function can be written as

$$q = f(I, X, \varepsilon) \tag{1}$$

The adult endowment in turn influences the individual's demographic decisions - childbearing, union formation, union dissolution, and the order in which they occur – through an unspecified decision process, resulting in a model of demographic behavior:

$$D = g(q, X, E, \eta), \; D \in \mathcal{D} \tag{2}$$

Here, D is a vector of interrelated demographic behaviors chosen from the set $\mathcal{D}$, written as a function of the endowment, child and mother characteristics, environmental factors E facing the individual in adulthood, such as labor and marriage market conditions, and a disturbance, η. For example, D might indicate whether the individual gave birth to her first child before forming a union, whether her next event was giving birth to another child or entering a union, and in the latter case the type of union (marriage or cohabitation) and whether it was with the biological father of the first child or a different man. I interpret (2) as a demand equation, derived from expected utility maximization subject to the production function and time and budget constraints, but other interpretations from a sociological or psychological perspective are certainly possible.

The sequence of demographic choices made by the individual upon becoming an adult determines the family structure experienced by his or her children:

$$F' = h(D). \tag{3}$$

F' denotes the family structure experiences of the individual's children.[14] Intergenerational correlation of family structure is a characterization of the relationship between F, the family

[14] There is no disturbance because the function (3) maps the sequence of demographic decisions deterministically into family structure. For example, one possible sequence of choices (an element of $\mathcal{D}$) for a female is to enter cohabitation as the first demographic event, give birth to a child at age 21, then dissolve the cohabiting union and retain custody of the child, and eventually marry a different man. Her first child's family structure (part of F') would be characterized as (a) born to a mother whose first demographic event is cohabitation, (b) born in a cohabitation to a 21 year old mother, (c) lives with the biological father in a cohabiting union for a specified duration, (d) experiences exit of the biological father at a particular age, (e) lives without any father for a

structure experienced by the individual as a child, and F', the family structure experienced by the individual's children.

The alert reader will have noticed that F does not appear in the model. The inputs in equation (1) are the quantity and quality of resources devoted to children. This conceptual approach assumes that, conditional on the complete set of inputs, I, family structure does not have a direct impact on child outcomes. However, socialization theory posits that family structure plays an independent role in determining child preferences and subsequent behavior, conditional on the inputs. To incorporate family structure in the production function, revise equation (1) as

$$q = f'(F, I', X, \varepsilon') \qquad (1')$$

Here, I' is the set of inputs that can be observed, family structure (F) serves as a proxy for unobserved inputs, or has a direct impact on the adult endowment, or both, and ε' captures unobserved inputs that are not proxied by F. If socialization is unimportant, then equation (1) has a structural interpretation, but equation (1′) does not. If socialization is important, then equation (1) is misspecified by omitting F, although F may serve in part as a proxy for missing inputs in (1′) as well as playing a direct role in determining the adult endowment.

Substitute equation (1′) into (2) to derive an equation for demographic behavior of as a function of childhood family structure, observed inputs, and the other relevant factors:

$$D = r(F, I', X, E, \delta) \qquad (4)$$

Then, substitute (4) into (3) to yield an equation characterizing intergenerational correlation in family structure:

$$F' = s(F, I'\ X, E, \theta) \qquad (5)$$

I estimate various specifications of equations (4) and (5). They are hybrid equations, the parameters of which are determined by preferences, productivity, and, potentially, socialization. I test the hypothesis that the effect of family structure in equations (4) and (5) is equal to zero. If the hypothesis is rejected, the pattern of effects by group of family structure variables (see page

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specified duration at given ages, (f) experiences the entry of a stepfather at a particular age, and (g) lives with the stepfather for a specified duration. Any or all of these outcomes may be of interest.

5) may be informative about whether socialization is responsible for the rejection. The interpretation will necessarily be speculative because we do not observe all the relevant inputs.

This discussion raises the issue of endogeneity. The problem of unobserved heterogeneity and missing inputs in estimating the effects of family structure have been discussed by Ginther and Pollak (2004), McLanahan and Percheski (2008), McLanahan, Tach, and Schneider (2013), and Ermisch, Francesconi, and Pevalin (2004), among others. The approaches used in the literature to deal with omitted variable bias include within-family comparison of siblings exposed to different family structures (Ginther and Pollak, 2004; Kalil et al., 2016; Kamp Dush et al., nd), and comparisons of the effects of divorce and parental death, with the latter presumed to be more likely to be exogenous (Corak, 2001; Lang and Zagorsky, 2001; Biblarz and Gottainer, 2000**;** Kalil et al., 2016). Randomized controlled trials have not been used, for obvious reasons, and Instrumental Variables estimation has not been used because of the difficulty of finding credible instruments for multiple inputs. I have little to contribute to this discussion. I rely on the richness of the data to convert as much unobserved heterogeneity as possible into observed control variables. I cannot claim to estimate causal effects, but will make inferences by comparing the results of richer and more parsimonious specifications.

3. **Data and Descriptive Statistics**

I use data on female respondents and their children from the NLSY79 surveys, the CNLSY79 mother and child supplements, and the Young Adult surveys. The NLSY79 sample has been interviewed from 1979 to the present. I use data through 2014, the most recent year available[15]. I use the cross-section sample plus the black and Hispanic oversamples. The survey has been asking mothers detailed questions about their children and assessing their development since 1986. Beginning in 1994, children who were over age 14 have been interviewed separately as "Young Adults" (YAs). I study the behavior and outcomes of YAs as a function of the family structure they experienced and inputs provided during their childhood. In order to be included in the analysis sample, a child must have been interviewed at least once as a YA. Table 1 indicates that 3,832 (81%) of the 4,698 female respondents in the cross-section and black and Hispanic

[15] The interview schedule for the NLSY79 was annual from 1979-1994, biannual from 1994-2010, and every four years since 2010, with about half the sample interviewed in each even-numbered year since 2010. The YA interview schedule is biannual until age 30 and every four years thereafter.

oversamples reported having at least one child as of their most recent interview.[16] Respondents were aged 49-58 in 2014, so their childbearing is very likely complete. Of the 3,832 mothers, 3,391 (89%) have at least one child who was interviewed as a YA.

Table 1 shows characteristics of the female sample classified by whether they had any children and whether any of their children were interviewed as YAs.[17] Compared to non-mothers, mothers are more likely to be black or Hispanic, have lower parental education, more siblings, lower education, and lower cognitive skill, as measured by the Armed Forces Qualification Test (AFQT). I control for these variables, but it is certainly possible that mothers and non-mothers differ systematically in unobserved ways. Women who have at least one child with a YA interview are more likely to be black, less likely to be Hispanic, less likely to be an immigrant, have lower parental education, lower cognitive skill, and a similar level of education, compared to those whose children were never interviewed (yet) as a YA. Mothers who had at least one child interviewed as a YA had a higher incidence of cohabitation and divorce, were were 9 pp more likely to have had their first child before marrying or cohabiting. These differences are partly due to differences in age at first birth: mothers whose children have not been interviewed as YAs had their children an average of 4.2 years later than mothers whose children were ever interviewed as a YA (27.9 vs. 23.7). Some children of the former group were not yet eligible for the YA survey because they were not yet 15 in the most recent survey year.

Constructing measures of the family structure experiences of children throughout the childhood years requires extensive and detailed information about the mother's demographic behavior. The NLSY79 surveys collect a great deal of information on births, cohabitations, marriages, divorces, and the relationship of each child to the mother's current partner. However, some important information was not collected in the early survey years, some mothers have complicated demographic histories that make it difficult to construct complete measures of family structure, and some mothers report inconsistent information. I describe how each of these problems is handled in the Data Appendix. In the end, 9% of mothers with at least one child interviewed as a YA were dropped as a result of inconsistent or missing responses, and several

[16] Some female respondents who became permanent non-respondents may have had children after dropping out of the study.

[17] All descriptive and estimation results presented here use custom sample weights derived from the original NLSY79 weights. See https://www.nlsinfo.org/content/cohorts/nlsy79-children/using-and-understanding-the-data/sample-weights for details. Unweighted estimation results are discussed below.

approximations were used for cases in which there was some uncertainty about the beginning and ending dates of cohabitation spells relative to the birth date of a child. As I show below, these approximations had very little impact on the results. The last column of Table 1 shows descriptive statistics for the estimation sample, which are very similar to all mothers whose children have had at least one YA interview.

Descriptive statistics on several aspects of the family structure experiences of the YAs during childhood are shown in Table 2. The fraction of childhood (age < 18) spent living with married biological parents was about two thirds (65%), compared to about one quarter (23%) of childhood living with a single mother, 9% with a married stepfather, and 3% with a cohabiting father, biological or step. 80% of children were born during marriage, 17% to a single mother, and 3% to a cohabiting mother. 28% of YAs experienced a divorce, separation, or the dissolution of a cohabitation with the biological father and 10% experienced exit of a stepfather. 22% experienced the entry of a stepfather and 4% experienced entry of the biological father. The mean age of the mother at birth was 26.1. Finally, the first demographic event experienced by the mother was marriage in 64% of cases, cohabitation in 17%, and birth in 19%.

One might wonder whether there is enough independent variation in the family structure measures to allow precise estimates of the effects of all four groups in the same specification. To address this question, I estimated regressions of each of the share and transition variables on the birth status and the mother's first event. The R^2 estimates from these regressions are 0.05 for exit, 0.20 for entry, and 0.52, 0.08, 0.25, and 0.04 for the fraction of childhood with married biological, married step, cohabiting biological, and cohabiting stepparents, respectively. This suggests that there is enough independent variation.

As noted above, a concern about the YA sample is that it is not representative of a specific population of children. In order to determine whether the YA sample is representative of the population of children from the same cohorts, I constructed a comparison sample from the March CPS. I compared summary statistics on selected variables from the last interview for each YA to statistics on the corresponding CPS variables for individuals observed at the same ages in the same survey years as the YAs.[18] Table A-1 in the Appendix shows means of several key variables for the two samples. Considering differences in the data collection and variable

[18] Birth year is not available in the CPS, so I approximated it as survey year minus age minus 1, assuming that CPS respondents had their birthdays after the March interview. I used CPS data from even-number years in 2000-2014.

definitions, the agreement is remarkably good. One exception is that Hispanics are underrepresented in the NLSY79, which is not surprising given the very rapid growth of the US Hispanic population since 1979 and the absence of a refresher sample in the NLSY79. Cohabitation in the CPS is lower than in the CNLSY79, probably because information is collected for between-survey cohabitations in the CNLSY79, and because the earlier years of the CPS did not collect cohabitation data consistently. Figure A-1 shows results for selected variables by age. Aside from some fluctuations due to small CNLSY79 samples at some ages, the matches are quite good.

Table 3 displays descriptive statistics for YAs on several of the same demographic behaviors shown for mothers in Table 2. As noted above, many of the YAs were relatively young at the time of their last interview (26.2 on average), and had not yet entered a union or had a child. The timing of family formation and dissolution differs by gender, with females tending to enter unions and become a parent at earlier ages than males. And children are much more likely to live with the mother than with the father if their parents are not in a union. Accordingly, the statistics are presented separately for male and female YAs, as well as the combined sample. 52% of female YAs and 43% of male YAs have ever cohabited as of the most recent interview, 34% of females and 27% of males have ever married, and 41% of females and 30% of males have become a parent. The next three rows show which demographic event occurred first, conditional on whether any event occurred. In this case male and female behavior is similar, with about two thirds of YAs cohabiting before marrying or having a child. This stands in stark contrast to their mothers, of whom only 17% cohabited before marrying or having a child (see Table 2).

The next few rows describe the behaviors that directly determine the family structure of the children of the YAs. 48% of males and 12% of females have ever lived without at least one of their biological children, conditional on being a parent, while 23% of males and 58% of females ever lived with a biological child without the other biological parent present. 36% of YAs were married at the time of the first birth. These low rates reflect in part the relatively young age of childbearing of those who have had a child by the time of the last interview, but as noted previously, there has been a substantial shift away from childbearing within marriage. The contrast with the behavior of the mothers shown in Table 2 is striking.

The lower part of Table 4 shows mean annual hazard rates of the first demographic event experienced by the YA, assuming risk begins at age 14. The average annual hazard of entry to

cohabitation as the first demographic event is 3.6% for males and 4.7% for females. The hazard of entry to marriage is 0.84% for males and 1.19% for females. The hazard of entry to parenthood is 0.63% for males and 1.21% for females. The age pattern of the hazard rates is shown in Figure A-2 in the Appendix. Because many sample members have not yet experienced any of the three key demographic events of interest, the main empirical analysis will be a competing-risks hazard model of time to the first demographic event. This makes it possible to include right-censored cases. The hazard model approach is attractive because it does not condition on previous decisions by the YA, but the disadvantages are that the first event is not always a direct determinant of family structure, and it does not directly measure the behavior and outcomes associated with the family structure of the children of the YAs. Accordingly, I analyze these behaviors and outcomes as well, despite the possibility of dynamic selection bias.

Table 4 shows descriptive statistics on the same family structure measures for the YA's children as those shown in Table 2 for the YA. 42% of the 5,595 children born to YAs to date were born in marriage, 33% during cohabitation and 25% to a single parent. 65% of the YA's children who were ever at risk of having a parent enter the household (i.e. ever lived with a single parent, usually the mother) experienced entry, mainly to cohabitation. 27% of children whose parents were cohabiting experienced the end of the cohabitation, and 8% of those living with married parents experienced a divorce. The cumulative share of childhood to date spent with married biological parents is 40%, cohabiting biological parents 15%, the YA and a stepparent 14%, the YA and no other parent 13%, and the other biological parent without the YA 18%.[19]

Table 5 presents a first look at the intergenerational correlation of family structure, conditional only on the age of the YA at the most recent interview. Panel A shows that the mother's first demographic event is strongly associated with the hazard rate of the YA's first event. A YA whose mother's first event was marriage has an annual hazard of marriage as the first event 0.9 pp higher than does a YA whose mother's whose first event was a birth (the omitted category). This is a 90% effect relative to the mean hazard of 1.0 pp. A YA whose mother's first event was cohabitation first has a 1.4 pp higher annual hazard of cohabiting first relative to the reference group, a 35% effect relative to the mean hazard of 4.06 pp. Panel B

[19] There is no information about the family structure of children living with the other biological parent, since the latter is not part of the survey. The great majority of children living with the other biological parent are the children of male YAs.

shows that marital status at birth is correlated across generations. A YA whose mother was married at his or her birth is 33 pp more likely to be married at the birth of his children, compared to the mother being single at his birth (the omitted category). A YA whose mother was cohabiting at birth has a 10 pp higher probability of being married at birth, but only a 1 pp higher chance of cohabiting at birth. Panel C reveals a positive intergenerational correlation in age at first birth. Panel D indicates that having experienced exit of a father figure during childhood increases the likelihood that the YA's children experience an exit. Panel E shows no correlation in entry of a father figure. Finally, Panel F shows that the fraction of childhood spent living with married biological parents is correlated across generations, as is the fraction spent with a cohabiting stepparent.

The three groups of explanatory variables are (1) the family structure experienced by the YA as a child, (2) background characteristics of the YA and his or her mother and family, and (3) inputs experienced by the YA during childhood. Family structure is measured by the variables described in Table 2. The characteristics of the YA include a cubic in age, dummies for black, Hispanic, and female, year of birth, number of siblings, birth order, and birth spacing. Mother characteristics include her year of birth, AFQT score, whether she was born in the US, her parents' education, her religion, several measures of her attitudes and political leanings, non-cognitive attributes, and her own family structure history in childhood. Family characteristics include childhood averages of the number of household members in various age/sex groups.

The inputs include childhood averages of the following variables: residential moves, the mother's employment, family income, health insurance coverage, the mother's and spouse/partner's completed years of education, the cognitive stimulation and emotional support subscales of the HOME Inventory, several measures of parental relationship quality, several measures of parenting style during adolescence, measures of child care and Head Start participation, time spent with the absent biological father, the number of schools attended, and the mother's rating of the YA's school. Means of the background characteristics and inputs are provided in Appendix Table A-2. [20]

4. Results

[20]There are many missing values for the explanatory variables. I set these equal to zero and included a dummy for each one (or group) indicating that the value was missing. This approach was *not* used for the family structure variables: cases with missing or inconsistent data were dropped, as noted above.

A. Main Results

The main results are from multinomial logit estimates of an annual competing-risks hazard model of the YA's first demographic event: marriage, cohabitation, or parenthood. The YA is assumed to first be at risk of a demographic event at age 14, and is followed until the first event occurs or the last interview, if no event occurs. [21] Table 6 reports marginal effects and test statistics from three specifications, each of which includes the full set of family structure variables described above. The first specification includes no other covariates except a cubic in age. The second adds controls for the background characteristics, and the third includes background characteristics and inputs.

There are a large number of figures in Table 6, so in order to get an overview of the results, it is useful to begin with results of tests of the hypotheses that the effects of the family structure variables are jointly equal to zero, separately for each of the four groups, and combined. The results are reported in Panel A of Table 6, with p-values less than 0.05 shown in bold. The first column shows that the null hypothesis is rejected at the 1% level of significance for three of the four groups of family structure variables and is rejected at the 10% level for the fourth group, the transitions. With controls for the background characteristics, the hypothesis can no longer be rejected at the 10% level for the birth status and transition groups. The p-value for the shares increases to 0.026. Adding additional controls for the inputs further increases the p-value for the shares to 0.067. The hypothesis that the mother's first event has no impact on the YA's first demographic event is strongly rejected in all three specifications. The same is true for the joint test for all of the family structure variables.

The remaining panels of Table 6 report estimated marginal effects of the family structure variables for each specification[22] (results for the other explanatory variables are reported in Appendix Table A-2). Panel B shows estimates of the effects of the mother's first event. A striking result is the strong and statistically significant association between the mother's and YA's first-event cohabitation behavior. In the specification in the first column, the annual hazard of entering cohabitation as the first event is 1.52 pp higher if the mother cohabited first,

[21] From ages 14-17, the family structure measures are averages from age 0-14, 0-15, 0-16, and 0-17, respectively. Beginning at age 18, the family structure measures are averages over ages 0-17.

[22] Standard errors are clustered at the level of the YA. Clustering by the mother increased the standard errors by a very small amount, not enough to change any inferences.

compared to having a birth first (the omitted category). This is a 37% effect relative to the 4.06% mean annual hazard rate of entering cohabitation as the first demographic event. The effect is robust to controls for background and inputs. The mother's first event has large effects on the hazard of becoming a parent, but these are not robust to the controls.

Panel C shows results for the mother's union status and age at the birth of the child. The YA is more likely to enter cohabitation first if the mother was cohabiting when the YA was born, relative to being single at birth, but the estimated effect falls by more than 50% when the controls are included. Having a mother who was older at the time of the YA's birth is associated with a lower risk of any demographic event, but these effects vanish when the controls are added.

The results in Panel D for the effects of divorce and entry indicate that experiencing the exit of a father figure during childhood increases the hazard of cohabitation as the first event by a statistically significant 0.83-0.93 pp without controlling for inputs, but the estimate drops to 0.54 pp with inclusion of the inputs. Experiencing an exit reduces the hazard of marriage, with a statistically significant -0.49 marginal effect in column 3. This is almost a 50% effect relative to the mean annual marriage hazard of 1.00%. Experiencing the entry of a father figure into the mother's household has small and statistically insignificant effects.[23]

The results in Panel E show that the fraction of childhood lived with a cohabiting stepfather has a robust positive association with the YA's risk of cohabiting first. The coefficient estimate of 4.62 pp in column 3 represents the impact of switching from 0% to 100% of childhood living in this family structure. A 10 pp increase in the share of childhood spent with a cohabiting stepfather (the mean share is 2% - see Table 2) would be associated with a 0.10*4.62 = 0.42 pp increase in the hazard of entering cohabitation, about a 10% effect relative to the mean hazard. Results in column 3 indicate that a higher share of childhood lived in the other three father-present structures, relative to living with a single mother, also increases the hazard of cohabitation as the first event. The effects for married biological and stepfathers are moderately large (1.27 pp. and 1.43 pp. for biological and stepfathers, respectively) and statistically

[23] Allowing for different effects for exit of the biological father and stepfather indicates that the effect on the hazard of cohabitation is due to exit of the biological father, while the effect on the marriage hazard results from exit of a stepfather (results not shown).

significant at the 10% level. Several other large and statistically significant associations in column 1 are not robust to controls.

To summarize, the joint test results indicate that the mother's first event is the only measure of family structure that has a reasonably large and robust association with the YA's first demographic event. Given the risk of false positives with a large number of individual coefficients, the joint tests are more conservative. The mother's first event is not child-specific, and occurred at or before the birth of the YA (in some cases, many years before). As discussed above, I interpret the mother's first event as an indicator of the mother's overall "demographic type." The fact that the mother's first event is strongly associated with the child's first event after controlling for inputs suggests that the mother's first event is a proxy for unobserved inputs or characteristics that influence the behavior of her children. After all, if socialization is the mechanism, then how does a child learn from behavior of the mother that occurred at or before the child's birth? This is an admittedly speculative interpretation, and I discuss evidence on alternative interpretations below. Evidence on the association between the mother's first event and other demographic outcomes and the family structure experiences of the YA's children is presented in the next section.

B. Attitudes

A more direct approach to the issue of whether socialization is an important cause of intergenerational correlation is to analyze attitudes toward family structure. As it happens, the only question about family structure attitudes in the CNLSY79 is about cohabitation. YAs are asked how strongly they agree or disagree with the statement that "it would be okay for a couple [the respondent] to have children in cohabitation."[24] If children's preferences are influenced by observing their parents' behavior, then the actual time spent by children in cohabitation should influence their attitudes, but the mother's union status at birth and her first demographic event should be irrelevant, conditional on actual cohabitation experiences.

[24] There are two versions of the question, one in the fertility section and one in the attitudes section. They are identical except that one refers to "a couple" while the other refers to the respondent. The results were very similar using each question as the outcome. I report results for the question that refers to the respondent. The question was asked in 2008, 2010, 2012, and 2014. I use the earliest available report for each YA, in order to avoid as much as possible *ex post* rationalization by YAs who already had a child while cohabiting when answering the question.

Table 7 reports test statistics and marginal effects for the family structure variables from a logit model of whether the YA agrees with the above statement. There is one observation per YA, and the specification is the same as in column 3 of Table 6. The test statistics indicate that attitudes of YAs about having children while cohabiting are not influenced by their experience of cohabitation during childhood. Rather, attitudes are most strongly associated with the mother's first event. If the mother's first event was cohabitation, the YA is 5.5 pp more like to agree that having children while cohabiting is okay, a 9.5% effect relative to the mean agreement rate of 58%. This estimate is statistically significant at the 10% level. If the mother was married at the time of the YA's birth, this reduces the likelihood of agreement by 6.5 pp, also statistically significant at the 10% level, and consistent with the proxy interpretation. However, the effects of two of the family structure shares, married step and cohabiting step, are positive, large, and statistically significant at the 10% level. The test for the joint significance of the shares rejects at the 10% level. Thus the evidence is not conclusive, but the results of the joint hypothesis tests are somewhat more supportive of the proxy view.

C. Heterogeneous Effects

The results presented so far restrict the effects of family structure to be invariant to the YA's age at exposure, race/ethnicity, and gender. However, past research has demonstrated the possibility that the effects of family structure could vary with these characteristics. To examine whether age at exposure to family structure is important, I estimated a version of the model in which the effects of the time-varying family structure variables are allowed to differ as a function of three categories of age at exposure: 0-5, 6-11, and 12-17.[25] The test statistics are reported in Table 8 and marginal effects are in Appendix Table A-3. The results indicate that the shares and transitions have no impact at any age. This may be a result of collinearity in family structure experienced at different ages. Ermisch et al. (2004) report that the effects of family structure experiences in early childhood were larger than the effects experienced later in childhood, but McLanahan and Sandefur (1994) found no differences.

As noted in the introduction, family structure differs substantially by race and ethnicity. Whether the effects of family structure also differ is an interesting question, previously analyzed

[25] The effects of other covariates were restricted to be invariant to age of exposure, but the results were very similar in an alternative specification in which the inputs were allowed to have age-specific effects.

by McLanahan and Sandefur (1994). I estimated a specification of the hazard model in which the effects of family structure (but not other variables) are allowed to differ for non-Hispanic whites, non-Hispanic Blacks, and Hispanics. Test statistics are shown in Table 9.[26] The test statistics reject the joint hypothesis that the family structure variables have no impact. The specific groups of variables that are associated with the YA's demographic behavior differ across race and ethnicity. For non-Hispanic whites, the only group that matters is the mother's first event, for blacks it is the shares, and for Hispanics it is the shares and transitions. The marginal effects are reported in Appendix Table A-4. They indicate that the two most robust results in Table 6 for intergenerational correlation in cohabitation are present for all three groups, with some variation in magnitude and precision. For whites, the results are very much like those in Table 6. For blacks, several of the effects of the shares are statistically significant at the 5% level. Spending time with a father figure in any union-type/biological-step category has a positive impact on the hazard of cohabiting first, with three of the four marginal effects significantly different from zero at the 5% level. For Hispanics, small sample size makes the results fairly imprecise, but similar to blacks, spending time with any father figure (except cohabiting biological, in this case) increases the hazard of cohabiting. Overall, the more precisely estimated effects are larger for blacks than for whites. McLanahan and Sandefur (1994) did not find such differences.

Differences in mother-daughter and mother-son correlations are of interest as well. Table 10 reports test statistics for specifications in which the effects of family structure (but not other variables) are allowed to differ for male and female YAs. The test statistics are similar for males and females except that the mother's first event is significant at the 1% level for females and only at the 10% level for males. The marginal effects reported in Appendix Table 5 indicate that there are no instances in which the sign of a marginal effect differs across groups and where one or both effects are significantly different from zero.

5. Additional Outcomes and Robustness

A. Results for Additional Outcomes

There are many other demographic and family structure outcomes of interest in addition to the YA's first event. These outcomes, which are conditional on the occurrence of at least one of

[26] It is important to note that these categories refer to the mother's race and ethnicity. I do not consider the self-reported race and ethnicity of the YA.

the initial events, include the hazards of subsequent events such as marriage, cohabitation, birth, and ending a union, the YA's union status at birth of a child, transitions, and duration of childhood spent by the YA's children in alternative family structure. However, unlike the first event, estimates of models of these subsequent events are subject to the possibility of dynamic selection bias.[27] I proceed with estimation of models for post-first-event outcomes, recognizing that the case for a causal interpretation is weaker than in the case of the first event.

Table 11 presents test statistics and marginal effects from multinomial logit estimates of a competing-risks model of the annual hazards of demographic events after the first event. The sample is limited to cases that have experienced a first demographic event, and the models are estimated separately by current union status: married, cohabiting, or single. The set of possible outcomes depends on current union status: a birth can occur in any union status, a cohabitation can begin only if single, a marriage can occur if cohabiting or single, and the end of a union can occur only if cohabiting or married.[28] In addition to family structure, background, and inputs, the specifications include time-varying controls for the number of children by age group and the cumulative number of previous cohabitations and marriages.

The test statistics in the top panel indicate that the family structure variables are jointly statistically significant for married individuals at the 1% level and for singles at the 10% level. The joint hypothesis test fails to reject for cohabiters. The estimated marginal effects for married YAs indicate that if the mother's first event was marriage, the annual risk of a birth increases by 3.5 pp, a 24% effect relative to the mean annual hazard of 15%. A married YA who experienced the exit of a father figure as a child is 1.75 pp more likely to divorce, a large effect relative to the mean annual divorce hazard of 1.5%. A married YA is less likely to divorce if she experienced entry of a father figure during childhood. Married YAs are much less likely to have a child in a given year the more time spent with a married father, biological or step, in childhood. These effects are consistent with a causal effect via socialization, subject to the caveat of selection bias.

Table 12 presents results from a multinomial logit model of the YA's union status at birth of his or her children. The unit of observation is a YA's child, and the sample consists of YAs who

[27] I attempted to deal with selection bias by estimating models of these outcomes jointly with the model for the first event, incorporating a common unobserved factor, treated as a random effect. The estimation algorithm failed to converge. This could be a result of the very large number of parameters to estimate, or it could indicate that the large number of control variables effectively accounts for common unobservables.

[28] It is assumed that there are no direct transitions from married to cohabiting. There is always a spell of being single following the end of a union. The spell of being single can begin and end in the same year.

have had at least one birth. The model specification is the same as in column 3 of Table 6. The test statistics indicate that the hypothesis that the family structure effects are jointly equal to zero cannot be rejected at the 10% level. The only individual statistically significant marginal effect indicates that more time spent by a YA living with married biological parents is associated with an increase in the probability of having children while married. This is the sign one would expect based on socialization theory.

Table 13 reports linear regression estimates of the fraction of childhood to date spent by the YA's children in alternative family structures, controlling for the YA's union status at birth. The test statistics for the hypothesis that the family structure effects are jointly equal to zero fails to reject at the 10% level of significance in every case, although the hypothesis is rejected for union status and age of the mother at birth in two cases.[29] The coefficient estimates indicate that a YA whose mother was older at the time of his birth spends more time living with his own children with the other biological parent present, married or cohabiting, and less time with no other parent present. There is no consistent pattern of effects of the shares: in two cases, spending more time as a child in a given structure is associated with one's children spending more time in that structure, but in two cases the association is negative.

B. Robustness

In order to examine the robustness of the findings, Table 14 presents results for several alternative specifications and samples. Results from column 3 of Table 6 are reproduced in the first column of Table 14 for reference. The second column shows results from specifications in which each of the four groups of family structure variables is included in a separate model. The test statistics are more likely to reject, but the marginal effects are very similar to those in the first column, and a bit more precisely estimated. The third and fourth columns report results from subsamples in which there is likely to be less measurement error in cohabitation. The third column uses the subsample of YAs whose mothers had unambiguous demographic histories with no approximations necessary (see the Data Appendix for details). There are a few differences in marginal effects compared to column 1. The cases in which a marginal effect is larger in absolute value in column 3 are mainly for the mother's first event and status at birth. The fourth column uses respondents born in the 1960s, who were no more than 20 years old at the first survey in

[29] The same result holds in specifications that do not condition on the YAs union status at birth.

1979. This sample is less likely to have had cohabitations that began and ended before the 1979 interview. The results are very similar to the baseline results.

The last column present estimates that do use NLSY79 sampling weights. The weights adjust for three factors: (1) overrepresentation of black and Hispanic NLSY79 respondents, (2) non-response to the initial 1979 survey, and (3) the number of surveys completed by the YA. Compared to column 1, the unweighted results show only minor differences.

6. Discussion and Comparison to Previous Findings

The main findings of this study are (1) cohabiting and bearing and raising children while cohabiting are correlated across generations, a novel finding, (2) background characteristics and a large but not exhaustive set of inputs to the production of child outcomes account for many but not all of the observed intergenerational correlations, and (3) the remaining correlations are more likely to be due to residual unobserved heterogeneity in characteristics and inputs rather than a causal effect of family structure via socialization. Thus my answer to the question in the title of the paper is a qualified "no:" family structure is correlated but is not *transmitted* across generations. The answer is qualified for the reasons noted in the previous section: some findings are consistent with a causal effect via socialization, but the bulk of the evidence is not consistent with a socialization story.

The findings are generally consistent with previous results in the large literature on intergenerational correlation of family structure, although differences in data, variable definitions, and methods make such comparisons inexact. Broadly speaking, my interpretation of the findings in the literature is that inputs and child and family characteristics explain much but not all of the intergenerational correlation in family structure. Previous studies differ in their interpretations of the remaining correlations after controlling for inputs.

One of most comparable studies is Hofferth and Goldscheider (2010), who used the CNLSY79 data through the 2006 wave. They estimate hazard models of the transition to parenthood as a function of several family structure measures, focusing on the presence of the biological father and the number of transitions experienced by the YA up to age 14. They find few associations between family structure and the risk of early parenthood for male YAs, and most of the associations are accounted for by family background and inputs (their model 3). There are stronger associations for females, several of which persist after controlling for

background and inputs. The authors argue that the results provide some support for the socialization hypothesis for females.

Another closely related study by Kamp Dush et al. (nd) uses the CNLSY79 data through the 2012 wave to study intergenerational transmission of family instability, measured by the total number of co-residential partners. They find a positive intergenerational correlation, which becomes only slightly weaker after controlling for inputs. Their approach to testing competing explanations is to compare between-family and within-family effects, using sibling differences. If socialization is important, they argue that this should appear in within-family estimates, which are identified by differences in exposure of siblings to number of partners, rather than by differences across households, which are likely to be correlated with unobserved household factors. The magnitude of the intergenerational association is in fact larger in the within-family estimates, but the standard errors are larger as well, so the results are inconclusive. The authors infer that there is little support for social learning.

Two of the key strengths of the CNLSY79 data are its coverage of recent cohorts as they become adults and the prospectively collected data on childhood family structure and inputs. [30] Two other papers use data on recent cohorts, but rely on retrospectively reported parental family structure and input measures. Hognas and Carlson (2012) use cross-section data from the 2002 wave of the National Survey of Family Growth to document intergenerational correlation in non-marital childbearing. They find a strong intergenerational correlation, only slightly weaker after controlling for background and inputs, but they acknowledge that the set of background and input variables available (the mother's employment, parental education, number of siblings, age at first sexual experience, and education) is too limited to draw firm conclusions. They cannot evaluate alternative explanations for the effects.

Amato and Patterson (2017) use data from the National Longitudinal Survey of Adolescent Health to study intergenerational correlation of union instability. They rely on retrospective questions to the adolescent's mother to construct a measure of her total number of partners (marriages plus cohabitations). They find a positive correlation in union instability that decreases modestly with controls for a few inputs measured contemporaneously in adolescence:

[30] Many studies use longitudinal data that allow prospective measurement of family structure and inputs, but do not analyze long run demographic and family structure outcomes. Examples include McLanahan and Sandefur (1994), Kim (2014), Wu (1996), and Ermisch et al. (2004).

parental relationship quality, income, and education. High discord in the parental relationship is associated with an increased likelihood of the child's own union instability, and the authors interpret this as evidence in favor of socialization. The argument is that children learn negative attitudes from both family structure disruption and intact but discordant unions.

7. Conclusions

Intergenerational correlations in behavior and outcomes are of interest to social scientists as potential contributors to persistent poverty. The bulk of attention has been on intergenerational correlation of education and earnings, but family structure is important as well because of its possible role in perpetuating socioeconomic inequality (McLanahan and Perchesky, 2008). This study has taken full advantage of a very rich multigenerational longitudinal data set to make some progress toward understanding the sources of intergenerational correlation of family structure. The results provide suggestive evidence that intergenerational correlation of family structure is a byproduct of unobserved characteristics and inputs rather than a result of direct transmission across generations. The evidence is only suggestive, because proving a negative is always difficult: the absence of evidence of a causal effect does not mean the absence of a causal effect. And some of the results are consistent with the interpretation of a causal effect of family structure via socialization. There are some important limitations of the analysis, discussed in the introduction, so the conclusions of this study should not be overstated.

There are several directions for future research that could be fruitful. First, more research on attitudes toward family structure would be useful. Socialization theory describes how individuals acquire the attitudes and preferences that drive their behavior. Direct evidence on attitudes about family structure can provide useful complementary evidence to analyses of actual behavior. Second, a dynamic analysis of demographic behavior focused on the implications for the intergenerational correlation of family structure would be of considerable interest. Blau and van der Klaauw (2013) analyzed a dynamic model of demographic behavior and its implications for family structure, but did not model the behavior of the next generation. Finally, extending the structural estimation approaches of Brown and Flinn (2011), Gayle, Golan, and Soytas (2014), and Tartari (2015) to incorporate implications for intergenerational correlations offers the promise of a better understanding of the mechanisms underlying such correlations.

Data Appendix

Family structure variables

The variables that characterize the YA's family structure during childhood are constructed from detailed questions about marriage, divorce, cohabitation, births, and living arrangements. With the exception of cohabitation in some years, the events are dated to the month. A description of measurement issues for cohabitation follows. See Blau and van der Klaauw (2008, 2013) for more information.

There were two significant changes in the collection of cohabitation data over time. Before 1990, the only information available is cohabitation status at the interview date. This implies that cohabitations that began and ended before the first survey are missed, as are cohabitations that began and ended between surveys. Beginning in 1990, the starting dates to the nearest month of cohabitations in progress at the interview date were collected, along with the starting dates of cohabitations that turned into marriages that were in progress at the survey date. Beginning in 2002, the starting and ending dates to the nearest month of all cohabitations of at least three months duration were collected. There is nothing to be done about cohabitations that began and ended before the initial 1979 survey or about short cohabitations missed between surveys. When a cohabitation is reported in a pre-1990 survey, the start date is unknown. In these cases, I assigned alternative starting dates, ranging from the earliest possible date (e.g. the month after survey wave t-1 if the respondent reported cohabiting at wave t and not cohabitating at t-1) to the latest possible date (the month before wave t). A similar approach was used for ending dates of cohabitations that were in progress at wave t-1 and had ended by wave t (this applies up to the 2002 survey). I estimated models using alternative starting and ending dates, and found that the results were not at all sensitive. The results reported here use the earliest possible starting and ending dates, when the exact date is unknown.

Second, there are cases in which it is not possible to determine the mother's union status at the time of a child's birth. This could occur, for example, if a cohabitation began and a birth occurred between survey dates before 1990 and we do not know the actual begin date of the cohabitation. Similarly if a cohabitation ended and a child was born between surveys, we cannot determine whether the child was born before or after the end of the cohabitation. The mother's union status at the time of birth is a key variable in the analysis, and dropping such cases would systematically select out mothers with relatively complex demographic trajectories. Instead, I

created two versions of the child's family structure history in such cases, one in which the child is assumed to have been born during the cohabitation and one in which the child was assumed to have been born while the mother was not cohabiting. The mother's union status at birth and the family structure in which the child lived between birth and the next survey date are the only differences between the two versions. Each sequence for a given mother is given equal weight in the analysis, with the weights summing to one for each mother. For some mothers, this occurs for multiple children, so there would be 2^n demographic histories, where n is the number of children for whom union status at birth is uncertain. In this case, each history receives a weight of $1/2^n$.

Finally, there are cases in which the mother's reports of demographic events are inconsistent across surveys or missing. Some examples of inconsistencies include cases in which a marriage or cohabitation was reported to have ended before it began, the reported relationship between a child and the current partner is inconsistent across survey waves, and cases in which a child is reported to have died before he was born. These cases, amounting to 9% of the mothers with at least one child with a YA interview, are dropped.

Inputs:

Definitions of several of the inputs listed in Table A-2 are given here.

Rules: Sum of binary indicators of whether the YA's parents established rules concerning dating, homework, television, and keeping parents informed of his or her whereabouts.

Rules say some/lot: Based on questions about how much say the YA had in determining the rules. Each response was converted to a binary indicator of whether the YA had "some" or "a lot" of say, versus "little" or "none," and the binary indicators were summed.

Momwell: Based on three questions about how close the YA is to his mother, how well they are able to talk and share ideas, and how often the mother misses important events in the YA's life. Each is converted to a binary indicator for a positive answer (extremely or quite or a lot) and the three are summed. *Dadwell* and *stepwell* are the corresponding variables for the biological and stepfather.

Cognitive Stimulation and *Emotional Support*: Subscales of the HOME Inventory, described on the CNLSY79 web site: https://www.nlsinfo.org/content/cohorts/nlsy79-children/topical-guide/assessments/home-home-observation-measurement.

Mother's ranking of child's standing in school: (1) one of the best, (2) above the middle, (3) middle, (4) below the middle, (5) one of the worst.

School grade: The YA's mother's "grade" given to several aspects of the YA's school: effectiveness of the principal as a leader, how much teachers care about students, school safety, communication with parents, parental participation, order and discipline, teacher skill, and teaching right from wrong. "A" is converted to 5, "B" to 4, etc. The scores for the 8 items are averaged.

Numfail: The number of school aspects rated as "D" or "F".

Argue: The number of issues about which the mother frequently argues with her partner or spouse. The issues include chores, children, money, affection, religion, leisure activities, drinking, other women, relatives. Binary indicators are created for "often or sometimes," versus "hardly ever or never" and summed over the issues.

Not happy: Would you say your relationship is very happy, fairly happy, or not too happy. Dummy for fairly or not too.

Background:

Rotter Locus of control scale, Rosenberg: self- esteem scale, Pearlin: mastery scale: See https://www.nlsinfo.org/content/cohorts/nlsy79/topical-guide/attitudes

Discrimination: Did the mother ever experience discrimination based on age, sex, race, or nationality?

Traditional attitudes: Mother responses to attitudinal questions: a woman's place is in the home, a working wife is more useful than one who stays home, employment of wives leads to more juvenile delinquency, inflation does not necessitate employment of both spouses, everyone is better off with traditional gender roles, men should not share housework, women are happier in traditional roles. Responses are converted so that a higher score indicates more traditional attitudes. 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. Summed over the 8 items.

Risk attitude: 0 to 10 scale, 0 = very risk-averse, 10 = fully prepared to take risks"

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Table 1: Characteristics of Female NLSY79 Respondents by Parent and YA Interview Status

	All Women		Women with any children		
Characteristic	No children	With children	No YA interview	Any YA interview	Any YA interview, used in estimation
Black	0.12	0.16	0.10	0.16	0.16
Hispanic	0.05	0.07	0.09	0.07	0.07
Immigrant	0.05	0.05	0.07	0.04	0.04
Father's education	12.7	11.6	12.2	11.5	11.6
Mother's education	12.2	11.4	11.5	11.4	11.4
No. of siblings	2.8	3.5	3.4	3.5	3.5
AFQT score (%ile)	54.2	45.8	50.4	45.2	46.2
Education	13.6	12.9	13.0	12.9	13.0
Ever married	0.62	0.93	0.92	0.93	0.93
Ever cohabited	0.39	0.39	0.27	0.40	0.37
Ever divorced	0.52	0.48	0.36	0.50	0.47
Age at first birth			27.9	23.7	23.9
Mother's first demographic event					
Birth			0.10	0.19	0.18
Marry			0.71	0.62	0.63
Cohabit			0.18	0.20	0.19
Sample size	872	3,832	441	3,391	3,025

Notes: YA = Young Adult. Total sample size is 4,698 female NLSY79 respondents from the cross-sectional samples of blacks, whites and Hispanics, and the black and Hispanic oversamples. All statistics are weighted by the respondent's 1979 sampling weight. The last column excludes cases with inconsistent data, as described in the text and Data Appendix.

Table 2: Descriptive Statistics on Family Structure and Changes Experienced by Young Adults

Fraction of childhood (ages 0-17) lived with biological mother and:	
Married Biological Father	0.65
Married Stepfather	0.09
Cohabiting Biological Father	0.01
Cohabiting Stepfather	0.02
No Father	0.23
Events experienced during childhood:	
Exit of biological father (married or cohabiting)	0.28
Exit of stepfather (married or cohabiting)	0.10
Entry of biological father (married or cohabiting)	0.04
Entry of Stepfather (married or Cohabiting)	0.22
Mother's marital status at the child's birth:	
Married	0.80
Cohabiting	0.03
No Union	0.17
Mother's first demographic event	
Marry	0.64
Cohabit	0.17
Birth	0.19
Age of mother at birth of child	26.1
Sample size	6,582

Notes: Statistics are weighted by the Young Adult's sampling weight, derived from the mother's sampling weight and the number of survey waves for which the YA was observed. See https://www.nlsinfo.org/content/cohorts/nlsy79-children/using-and-understanding-the-data/sample-weights.

Table 3: Demographic Behavior of Young Adult Respondents by Gender and Overall

	All	Males	Females
A. Outcomes as of latest survey			
Ever had a child	0.35	0.30	0.41
Ever married	0.30	0.27	0.34
Ever cohabited	0.47	0.43	0.52
First demographic event, conditional on any			
Birth	0.17	0.15	0.19
Marry	0.15	0.16	0.15
Cohabit	0.68	0.69	0.66
Age first marry	24.1	24.8	23.6
Age first cohabit	21.5	22.2	20.9
Age first birth	22.9	23.6	22.4
Ever live apart from a biological child conditional on having a child	0.27	0.48	0.12
Ever live with a biological child without other biological parent present conditional on having a child	0.45	0.23	0.58
Union status at first birth			
Single	0.30	0.29	0.31
Cohabiting	0.34	0.35	0.33
Married	0.36	0.37	0.36
Ever end a marriage (divorce or separation) if ever at risk	0.08	0.03	0.11
Ever end a cohabitation if ever at risk	0.26	0.14	0.32
B. Annual Hazard Rate (*100) of First Demographic Event			
Birth	0.90	0.63	1.21
Marriage	1.00	0.84	1.19
Cohabitation	4.06	3.56	4.67
Age last observed	26.2	26.1	26.3
Number of person-sequence-years	64,082	35,026	29,056
Number of person-years	52,886	28,553	24,333
Number of YAs	6,582	3,328	3,524

Notes: Statistics are weighted by the Young Adult's sampling weight, derived from the mother's sampling weight and the number of survey waves for which the YA was observed. See https://www.nlsinfo.org/content/cohorts/nlsy79-children/using-and-understanding-the-data/sample-weights.

Table 4: Demographic Behavior of the CNLSY79 Young Adults and the Family Structure Experiences of their Children

Marital status at birth of YA's children			
Married	0.42		
Cohabiting	0.33		
Single	0.25		
	(5,595)		
YA's children ever experienced exit of father figure from household, conditional on being at risk	0.18 (2,135)		
Divorce	0.08 (1,237)		
End of cohabitation	0.27 (1,365)		
YA's children ever experienced entry of father figure into household, conditional on being at risk	0.65 (906)		
Marry	0.09 (906)		
Cohabit	0.59 (906)		
Ever marry cohabiting partner, conditional on being at risk	0.29 (1,365)		
Fraction of childhood of YA's children spent living with			
Married biological parents	0.40		
Cohabiting biological parents	0.15		
One biological parent and one married step parent	0.05		
One biological parent and one cohabiting step parent	0.09		
Young adult and no other parent	0.13		
Other biological parent	0.18		
Sample size (number of YAs who had a child)	(2,724)		
Annual hazard rates of YA's events following the first event, conditional on current union status			
	Married	Cohabiting	Single
Has a (new) child	0.160	0.107	0.071
Marries		0.091	0.020
Cohabits			0.180
Exits a union	0.018	0.105	
Number of YA person-sequence-years at risk	13,226	21,234	21,389
Number of YA person-years at risk	11,147	16,276	10,538

Notes: unit of observation in the upper part of the table is either the child of a Young Adult or a Young Adult. Unit of observation in the lower panel is YA person-years. Sample sizes are in parentheses in the upper panel. Weighted by the CNLSY79 sampling weight.

Table 5: Intergenerational Correlations of Family Structure for Mothers and Young Adults

A: Outcome: Annual hazard (*100) of Young Adult's First Event				
Mother's first event	Birth	Marriage	Cohabitation	
Marry	-1.3 (0.10)	0.90 (0.20)	-0.20 (0.20)	
Cohabit	-1.2 (0.20)	-0.10 (0.20)	1.4 (0.30)	
Mean	0.90	1.00	4.06	
B: Outcome: YA's Union Status at birth of child				
Mother's union status at birth	Married	Cohabiting	Single	
Married	0.33 (0.02)	-0.14 (0.02)	-0.20 (0.01)	
Cohabiting	0.10 (0.05)	0.01 (0.04)	-0.10 (0.03)	
Mean	0.42	0.33	0.25	
C: Outcome: Young Adult's Age at first birth				
Mother's age at first birth	0.18 (0.02)			
Mean	22.9			
D: Outcome: Annual hazard (*100) of YA's children experiencing exit of a parent from a union of the indicated type, conditional on being at risk				
	Married Bio	Married step	Cohab. Bio	Cohab. Step
Mother exited from any union with YA present	1.04 (0.35)	2.8 (1.5)	-0.14 (0.87)	-0.90 (1.40)
Mean	0.78	4.30	3.70	10.9
E: Outcome: Annual hazard (*100) of YA's children experiencing entry into a union of the indicated type, conditional on being at risk				
	Married Bio	Married step	Cohab. Bio	Cohab. Step
Mother entered any union with YA present	0.45 (0.49)	0.45 (0.49)	0.90 (14.0)	0.90 (14.0)
Mean	1.7	1.7	14.0	14.0
F: Outcome: Fraction of YA's children's childhood spent in alternative family structures				
	Married Bio	Married step	Cohab. Bio	Cohab. Step
Fraction of YA's childhood spent in the indicated FS	0.22 (0.02)	-0.01 (0.02)	0.02 (0.06)	0.12 (0.06)
Mean	0.40	0.05	0.15	0.09

Notes: each panel shows regression coefficients or marginal effects from estimates of a model of the indicated outcome variable as a function of the explanatory variable shown in the table stub, controlling for age at which the YA was last observed. The models in panels A, B, D, and F are logits, and the table entries are marginal effects. The models in panels C and are linear regressions, and the table entries are regression coefficients. Sample size for Panel A is 64,082 person-year sequences. Sample size for panels B, C, and F is 2,724 YAs who have had at least one child. Sample sizes in Panel D are 5,499, 2,212, 5,546, and 7,095 person-year sequences in the indicated state, respectively. Sample size in panel E is 11,142 person-year-sequences in which a YA's child is living with the YA without another parent. Standard errors are in parentheses, clustered by the YA.

Table 6: Marginal Effects (*100) of Family Structure Variables in Competing-Risks Hazard Model of First Demographic Event

Other covariates:	None	Background	Background and inputs
A: Test Statistics			
Mother's first event	**0.000**	**0.000**	**0.000**
Marital status & age at birth	**0.000**	0.43	0.67
Entry and exit	0.078	0.26	0.34
Fractions	**0.000**	**0.026**	0.067
All	**0.000**	**0.000**	**0.000**
B: Mother's first event			
Married			
Pr(YA has child first)	**-0.64 (0.14)**	-0.09 (0.13)	-0.07 (0.13)
Pr(YA marries first)	0.44 (0.30)	0.24 (0.30)	0.03 (0.29)
Pr(YA cohabits first)	0.22 (0.40)	0.11 (0.41)	-0.06 (0.39)
Cohabited			
Pr(YA has child first)	**-0.69 (0.19)**	0.05 (0.19)	0.07 (0.19)
Pr(YA marries first)	-0.27 (0.34)	-0.44 (0.36)	-0.46 (0.35)
Pr(YA cohabits first)	**1.52 (0.44)**	**1.72 (0.48)**	**1.48 (0.46)**
C: Mother's union status and age at birth of YA			
Married			
Pr(YA has child first)	-0.27 (0.18)	-0.17 (0.16)	-0.17 (0.16)
Pr(YA marries first)	0.26 (0.40)	0.22 (0.36)	0.17 (0.36)
Pr(YA cohabits first)	-0.03 (0.51)	-0.83 (0.53)	-0.76 (0.51)
Cohabiting			
Pr(YA has child first)	-0.00 (0.23)	-0.09 (0.23)	-0.04 (0.23)
Pr(YA marries first)	0.04 (0.53)	0.03 (0.55)	0.10 (0.56)
Pr(YA cohabits first)	**1.22 (0.61)**	0.78 (0.64)	0.54 (0.64)
Age of mother at birth			
Pr(YA has child first)	**-0.10 (0.01)**	-0.01 (0.09)	-0.04 (0.09)
Pr(YA marries first)	**-0.05 (0.02)**	-0.01 (0.13)	0.01 (0.13)
Pr(YA cohabits first)	**-0.28 (0.03)**	-0.07 (0.25)	-0.00 (0.26)
D: Changes in family structure			
Father exits child's hh			
Pr(YA has child first)	-0.05 (0.10)	-0.03 (0.10)	-0.01 (0.11)
Pr(YA marries first)	-0.21 (0.23)	-0.28 (0.23)	**-0.49 (0.23)**
Pr(YA cohabits first)	**0.93 (0.33)**	**0.83 (0.35)**	0.54 (0.37)
Father enters child's hh			

Pr(YA has child first)	-0.07 (0.12)	-0.01 (0.11)	0.01 (0.13)
Pr(YA marries first)	-0.21 (0.23)	0.19 (0.24)	0.08 (0.26)
Pr(YA cohabits first)	-0.12 (0.34)	-0.19 (0.37)	-0.17 (0.37)
E: Fraction of childhood lived with:			
Married biological father			
Pr(YA has child first)	**-0.91 (0.17)**	-0.30 (0.17)	-0.02 (0.24)
Pr(YA marries first)	**0.66 (0.33)**	0.48 (0.38)	0.11 (0.41)
Pr(YA cohabits first)	-0.54 (0.49)	-0.61 (0.55)	1.27 (0.71)
Married step father			
Pr(YA has child first)	**-0.53 (0.22)**	-0.03 (0.22)	0.19 (0.27)
Pr(YA marries first)	**0.79 (0.39)**	0.72 (0.42)	0.46 (0.46)
Pr(YA cohabits first)	0.77 (0.63)	0.26 (0.69)	1.43 (0.78)
Cohabiting biol. father			
Pr(YA has child first)	-0.52 (0.45)	-0.51 (0.48)	-0.55 (0.53)
Pr(YA marries first)	-0.13 (0.83)	-0.43 (0.91)	-0.59 (0.75)
Pr(YA cohabits first)	0.28 (1.72)	-1.10 (1.80)	0.29 (1.99)
Cohabiting stepfather			
Pr(YA has child first)	0.03 (0.38)	0.24 (0.37)	-.33 (0.42)
Pr(YA marries first)	-0.72 (1.16)	-0.68 (1.18)	-0.53 (1.14)
Pr(YA cohabits first)	**4.34 (1.21)**	**3.53 (1.24)**	**4.62 (1.26)**
Dep. variable mean (*100)			
Pr(YA has child first)	0.90		
Pr(YA marries first)	1.00		
Pr(YA cohabits first)	4.06		
No. of person-year-sequences (No. of person years)	64,082 (52,886)		
Number of YAs	6,582		

Notes: Results are from multinomial logit estimates of a competing risks annual hazard model of the first demographic event: have a child, marry, or cohabit. Each column shows results from a different model. The baseline category for the dependent variable is no event. Reference categories for the explanatory variables are single, married, no event, and single for the four groups, respectively. All specifications include the child and family characteristics described in the text. See Appendix Table A-2 for the estimated effects of the other explanatory variables. Standard errors are clustered at level of the YA. Estimates are weighted by the CNLSY79 sampling weight and the multiple-sequence weight described in the text. Marginal effects and p-values in bold are statistically significant at the 5% level.

Table 7: Marginal Effects (*100) from Logit Model of Whether the YA has a Favorable Attitude Toward Having Children in Cohabitation

Test statistics (p values)	
Mother's first event	**0.003**
Mother's marital status and age at birth	0.26
Events	0.37
Fractions	0.09
All	**0.001**
Mother's first event	
Marry	-1.9 (2.5)
Cohabit	5.5 (2.9)
Mother's marital status at birth	
Married	-6.5(3.4)
Cohabiting	-2.0(4.6)
Age of mother at birth of YA	-0.8 (1.7)
Events	
Exit	3.1 (2.5)
Entry	-2.7(2.7)
Fractions	
Married biological	-2.8(4.6)
Married step	-9.5 (5.7)
Cohabiting biological	-2.6 (10.6)
Cohabiting step	18.6 (11.1)
Mean of dependent variable	0.58
Sample size	6,248

Notes: unit of observation is a YA. Estimates are weighted by the CNLSY79 sampling weight. The dependent variable is a binary indicator equal to one if the YA agrees or strongly agrees with the statement "it would be okay for the respondent to have children in cohabitation" and equal to zero if the YA disagrees or strongly disagrees. Test statistics and the marginal effects in bold are statistically significant at the 5% level.

Table 8: Test Statistics on Time-Varying Family Structure Variables Experienced at Specific Ages in Competing-Risks Hazard Model of First Demographic Event

	Ages 0-5	Ages 6-11	Ages 12-17
Test statistics (p values)			
Entry and exit	0.98	0.40	0.76
Fractions	0.36	0.60	0.46

Notes: Results are from a multinomial competing risks hazard model of the first demographic event, with the effects of family structure variables experienced at different ages allowed to differ. Effects of the mother's first event and status at birth do not depend on the child's age and are not shown. The specification is based on Table 6, column 3. Estimated marginal effects are reported in Appendix Table A-3.

Table 9: Test Statistics on Family Structure Variables in Competing-Risks Hazard Model of First Demographic Event, With Interactions by Race/Ethnicity

	Non-Hispanic White	Non-Hispanic Black	Hispanic
Test statistics (p values)			
Mother's first event	**0.001**	0.17	0.69
Marital status and age at birth	0.60	0.88	0.43
Entry and exit	0.35	0.20	**0.020**
Fractions	0.21	**0.015**	**0.010**
All	**0.002**	**0.009**	**0.000**

Notes: Results are from a multinomial competing risks hazard model of the first demographic event, with the effects of family structure variables allowed to differ by race and ethnicity. The specification is based on Table 6, column 3. Marginal effects are reported in Appendix Table A-4. P values in bold indicate that the null hypothesis that the effects of the indicated group of variables are jointly equal to zero is rejected at the 5% level.

Table 10: Test Statistics on Family Structure Variables Competing Risks Hazard Model of First Demographic Event, with Interactions by gender

	Male	Female
Panel A: Test statistics (p values)		
Mother's first event	0.08	**0.003**
Marital status and age at birth	0.70	0.68
Entry and exit	0.23	0.83
Fractions	0.30	0.17
All	**0.002**	**0.000**

Notes: Results are from a multinomial competing risks hazard model of the first demographic event, with the effects of family structure variables allowed to differ by gender. The specification is based on Table 6, column 3. Marginal effects are reported in Appendix Table A-5. P values in bold indicate that the null hypothesis that the effects of the indicated group of variables are jointly equal to zero is rejected at the 5% level.

Table 11: Test statistics and Marginal Effects (*100) of Family Structure Variables from Competing Risks Hazard Model of Subsequent Demographic Events, by Current Union Status

	Married	Cohabiting	Single
Test Statistics			
Mother's first event	0.18	0.40	0.67
Marital status and age at birth	0.13	0.68	0.59
Entry and exit	**0.005**	0.16	0.15
Fractions	0.032	0.25	0.10
All	**0.004**	0.22	0.075
Mother's first event			
Married			
Pr(YA has a child)	**3.54 (1.55)**	2.06 (1.53)	-0.63 (1.32)
Pr(YA marries)		0.53 (1.61)	0.80 (0.93)
Pr(YA cohabits)			1.36 (2.09)
Pr(YA ends union)	-0.47 (0.59)	-0.94 (1.21)	
Cohabited			
Pr(YA has a child)	1.06 (2.15)	0.42 (2.04)	-2.23 (2.35)
Pr(YA marries)		-2.59 (2.07)	-1.06 (1.41)
Pr(YA cohabits)			0.77 (3.04)
Pr(YA ends union)	0.18 (1.05)	1.60 (1.59)	
Mother's union status at YA's birth			
Married			
Pr(YA has a child)	-0.60 (2.03)	0.26 (1.78)	1.73 (1.51)
Pr(YA marries)		-1.00 (2.15)	0.95 (1.08)
Pr(YA cohabits)			-3.01 (2.82)
Pr(YA ends union)	0.64 (0.79)	1.19 (1.40)	
Cohabiting			
Pr(YA has a child)	-4.70 (2.75)	0.05 (2.21)	-0.11 (2.13)
Pr(YA marries)		3.01 (2.66)	-1.13 (1.99)
Pr(YA cohabits)			3.56 (2.83)
Pr(YA ends union)	-0.61 (0.96)	1.35 (1.77)	
Age of Mother at birth of child			
Pr(YA has a child)	-0.97 (1.18)	-0.78 (1.16)	0.38 (1.06)
Pr(YA marries)		-1.89 (1.38)	-0.02 (0.72)
Pr(YA cohabits)			-1.14 (1.65)
Pr(YA ends union)	**0.79 (0.40)**	-0.73 (1.01)	
Exit and entry			
Father figure exits child's household			
Pr(YA has a child)	-1.36 (1.49)	1.47 (1.29)	-1.08 (1.12)

Pr(YA marries)		-0.08 (1.56)	0.27 (0.71)
Pr(YA cohabits)			**4.13 (1.84)**
Pr(YA ends union)	**1.75 (0.66)**	2.11 (1.10)	
Father figure enters child's household			
Pr(YA has a child)	-0.67 (1.48)	1.26 (1.34)	-1.22 (1.23)
Pr(YA marries)		1.97 (1.61)	0.86 (0.99)
Pr(YA cohabits)			-0.52 (2.02)
Pr(YA ends union)	**-1.75 (0.54)**	-0.51 (1.12)	
Fraction of childhood lived with:			
Married biological father			
Pr(YA has a child)	**-8.44 (3.40)**	-1.79 (2.55)	-2.16 (2.28)
Pr(YA marries)		3.10 (2.88)	2.74 (1.44)
Pr(YA cohabits)			4.76 (3.80)
Pr(YA ends union)	-1.29 (1.12)	2.61 (2.11)	
Married step father			
Pr(YA has a child)	**-7.93 (3.59)**	0.92 (2.73)	1.41 (2.41)
Pr(YA marries)		0.07 (3.38)	3.25 (1.81)
Pr(YA cohabits)			1.24 (3.87)
Pr(YA ends union)	1.60 (1.34)	-1.37 (2.72)	
Cohabiting biological father			
Pr(YA has a child)	-6.93(12.97)	9.54 (6.19)	0.09 (5.55)
Pr(YA marries)		-10.08 (11.32)	-6.87 (8.36)
Pr(YA cohabits)			8.80 (8.25)
Pr(YA ends union)	2.40 (3.69)	0.37 (4.33)	
Cohabiting stepfather			
Pr(YA has a child)	-9.76(6.49)	-0.84 (4.74)	6.27 (4.27)
Pr(YA marries)		-9.95 (6.49)	5.70 (3.60)
Pr(YA cohabits)			-2.89 (6.03)
Pr(YA ends union)	0.67 (2.27)	3.94 (3.87)	
Dependent Variable Means			
Pr(Birth)	.150	0.139	0.084
Pr(Marry)		0.085	0.017
Pr(Cohabit)			0.136
Pr(End union)	.015	0.075	
Sample size (person-years)	13,214	21,248	21,465

Notes: each column shows estimates from an annual competing-risks multinomial logit hazard model, conditional on the union status indicated at the column head. The sample consists of years following the YA's first event. Marginal effects and p-values in bold are significantly different from zero at the 5% level.

Table 12: Marginal Effects (*100) of Family Structure Variables from Multinomial Logit Model of YA's Union Status at Birth of Child

	Married	Cohabiting
Test statistics (p values)		
Mother's first event	0.15	
Mother's marital status and age at birth	0.92	
Events	0.66	
Fractions	0.45	
All	0.40	
Mother's first event		
Marry	3.61(2.71)	0.22 (2.77)
Cohabit	-1.70 (3.35)	4.96 (3.56)
Mother's marital status at birth		
Married	-1.46 (3.55)	-1.18 (3.55)
Cohabiting	0.35 (4.62)	0.92 (4.45)
Age of mother at birth of child	-0.02 (2.05)	0.62 (2.05)
Events		
Exit	0.83 (2.53)	1.03 (2.45)
Entry	1.64 (2.43)	-0.69 (2.49)
Fractions		
Married biological	**10.33 (4.59)**	-5.71 (4.70)
Married step	8.72 (4.97)	-7.00 (4.95)
Cohabiting biological	-7.23 (13.36)	5.74 (12.23)
Cohabiting step	1.65 (10.77)	-3.57 (10.05)
Mean of dependent variable	0.42	0.33
Sample size (number of YAs' children)	5,595	

Notes: The omitted category for the dependent variable is single at birth. Estimates are weighted by the CNLSY79 sampling weight. Marginal effects and p-values in bold are statistically significant at the 5% level.

Table 13: Test Statistics and Coefficient Estimates on Family Structure Variables from Regression Models of Fraction of Childhood Spent by YA's Children in Alternative Family Structures, Conditional on Union Status at Birth

Test statistics	Married biological	Married step	Cohabiting biological	Cohabiting step	Single
Mother's first event	0.88	0.96	0.80	0.18	0.63
Marital status & age at birth	0.09	0.26	**0.012**	0.46	**0.039**
Entry and exit	0.54	0.22	0.78	0.41	0.68
Fractions	0.26	0.10	0.32	0.72	0.44
All	0.28	0.12	0.51	0.60	0.65
Parameter estimates					
Mother's first event					
Marry	-0.27 (1.9)	-0.27 (1.1)	-0.73 (1.9)	-0.17 (1.4)	-0.86 (1.8)
Cohabit	-1.2 (2.4)	-0.05 (1.3)	-1.6 (2.5)	3.3 (2.2)	-2.1 (2.1)
Mother's marital status at birth					
Married	1.9 (2.2)	-1.5 (1.3)	3.2 (2.4)	-1.7 (1.9)	1.2 (2.4)
Cohabiting	-3.5 (3.0)	2.7 (2.4)	2.7 (3.0)	-3.1 (2.3)	0.10 (2.6)
Age mom at birth	2.3 (1.4)	0.83 (0.85)	**4.1 (1.4)**	-0.76 (0.97)	**-3.6 (1.3)**
Events					
Exit	-1.9 (1.8)	1.6 (0.93)	0.51 (1.5)	1.1 (1.4)	-1.2 (1.6)
Entry	1.0 (1.7)	-0.40 (1.0)	0.89 (1.9)	-1.8 (1.4)	-0.15 (1.6)
Fractions					
Married biological	4.0 (3.1)	0.07 (1.9)	-5.7 (3.7)	-0.10 (2.7)	-0.00 (2.9)
Married step	2.2 (3.9)	-2.4 (2.2)	**-7.7 (3.9)**	2.0 (3.0)	5.30 (3.5)
Cohabiting biolog	15.4 (8.2)	-6.5 (5.7)	-5.2 (7.3)	0.31 (6.2)	4.0 (6.7)
Cohabiting step	8.2 (5.7)	**-7.2 (3.1)**	-10.7 (6.8)	6.3 (5.8)	-0.38 (5.6)
Mean (%)	40	5	15	9	13

Notes: Each column shows results from a different regression. Unit of observation is a YA. Sample size is 2,724 YAs who have had a child. The estimates are weighted by YA's sampling weight and the sum over the YA's children of years of exposure as of the last observation for the YA. Parameter estimates in bold are statistically significant at the 5% level. The means in the last row do not sum to one, because there is another category: the child lives with the other parent, accounting for 18% of living arrangement time spent by children.

Table 14: Marginal Effects (*100) of Family Structure Variables in Competing-Risks Hazard Model of First Demographic Event, alternative specifications and subsamples

	Baseline (Table 6, column 3)	One set of FS inputs at a time	No multiple sequences	Respondents born in 1960s	Unweighted
A: Test Statistics					
Mother's first event	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Marital status & age at birth	0.43	0.091	0.37	0.76	0.38
Entry and exit	0.34	0.075	0.82	0.72	0.09
Fractions	0.067	**0.009**	0.024	0.58	0.13
All	**0.000**	---	**0.0070**	**0.041**	**0.000**
B: Mother's first event					
Married					
Pr(YA has child first)	-0.07 (0.13)	-0.18 (0.11)	-0.02 (0.13)	- 0.16 (0.17)	-0.25 (0.19)
Pr(YA marries first)	0.03 (0.29)	0.05 (0.22)	**-0.65 (0.33)**	0.21 (0.27)	0.26 (0.19)
Pr(YA cohabits first)	-0.06 (0.39)	-0.26 (0.34)	-0.35 (0.46)	-0.03 (0.50)	0.24 (0.31)
Cohabited					
Pr(YA has child first)	0.07 (0.19)	-0.02 (0.18)	-0.04 (0.20)	0.14 (0.23)	0.06 (0.24)
Pr(YA marries first)	-0.46 (0.35)	-0.52 (0.30)	**-1.26 (0.42)**	-0.07 (0.37)	-0.16 (0.24)
Pr(YA cohabits first)	**1.48 (0.46)**	**1.39 (0.43)**	**1.35 (0.56)**	**1.81 (0.55)**	**1.37 (0.37)**
C: Union status and age at birth					
Married					
Pr(YA has child first)	-0.17 (0.16)	**-0.24 (0.11)**	-0.22 (0.18)	-0.25 (0.21)	-0.36 (0.23)
Pr(YA marries first)	0.17 (0.36)	0.03 (0.22)	**0.98 (0.46)**	0.24 (0.37)	-0.08 (0.25)
Pr(YA cohabits first)	-0.76 (0.51)	-0.50 (0.37)	-0.55 (0.60)	-0.80 (0.58)	**-0.80 (0.38)**
Cohabiting					
Pr(YA has child first)	-0.04 (0.23)	-0.16 (0.20)	-0.08 (0.34)	-0.07 (0.27)	-0.14 (0.29)
Pr(YA marries first)	0.10 (0.56)	-0.34 (0.51)	0.96 (1.01)	0.19 (0.62)	-0.14 (0.39)
Pr(YA cohabits first)	0.54 (0.64)	1.09 (0.56)	1.23 (1.11)	-0.25 (0.71)	0.20 (0.50)
Age of mother at birth					
Pr(YA has child first)	-0.04 (0.09)	-0.05 (0.09)	0.03 (0.10)	0.17 (0.13)	-0.02 (0.13)
Pr(YA marries first)	0.01 (0.13)	-0.00 (0.14)	0.09 (0.07)	-0.01 (0.16)	0.06 (0.10)
Pr(YA cohabits first)	-0.00 (0.26)	0.04 (0.26)	-0.05 (0.29)	0.12 (0.32)	-0.00 (0.21)
D. Exit and Entry					
Father figure exits hh					
Pr(YA has child first)	-0.01 (0.11)	-0.06 (0.10)	-0.01 (0.12)	0.09 (0.14)	-0.06 (0.16)
Pr(YA marries first)	**-0.49 (0.23)**	**-0.48 (0.19)**	-0.42 (0.31)	-0.10 (0.26)	-0.25 (0.16)
Pr(YA cohabits first)	0.54 (0.37)	0.39 (0.32)	0.34 (0.47)	0.70 (0.43)	**0.70 (0.29)**
Father figure enters hh					
Pr(YA has child first)	0.01 (0.13)	0.15 (0.11)	0.01 (0.17)	-0.12 (0.15)	0.07 (0.17)
Pr(YA marries first)	0.08 (0.26)	0.07 (0.21)	0.27 (0.33)	-0.01 (0.27)	-0.11 (0.17)

Pr(YA cohabits first)	-0.17 (0.37)	0.17 (0.32)	-0.32 (0.46)	-0.12 (0.44)	0.10 (0.29)
E: Fraction of childhood with:					
Married biological father					
Pr(YA has child first)	-0.02 (0.24)	-0.16 (0.22)	0.21 (0.21)	0.01 (0.32)	0.10 (0.33)
Pr(YA marries first)	0.11 (0.41)	0.49 (0.36)	0.05 (0.52)	0.43 (0.50)	0.38 (0.31)
Pr(YA cohabits first)	1.27 (0.71)	0.51 (0.63)	0.80 (0.91)	1.30 (0.84)	0.93 (0.56)
Married step father					
Pr(YA has child first)	0.19 (0.27)	0.18 (0.26)	0.30 (0.28)	0.01 (0.32)	0.14 (0.36)
Pr(YA marries first)	0.46 (0.46)	0.63 (0.46)	0.60 (0.67)	0.72 (0.53)	**0.70 (0.34)**
Pr(YA cohabits first)	1.43 (0.78)	1.01 (0.76)	1.55 (0.97)	1.52 (0.93)	0.77 (0.62)
Cohabiting biological father					
Pr(YA has child first)	-0.55 (0.53)	-0.48 (0.46)	-0.33 (0.63)	-0.53 (0.37)	-0.19 (0.72)
Pr(YA marries first)	-0.59 (0.75)	-0.64 (0.98)	-1.78 (1.18)	0.73 (0.87)	-0.28 (0.75)
Pr(YA cohabits first)	0.29 (1.99)	2.31 (1.69)	-1.05 (3.36)	0.51 (1.99)	-0.36 (1.35)
Cohabiting stepfather					
Pr(YA has child first)	-.33 (0.42)	0.29 (0.42)	0.65 (0.461)	0.44 (0.42)	0.88 (0.59)
Pr(YA marries first)	-0.53 (1.14)	-0.61 (1.11)	-1.70 (1.70)	1.46 (1.05)	0.18 (0.71)
Pr(YA cohabits first)	**4.62 (1.26)**	**4.58 (1.23)**	**6.12 (1.67)**	2.86 (1.64)	**2.88 (1.05)**
Dependent variable mean (*100):					
Pr(YA has child first)	0.90	0.90	0.61	0.93	0.90
Pr(YA marries first)	1.00	1.00	1.08	0.76	1.00
Pr(YA cohabits first)	4.06	4.06	3.88	3.95	4.06
Number of person-sequence-years	64,082	64,082	39,097	45,858	64,082
Number of person-years	52,886	52,886	39,097	32,871	52,886
Number of YAs	6,582	6,582	4,724	4,251	6,582

Notes: each column shows marginal effects and test-statistics from a different specification of the model from column 3 of Table 6 or from a different sample. The first column reproduces results from column 3 of Table 6. The second column reports results from four different models, in which each group of family structure variables are included separately. The third column drops from the sample any cases with ambiguity in the respondent's union status at the time of the YA's birth. The fourth column uses NLSY79 female respondents who were born in the 1960s (dropping those born in 1957-1959). The last column reports estimates that do not weight by the YA's sampling weight (but still weight multiple family structure sequences as described in the Data Appendix).

Table A-1: Comparison of Characteristics of CNLSY79 Cohort to Same Cohorts in the CPS

Characteristic	CNLSY79	CPS
Female	0.49	0.50
Non-Hispanic White	0.80	0.65
Non-Hispanic Black	0.13	0.15
Hispanic	0.07	0.20
Independent residence	0.59	0.59
Lives with mother	0.35	0.37
Lives with father	0.27	0.28
Union status		
Married	0.20	0.31
Cohabiting	0.12	0.07
Single	0.67	0.61
Education		
High school dropout	0.17	0.27
High school graduate	0.24	0.24
Some college or Associates degree	0.35	0.28
Four year college graduate	0.18	0.16
Some post-bachelors education	0.06	0.06
Number of children	0.49	0.66
Number of children under age 5	0.22	0.27
Age of youngest child	3.6	4.6
Age of oldest child	5.9	7.8
Currently enrolled in secondary school	0.08	0.10
Currently enrolled in college	0.23	0.15
Hours worked per week	35.9	36.8
Employed Part-time (0-29 hours)	0.11	0.14
Employed full-time (30+ hours)	0.49	0.53
Employed	0.60	0.67
Wage/salary income (2014 $)	20,039	22,673
Number of YAs / CPS observations	6,852	474,496

Notes: Lives with mother and lives with father are not mutually exclusive. Statistics are weighted by the YA's sampling weight and the CPS March supplement weight, respectively. The CNLSY79 observations are from the most recent interview for each YA. CPS observations are from even-numbered March supplements from 2000 to 2014, corresponding to the CNLSY79 YA interviews, excluding 1994-1998. Year of birth in the CPS sample is defined as survey year - age – 1, assuming individuals were born after the March interview date.

Table A-2: Means and Marginal Effects (*100) of Inputs and Background Characteristics

		Outcome		
Inputs	Mean	Birth	Marry	Cohabit
Medicaid*	0.14	0.31 (0.18)	**-0.76 (0.34)**	-0.91 (.61)
Employer health insurance*	0.80	-0.07 (0.17)	**-0.73 (0.26)**	**-1.01 (0.50)**
Rules*	0.75	-0.41 (0.23)	0.64 (0.34)	-0.00 (.60)
Rules say some lot*	1.74	-0.03 (0.04)	-0.00 (0.06)	0.16 (.10)
Momwell*	2.27	-0.07 (0.06)	0.04 (0.11)	-0.13 (.17)
Dadwell*	1.78	**-0.14 (0.06)**	-0.04 (0.08)	-0.19 (.15)
Stepwell*	1.34	0.18 (0.10)	-0.19 (0.15)	0.11 (.29)
Mother is employed	0.30	0.25 (0.40)	-0.34 (0.61)	**2.57 (1.11)**
Family income/10,000	8.21	-0.018 (0.016)	-0.017 (0.011)	-0.035 (.020)
Mother's weeks worked/52	0.62	0.04 (0.45)	0.33 (0.66)	-2.15 (1.15)
Mother's years of education	12.9	-0.046 (0.029)	0.022 (0.040)	**-0.22 (0.07)**
Cognitive Stimulation (%ile)/100*	0.52	-0.14 (0.24)	0.17 (0.38)	**-.1.41 (0.68)**
Emotional Support (%ile)/100*	0.51	-0.05 (0.28)	0.33 (0.37)	0.66(0.69)
Argue*	1.77	0.073 (0.039)	-0.01 (0.05)	0.09 (0.10)
Not happy*	0.33	**-0.38 (0.16)**	-0.29 (0.20)	-0.41 (0.37)
Partner never observed	0.08	-0.63 (0.35)	**-1.66 (0.33)**	0.21 (0.92)
Partner'ss years of education	13.2	**-0.056 (0.027)**	-0.048 0(.030)	-0.052 (0.062)
Number of days visited per year by absent father/100	0.03	-0.03 (0.55)	-0.36 (0.95)	-1.26 (1.78)
Moved since last interview	0.24	0.13 (0.15)	-0.36 (0.26)	0.10 (0.40)
Used Formal child care	0.25	0.01 (0.14)	0.22 (0.12)	-0.48 (0.38)
Months of formal child care/10*	2.7	-0.08 (0.10)	0.22 (0.12)	-0.02 (0.25)
Used Nonrelative child care	0.29	0.08 (0.15)	0.23 (0.18)	-0.15 (0.37)
Months of Nonrel. child care /10	3.9	-0.08 (0.09)	-0.07 (0.10)	-0.09 (0.18)
Used Family child care	0.10	0.08 (0.20)	-0.36 (0.29)	0.26 (0.48)
Months of Family child care/10	1.0	-0.02 (0.14)	0.21 (0.20)	-0.52 (0.38)
Used relative child care	0.26			
Months of relative child care/10	3.0	-0.06 (0.08)	-0.10 (0.10)	0.09 (0.17)
Child care total/10*	1.9	**0.22 (0.09)**	-0.07 (0.12)	0.05 (0.22)
Child care number	1.7	0.02 (0.05)	-0.02 (0.07)	**0.25 (0.12)**
YA was enrolled in Head Start*	0.12	0.08 (0.39)	-0.21 (1.00)	0.84 (1.91)
Age at Head Start enrollment	3.7	-0.02 (0.07)	0.13 (0.20)	0.15 (0.35)
Duration in Head Start	3.0	0.01 (0.07)	-0.05 (0.17)	-0.42 (0.32)
Mother's ranking of standing*	2.0	0.40 (0.22)	0.14 (0.38)	0.17 (0.45)
Number of schools attended	2.8	0.02 (0.05)	0.02 (0.08)	0.10 (0.15)
Number elem. schools attended	1.8	0.09 (0.05)	0.07 (0.10)	0.02 (0.18)
Number high schools attended	1.2	0.07 (0.05)	-0.05 (0.12)	**0.56 (0.14)**
Mother's school grade*	4.3	-0.24 (0.18)	0.17 (0.24)	-0.15 (0.46)
Numfail*	0.03	0.24 (0.86)	1.61 (1.17)	2.85 (2.11)
Background				
Young Adult				

Female	0.49	**0.68 (0.07)**	**0.40 (0.09)**	**1.78 (0.17)**
Oldest age observed/10	27.4	0.26 (0.19)	0.07 (0.30)	1.05 (0.55)
Year of birth	87	-0.05(0.09)	-0.13 (0.14)	-0.17 (0.26)
Birth order	1.9	0.07 (0.04)	0.03 (0.06)	**0.44 (0.10)**
Months until next birth/100	46	0.15 (0.12)	-0.15 (0.24)	0.30 (0.38)
Months since previous birth/100	42	**0.45 (0.21)**	0.36 (0.42)	0.11 (0.62)
Mother				
Respondent is Black	0.18	**0.64 (0.15)**	**-0.90 (0.25)**	**-2.69 (0.43)**
Respondent is Hispanic	0.08	0.33 (0.18)	0.06 (0.20)	**-1.44 (0.40)**
Did not live with married biological parents at age 14	0.28	0.04 (0.13)	0.15 (0.25)	-0.13 (0.40)
Lived with bio. mother at ages:				
0-5	0.97	-0.04 (0.29)	0.08 (0.64)	-0.13 (1.19)
6-11	0.95	-0.02 (0.36)	0.17 (0.73)	0.28 (1.40)
12-17	0.92	-0.17 (0.30)	0.22 (0.55)	0.68 (1.14)
Lived with bio. father at ages:				
0-5	0.91	0.14 (0.76)	1.08 (1.17)	**-5.77 (2.44)**
6-11	0.83	0.31 (0.71)	1.74 (0.91)	2.97 (1.82)
12-17	0.77	-0.55 (0.51)	**-1.88 (0.67)**	-0.66 (1.46)
Lived with bio. mom & dad, ages:				
0-5	0.90	-0.30 (0.76)	-1.46 (1.18)	**4.87 (2.47)**
6-11	0.82	-0.15 (0.67)	-0.99 (0.90)	-2.88 (1.83)
12-17	0.73	0.66 (0.49)	1.40 (0.74)	0.64 (1.53)
AFQT score (percentile)/10	44	**0.13 (0.03)**	-0.003 (0.03)	-0.02 (0.06)
Number of siblings	3.7	0.011 (0.011)	-0.000 (0.017)	0.047 (0.032)
Born outside the US	0.05	-0.42 (0.25)	0.02 (0.26)	**-1.58 (0.55)**
Father's years of schooling/10	11.5	0.14 (0.15)	0.12 (0.22)	-0.15 (0.41)
Mother's years of schooling/10	11.4	-0.13 (0.17)	0.38 (0.29)	0.47 (0.52)
Respondent is Baptist	0.23	0.20 (0.19)	**0.80 (0.30)**	**-1.19 (0.44)**
Protestant	0.34	0.06 (0.19)	0.51 (0.29)	**-0.89 (0.39)**
Catholic	0.25	-0.28 (0.22)	0.03 (0.30)	-1.02 (0.42)
Other	0.10	0.00 (0.23)	0.55 (0.33)	-1.00 (0.52)
Rotter Locus of Control scale/10*	8.5	0.04(0.20)	0.36 (0.25)	0.32 (0.48)
Experienced Discrimination*	0.33	-0.04 (0.08)	**-0.31 (0.14)**	0.06 (0.24)
Rosenberg self-esteem scale/100*	23.5	0.27 (1.23)	2.16 (1.70)	2.92 (3.06)
Pearlin mastery scale/100*	22.1	-0.16 (0.16)	-3.12 (2.12)	-4.48 (3.90)
Traditional attitudes*	2.4	0.12 (0.17)	0.28 (0.20)	-0.32 (0.39)
Risk attitude*	2.9	-0.015 (0.19)	-0.043 (0.041)	-0.026 (0.056)
Voted in recent election	0.78	0.06 (0.10)	**-0.32 (0.15)**	-0.28 (0.26)
Political affiliation (2008):				
Democrat strong	0.21	-0.08 (0.11)	-0.37 (0.20)	-0.17 (0.31)
Democrat weak	0.15	-0.12 (0.14)	**-0.42 (0.20)**	-0.61 (0.35)
Republican strong	0.16	-0.20 (0.22)	0.25 (0.18)	-0.51 (0.38)
Republican weak	0.15	-0.16 (0.24)	0.14 (0.17)	-0.64 (0.19)

Household				
Household size	4.3	-0.02 (0.08)	**-0.43 (0.19)**	-0.17 (0.28)
No. of Boys 0-4	0.3	0.18 (0.25)	**1.04 (0.42**	-0.06 (0.74)
No. of Boys 5-11	0.5	0.05 (0.20)	0.29 (0.34)	-0.38 (0.60)
No. of Boys 12-17	0.3	-0.26 (0.25)	**1.18 (0.53)**	0.09 (0.77)
No. of Girls 0-4	0.3	-0.15 (0.23)	0.73 (0.46)	0.90 (0.73)
No. of Girls 5-11	0.5	0.07 (0.20)	**0.98 (0.37)**	-0.68 (0.65)
No. of Girls 12-17	0.3	-0.05 (0.22)	-0.17 (0.48)	-0.05 (0.76)

Note: Means are for cases with non-missing values. In the estimation, missing values are set to zero, and dummies indicating a missing variable are included. Estimates are from the model reported in column 3 in Table 6. Time-varying variables are averages over YA's childhood. Marginal effects that are significantly different from zero at the 5% level are in bold. The omitted category for the mother's religion is none.

* Indicates that the variable is described in the Data Appendix.

Table A-3: Marginal Effects (*100) of Time-Varying Family Structure Variables Experienced at Specific Ages in Competing-Risks Hazard Model of First Demographic Event

	Ages 0-5	Ages 6-11	Ages 12-17
Father figure exits child's household			
Pr(YA has child first)	0.10 (0.24)	-0.32 (0.23)	-0.13 (0.22)
Pr(YA marries first)	-0.33 (0.52)	-0.67 (0.49)	-0.38 (0.46)
Pr(YA cohabits first)	-0.24 (0.77)	-0.13 (0.69)	0.49 (0.58)
Father figure enters child's household			
Pr(YA has child first)	0.08 (0.21)	0.01 (0.22)	0.05 (0.22)
Pr(YA marries first)	0.02 (0.47)	0.06 (0.54)	-0.25 (0.47)
Pr(YA cohabits first)	0.42 (0.69)	0.35 (0.69)	-0.57 (0.59)
Fraction of childhood lived with:			
Married biological father			
Pr(YA has child first)	0.19 (0.35)	-0.10 (0.41)	-0.22 (0.35)
Pr(YA marries first)	0.20 (0.57)	-0.13 (0.81)	-0.38 (0.66)
Pr(YA cohabits first)	**2.61 (0.98)**	-0.93 (1.12)	0.37 (1.00)
Married step father			
Pr(YA has child first)	0.19 (0.51)	-0.28 (0.40)	0.15 (0.28)
Pr(YA marries first)	0.28 (1.01)	0.52 (0.80)	-0.61 (0.59)
Pr(YA cohabits first)	1.17 (1.47)	-0.35 (1.14)	1.16 (0.85)
Cohabiting biological father			
Pr(YA has child first)	-0.23 (0.52)	0.80 (0.83)	-2.44 (1.26)
Pr(YA marries first)	1.14 (1.05)	-2.03 (2.69)	-0.96 (2.00)
Pr(YA cohabits first)	**3.75 (1.60)**	-5.43 (3.02)	3.41 (2.89)
Cohabiting stepfather			
Pr(YA has child first)	0.43 (0.47)	0.00 (0.58)	0.13 (0.45)
Pr(YA marries first)	0.51 (1.33)	-1.09 (0.99)	0.38 (1.17)
Pr(YA cohabits first)	2.06 (1.62)	1.06 (1.61)	2.11 (1.19)
No. of person-sequence-years (person-years)	45,613 (37,644)		

Notes: Effects of mother's first event and marital status at birth do not depend on the child's age and are not shown. Results are from a multinomial competing risks hazard model of the first demographic event, with family structure variables measured separately for each of the three age ranges. The sample size is smaller than in the main estimates because not all YAs have data for all three age groups. Estimates are weighted by the CNLSY79 sampling weight. Marginal effects and p-values in bold are significantly different from zero at the 5% level.

Table A-4: Marginal Effects of Family Structure Variables by Race and Ethnicity in Multinomial Logit Competing Risks Hazard Model of First Demographic Event

	Non-Hispanic White	Non-Hispanic Black	Hispanic
Mother's first event			
Married			
Pr(YA has child first)	0.17 (0.32)	-0.21 (0.16)	-0.15 (0.24)
Pr(YA marries first)	-0.14 (0.39)	0.13 (0.44)	0.47 (0.38)
Pr(YA cohabits first)	-0.34 (0.57)	-0.05 (0.56)	0.85 (0.63)
Cohabited			
Pr(YA has child first)	0.29 (0.41)	-0.07 (0.21)	0.04 (0.35)
Pr(YA marries first)	-0.67 (0.46)	-0.72 (0.68)	0.50 (0.51)
Pr(YA cohabits first)	**1.28(0.64)**	**1.64 (0.69)**	0.78 (0.99)
Mother's union status at YA's birth			
Married			
Pr(YA has child first)	-0.31 (0.40)	-0.19 (0.19)	-0.49 (0.36)
Pr(YA marries first)	0.35 (0.48)	0.09 (0.54)	-0.81 (0.60)
Pr(YA cohabits first)	-0.59 (0.72)	-0.67 (0.65)	**2.06 (1.91)**
Cohabiting			
Pr(YA has child first)	0.64 (0.60)	-0.15 (0.25)	-0.10 (0.38)
Pr(YA marries first)	0.37 (0.85)	-0.93 (0.85)	0.03 (0.76)
Pr(YA cohabits first)	0.81 (1.03)	0.36 (0.74)	-0.36 (1.24)
Age of mother at YA's birth			
Pr(YA has child first)	-0.05 (0.10)	-0.02 (0.09)	-0.01 (0.09)
Pr(YA marries first)	0.00 (0.14)	0.00 (0.14)	0.02 (0.14)
Pr(YA cohabits first)	-0.03 (0.26	-0.07 (0.26)	0.05(0.26)
Exit and entry			
Father figure exits child's household			
Pr(YA has child first)	0.38 (0.28)	-0.11 (0.12)	-0.12 (0.24)
Pr(YA marries first)	-0.65 (0.33)	-0.13 (0.32)	-0.21 (0.44)
Pr(YA cohabits first)	0.14 (0.51)	**1.02 (0.45)**	1.16 (0.67)
Father figure enters child's household			
Pr(YA has child first)	-0.15 (0.36)	-0.05 (0.14)	0.45 (0.24)
Pr(YA marries first)	0.27 (0.34)	-0.42 (0.34)	-0.73 (0.40)
Pr(YA cohabits first)	-0.48 (0.53)	-0.16 (0.48)	0.96 (0.68)

Fraction of childhood lived with:			
Married biological father			
Pr(YA has child first)	0.01 (0.48)	0.16 (0.25)	-0.02 (0.42)
Pr(YA marries first)	-0.15 (0.50)	0.20 (0.59)	1.33 (0.72)
Pr(YA cohabits first)	0.71 (0.87)	**1.91 (0.89)**	**3.11 (1.12)**
Married step father			
Pr(YA has child first)	0.25 (0.65)	0.17 (0.28)	-0.25 (0.46)
Pr(YA marries first)	0.09 (0.60)	0.81 (0.55)	**1.66 (0.86)**
Pr(YA cohabits first)	1.74 (1.04)	0.35 (1.07)	1.47 (1.33)
Cohabiting biological father			
Pr(YA has child first)	-22.3 (11.8)	-0.59 (0.75)	0.36 (0.67)
Pr(YA marries first)	-1.32 (1.27)	**2.57 (1.29)**	-2.07 (1.83)
Pr(YA cohabits first)	-0.57 (3.21)	**5.60 (2.37)**	-2.15 (2.23)
Cohabiting stepfather			
Pr(YA has child first)	-0.26 (1.05)	0.27 (0.52)	1.07 (0.64)
Pr(YA marries first)	-0.73(1.82)	-1.38 (1.51)	0.98 (1.40)
Pr(YA cohabits first)	**5.08 (1.77)**	**4.18 (1.82)**	4.08 (2.46)

Notes: Results are from a single multinomial logit competing risks hazard model of the first demographic event, with each family structure variable interacted with indicators for the three race/ethnicity groups. Weighted by the YA's sampling weight. Marginal effects in bold are significantly different from zero at the 5% level.

Table A-5: Marginal Effects of Family Structure Variables by Gender in Multinomial Logit Competing Risks Hazard Model of First Demographic Event

	Male	Female
Mother's first event		
Married		
Pr(YA has child first)	-0.02 (0.19)	-0.12 (0.17)
Pr(YA marries first)	0.08 (0.39)	0.03 (0.38)
Pr(YA cohabits first)	-0.50 (0.50)	0.40 (0.56)
Cohabited		
Pr(YA has child first)	0.07 (0.32)	0.07 (0.22)
Pr(YA marries first)	-0.63(0.50)	-0.39 (0.47)
Pr(YA cohabits first)	0.84 (0.63)	**2.11 (0.62)**
Mother's union status and age at YA's birth		
Married		
Pr(YA has child first)	-0.07 (0.27)	-0.24 (0.20)
Pr(YA marries first)	0.27 (0.50)	-0.05 (0.49)
Pr(YA cohabits first)	**-1.28 (0.64)**	-0.32 (0.76)
Cohabited		
Pr(YA has child first)	-0.41 (0.37)	0.13 (0.28)
Pr(YA marries first)	0.37 (0.73)	-0.15 (0.91)
Pr(YA cohabits first)	-0.27 (0.88)	1.29 (0.89)
Mother's age at birth of YA		
Pr(YA has child first)	-0.06 (0.09)	-0.04 (0.09)
Pr(YA marries first)	-0.02 (0.14)	0.01 (0.014)
Pr(YA cohabits first)	-0.05 (0.26)	-0.00 (0.26)
Exit and entry		
Father figure exits child's household		
Pr(YA has child first)	0.04 (0.17)	-0.04 (0.13)
Pr(YA marries first)	**-0.78 (0.34)**	-0.30 (0.31)
Pr(YA cohabits first)	0.56 (0.46)	0.56 (0.51)
Father figure enters child's household		
Pr(YA has child first)	0.15 (0.22)	-0.09 (0.16)
Pr(YA marries first)	0.19 (0.35)	0.00 (0.34)
Pr(YA cohabits first)	-0.17 (0.49)	-0.21 (0.52)
Fraction of childhood lived with:		
Married biological father		
Pr(YA has child first)	0.14 (0.33)	-0.06 (0.25)

Pr(YA marries first)	-0.00 (0.47)	0.16 (0.55)
Pr(YA cohabits first)	**1.82 (0.86)**	0.84 (0.87)
Married step father		
Pr(YA has child first)	0.38 (0.45)	0.11 (0.28)
Pr(YA marries first)	-0.44 (0.64)	0.99 (0.57)
Pr(YA cohabits first)	1.43 (1.00)	1.48 (1.08)
Cohabiting biological father		
Pr(YA has child first)	-1.32 (1.59)	-0.51 (0.54)
Pr(YA marries first)	-0.05 (1.30)	-1.11 (0.99)
Pr(YA cohabits first)	0.60 (3.41)	-0.27(2.32)
Cohabiting stepfather		
Pr(YA has child first)	-0.35 (0.73)	0.67 (0.49)
Pr(YA marries first)	-0.74 (1.42)	-0.46 (1.65)
Pr(YA cohabits first)	**5.20 (1.71)**	**4.43 (1.67)**

Notes: Results are from a single multinomial competing risks hazard model of the first demographic event, with each family structure variable interacted with indicators for male and female. Weighted by the YA's sampling weight. Marginal effects in bold are significantly different from zero at the 5% level.

Figure A1: Comparison of Characteristics of NLSY Young Adults to Same Cohorts in the Current Population Survey

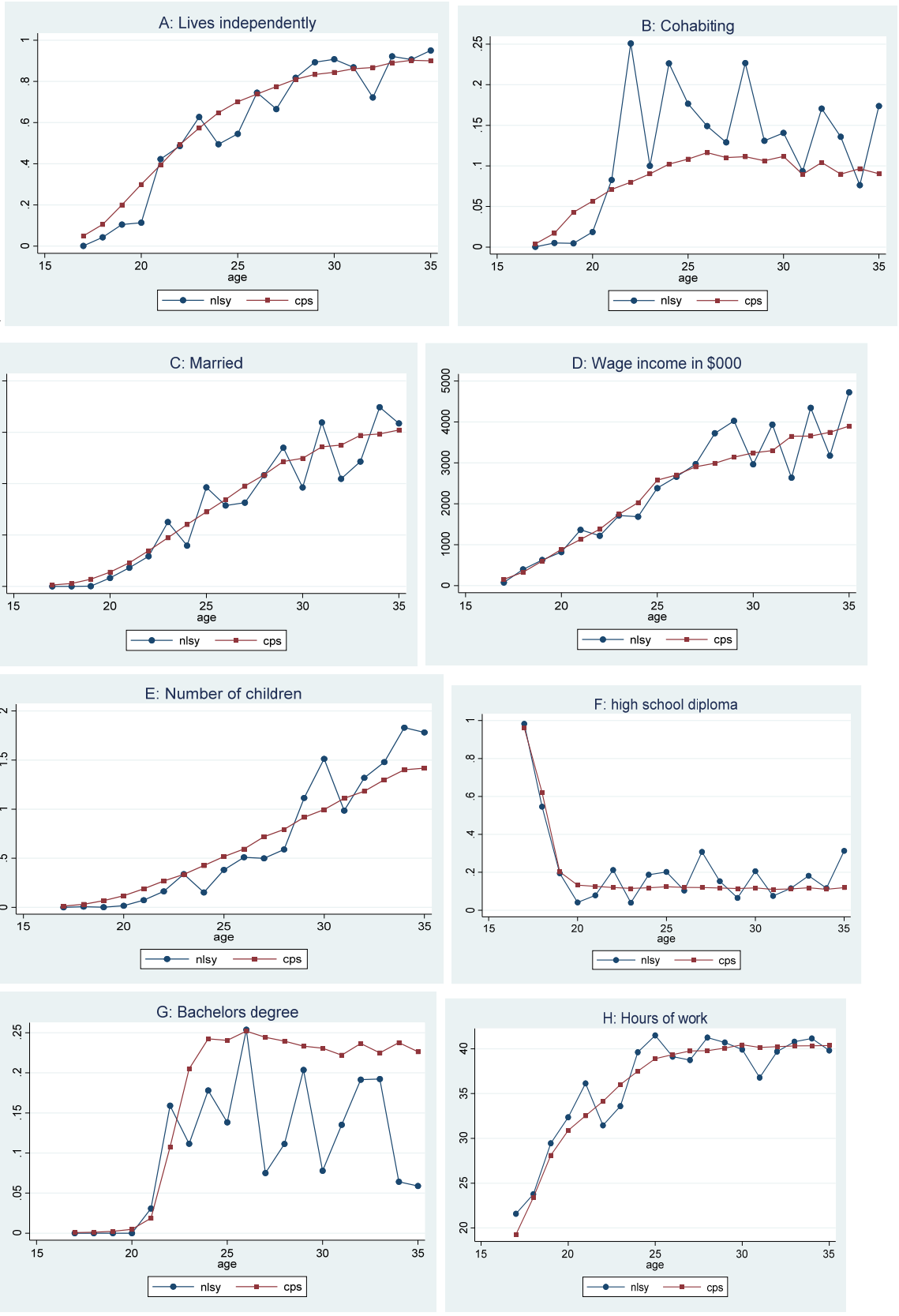

Figure A2: Hazard Rates of First Event