View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Carolina Digital Repository

What Leads Young Adults to Cohabitation?: The Effects of Family Status

Kayo Suzuki

A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements of for the degree of Master of Arts in the Department of Sociology.

Chapel Hill
2006

Approved by:

Kathleen M. Harris

Ronald R. Rindfuss

Lisa D. Pearce

ABSTRACT

Kayo Suzuki: What Leads Young Adults to Cohabitation?: The Effects of Family Status
(Under the direction of Kathleen M. Harris)

This thesis concerns the effects of family structure in childhood and adolescence on cohabitation in young adulthood as a first union. In the United States, cohabitation has become more common as a first union in recent decades, and over half of people cohabit before their first marriage. Prior studies show that family life experiences have significant effects on a child's own family formation. This study examines the effects of family structure in childhood on young adults' first union formation, focusing on the choice of cohabitation over marriage and singlehood. The results show that cohabitation is promoted by (1) reduced education, (2) experiencing parental cohabitation, (3) living in an alternative family growing up, and (4) experiencing higher number of family status changes. Male unemployment, welfare allowance, religion and religiosity, race/ethnicity, and parental education also had significant influence on young adults' cohabitation.

ACKNOWLEDGEMENTS

This thesis could not have been written without Dr. Kathleen Mullan Harris, who not only served as my supervisor but also encouraged and challenged me throughout the thesis-writing process. She and the other faculty members, Dr. Ronald R. Rindfuss and Dr. Lisa Pearce, guided me through the process, never accepting less than my best efforts. I also appreciate Dr. Cathy Zimmer for her statistics advice, and Dr. Phyllis Howren, Andi Lazar, Anne K. Hunter, and Emily Smith for their careful reading and correction of my English, as well as the emotional support they provided. I thank them all.

This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01-HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (addhealth@unc.edu).

TABLE OF CONTENTS

LIST OF TABLES

Table

LIST OF FIGURES

Figure

CHAPTER I

LITERATURE REVIEW AND THEORY

In the past few decades, non-traditional family forms have become more and more prevalent in the United States. Traditionally, it was the norm for young people to get married first and then have a child. However, people today create their own families in more diverse ways. One noticeable nontraditional family form is the female-headed family. In particular, families headed by unmarried mothers have been a subject of social controversy in relation to welfare dependency (Luker 1996). Another trend is the decrease of legal marriages and the increase of non-legal unions, or cohabitation. While many studies have examined childbirth outside marriage since the 1970s, cohabitation, especially those unions with no prospect of marriage that have become common in the last two or three decades, was not studied well until the 1990s (Casper and Cohen 2000). In the 1990s cohabitation gained scholars' attention as a relatively understudied behavior, and many recent studies have been conducted (Smock 2000). These studies show that cohabitation is now the major form of first union. According to Bumpass and Lu (2000), cohabitation preceded almost 60 percent of all first marriages between 1990 and 1994, compared to 46 percent between 1980 and 1984.

As cohabitation has become more prevalent, marriage has been declining. The 1995 National Survey of Family Growth shows that the ratio of women who were married by age 25 decreased from almost 70 percent of the cohort born in 1950-54 to 53 percent of the cohort born in 1965-69 (Raley 2000). Interestingly, despite the rising average age of first

marriage, the average age of first union formation has not greatly changed over decades (Bumpass, Sweet, and Cherlin 1991).

Cohabitation and the Family of Origin

Sociologists and demographers have tried to explain the increase of cohabitation from both macro and micro perspectives. Among micro perspectives, the effect of the family of origin on children's family of procreation has been an intriguing issue for researchers. In particular, how family structure affects on children's entry to marriage, marital life, and the stability of marriage has been studied by many researchers (Acock and Kiecolt 1989; Astone and McLanahan 1991; Greenberg and Nay 1982; McLanahan 1988; McLanahan and Bumpass 1988; Michael and Tuma 1985; Webster, Orbach, and House 1995). As for the effect on cohabitation, an interesting study about first union formation was conducted by Teachman (2003). With data from the 1995 National Survey of Family Growth, he studied first union formation among 7,477 women ages from 25 to 44. He developed hypotheses based on the following four theories: (1) economic hardship theory, (2) socialization theory, (3) social control theory, and (4) instability and change theory. Teachman categorized the parental family structures of the women into five groups: married biological parents, stepfamily, cohabiting non-biological parents, cohabiting two-biological parents, and others. Then, he specified the types of family status and the number of status changes at three developmental stages (age 0-5, 6-10, 11-15). Controlling for variables such as father's education, mother's education, mother's age of first birth, number of siblings, religion, race and ethnicity, and age, he compared the timing of first union formation and the type of first union formation (marriage or cohabitation) across the five family structure types. First, he

tested economic hardship theory with family status type. He thought children of single mothers or cohabiting couples would have the highest rate of cohabitation as they were most likely to be financially vulnerable. Second, he tested socialization theory with an expectation that the cohabitation rate is highest among those who have lived with a parent and his/her cohabiting partner. Third, he tested social control theory with an expectation that the cohabitation rate is higher among those who have lived in a single parent family than those who lived only in a two-parent family, and the impact is larger when living in a single parent family was experienced in adolescence. Finally, he tested change and instability theory with an expectation that what matters is not the type of family structure but the number of transitions. Furthermore, he tested these theories by examining the timing of family structure changes. He hypothesized that economic hardship and socialization would have stronger effects when an alternative family was experienced in adolescence. Also, he thought the lack of social control by two parents would have stronger effects when it occurs in adolescence. On the other hand, he did not hypothesize about the timing of structure change in terms of change and stability theory.

The results of his study support socialization theory: respondents who had lived with a cohabiting parent were most likely to have experienced premarital cohabitation among all respondents. Family status type affected choice of first union type: having lived in a non-traditional family increased the likelihood of premarital cohabitation. The results also support the instability and change perspective: the number of family status changes had a positive correlation with cohabitative union formation. However, he found no evidence to support the other two theories of economic hardship and social control. The lack of support for economic hardship theory is an obvious mismatch with Smock's finding that most

cohabitation studies show a lower socioeconomic status among cohabitors.

Teachman's study is a good illustration of how to measure the effects of family status on cohabitation. However, there are some significant weak points in his study. First, as Teachman points out, the data he used did not include two important variables: income and reduced education. I think they are essential variables in examining effects of family status on a union choice, because prior studies show that lower socioeconomic status is one of two most common correlates of cohabitation. Thus, it is necessary to analyze data with variables to measure socioeconomic status for a more thorough test. In addition, he used a dummy variable of Catholic to measure and control for the effects of religion, and the result showed that being Catholic did not have an effect on cohabitation choice, contrary to his expectation. I think Teachman should have measured religiosity rather than religion type, because Catholicism is not the only religion that encourages marriage and premarital abstinence. In addition, the level of internalization of a religious doctrine is expected to depend on a believer's religious commitment rather than a religion itself. Also, Smock's review shows that a difference between cohabitors and non-cohabitors is in religiosity. Another weakness of Teachman's study is that his sample only included females. Using data with both genders helps to have more generalizable results.

Theory and Theoretical Expectations

Here, I propose a theoretical framework of the influence of family status in childhood and adolescence on first union choice in young adulthood. As my focus is on first union formation, marriage and cohabitation after first union are beyond this study. I focus on first union formation because my main interest is in the effect of the family of origin. First union

formation is a significant turning point in the life course because it is a more permanent transition that separates youths and young adults from their family of origin, and it signifies an important life course decision. Furthermore, the effects of the family of origin are expected to be more salient in first union than in later residential unions, because experiences in previous union(s), such as relationships and socioeconomic conditions, should influence people's behaviors and attitudes in second and third unions, and because a first union occurs closer in time to family of origin experience.

I test four theories/hypotheses in this study, borrowing Teachman's theoretical framework: economic hardship theory, socialization theory, social control theory, change and instability theory. Economic hardship theory claims that a family structure change is often accompanied by economic hardship, which limits opportunities for education and work, and as a result, children with such a background are less attractive marriage mates and are less likely to be able to afford marriage compared to children from a two-biological parent household. Many studies show children who have spent time in an alternative family are more likely to encounter economic difficulty (e.g. McLanahan and Sandefur 1994). Because nonmarital union is an easier and more accessible arrangement, males without sufficient earnings are more likely to choose cohabitation over marriage (Smock and Manning 1997).

Socialization theory claims that children learn from parents about behaviors and attitudes toward family life including marriage and cohabitation. Children who grew up in an alternative family and witnessed their parents having courtship outside marriage are more likely to have more positive attitudes about nonmarital sex and cohabitation (Axinn and Thornton 1996; Clarkberg, Stolzengerg, and Waite 1995; McLanahan and Sandefur 1994). Therefore, if this theory is true, youth who experienced a parental cohabitation are most

likely to cohabit later, and those who are from a two-biological married parent family are least likely to cohabit.

Social control theory claims that the most significant effect of a family's living arrangement occurs in adolescence (McLanahan and Bumpass 1988; Thomson, McLanahan, and Braun-Curtin 1992). Researchers argue that single parents do not have enough time available to supervise children and that biological parents supervise children better than stepparents because the latter do not spend as much time with children as the former do (Astone and McLanahan 1991; McLanahan and Sandefur 1994). Youth who are not closely monitored and supervised during adolescence are more likely to engage in deviant behaviors such as early premarital sexual intercourse (Albrecht and Teachman 2003; McLanahan and Bumpass 1988; Udry and Billy 1987; Wu and Thomson 2001） and out-of-wedlock childbearing (Wu 1996; Wu and Martinson 1993). Because cohabitation without the prospect of marriage is a relatively new phenomenon, this theory also applies to cohabitation such that youth from a family without two biological parents are more likely to cohabit.

Instability and change theory emphasizes the impact of family structure transitions, rather than family status itself. It claims that separation from family members and change of family status puts children at risk, and as a result, it makes them more skeptical about long-lasting relationships. This theory identifies two major risk factors: one relates to psychological stress and the other to residential mobility. The former suggests risk is due to psychological turbulences caused by family separation and new family formation (Amato 1993; Amato and Keith 1991; Cherlin 1978; Cherlin, Chase-Lansedale, and McRae 1998; Furstenberg 1987), while the latter argues risk occurs through social relationship disconnection (Coleman, 1988, 1990; Hagan, MacMillan, and Wheaton, 1996). If this theory

is true, those who experienced a greater number of family status changes should be more likely to choose cohabitation over marriage, or more likely to avoid forming a residential union.

Based on these theories, four hypotheses will be tested in my study. Some hypotheses relate to the choice of cohabitation over singlehood, and others relate to the choice of cohabitation over marriage.

Hypothesis 1: Lower socioeconomic status of the family of origin and reduced education increase the chance of cohabitation over both singlehood and marriage.

Hypothesis 2: Growing up in a cohabiting-parent family increases the chance of cohabitation over marriage.

Hypothesis 3: Growing up in a two-biological parent family decreases the chance of cohabitation over both singlehood and marriage, while growing up in a single-parent family or non-biological parent family increases the chance of cohabitation over singlehood.

Hypothesis 4: Experiencing a number of family status changes increases the chance of cohabitation over both singlehood and marriage.

Figure 1 shows a conceptual model that incorporates the various factors related to these theories. As I will describe later, my analysis examines cohabitation and marriage as a first union. Therefore, it is possible to test these hypotheses for both cohabitation and marriage. In this study, however, I will focus on cohabitation, and I will refer to marriage in comparison to cohabitation. I focus on cohabitation because my interest is in non-traditional unions. Another reason is the sample age: the sample is age 18-26 at the time of the last interview (Wave 3) and thus marriage is not yet prevalent among the majority of the sample.

Other Factors on Cohabitation

The effect of the family of origin is not the only major explanatory factor for cohabitation. From a macro perspective, Smock (2000) identified four possible influences. First, she points out cultural change in two trends: individualism and secularism (Lesthaeghe 1983; Lesthaeghe and Surkyn 1988; Rindfuss and VandenHeuvel 1990; Thornton 1989). As the social norm for marriage has loosened, people have come to prefer and value individual happiness more than happiness that can be acquired in fulfilling traditional roles as a family member. At the same time, freed from religious doctrines, people have become more tolerant toward cohabitation without the prospect of marriage. The second factor is economic change. Industrialization induced women to enter the labor market (Goode 1960), and consequentially gender roles have changed (Cherlin and Furstenberg 1988). As a result, relationships within a couple have also changed. Females today no longer need to be dependent on their husbands if they have sufficient income from their own work. Other researchers argue that the marriageability of the male has been declining as male real earnings have decreased, at the same time that female economic independence has increased during past decades (Bachrach, Hindin, and Thomson 2000; Oppenheimer 1997). The third factor is the sexual revolution (Bumpass 1990). Due to advancement of contraceptive technologies, especially the appearance of contraceptive pills, sexual activity has become separated from reproduction. As a result, an argument to limit sexual activity to a marital relationship has lost ground. Fourth, Smock points out socialization effects as contemporary causal processes. Today more people think of cohabitation is an alternative union because they have more chances to see other people cohabiting. As more people cohabit, the non-married coresidential arrangement has become a more common living arrangement, and

acceptance of cohabitation has increased (Bumpass 1990; Rindfuss and VandenHeuvel 1990). Bachrach and her colleagues found another macro factor that influences cohabitation: government policies (Bachrach, Hindin, and Thomson 2000). For example, some researchers found higher cohabitation rates in association with more generous AFDC payment (Lichter, LeClere, and McLaughlin 1991; Moffit, Reville, and Winkler 1998). This occurs because higher benefits are a disincentive to marry because marriage could make the couple ineligible for benefits.

From an individual perspective, there are roughly four explanations. First, parents' behavior and attitudes about union formation affects cohabitation. Individuals whose mother has divorced and whose mother has liberal attitudes about cohabitation are more likely to enter cohabitation at an earlier stage of life (Axinn and Thornton 1993; Thornton 1991; Thornton, Axinn, and Hill 1992). Second, family socioeconomic status affects cohabitation. In reviewing previous studies on cohabitation, Smock (2000) found that the cohabitors were slightly more likely to have lower socioeconomic status in terms of educational attainment or income. This finding is supported by a qualitative study that explored young adults' ideals and attitudes about marriage. It shows young adults' deterrence from marriage and choice of cohabitation due to economic difficulty occurs regardless of the fact that the majority of young adults think marriage is the more desired choice than cohabitation and that they have high aspirations for marriage (Gibson, Edin, and McLanahan 2003). Third, marriage and cohabitation patterns vary by race and ethnicity: Hispanics and Asians are more likely to have a family of traditional types compared to whites and Native Americans. African-Americans have unique values about family formation: they tend to see economic security the primary importance in family formation (Bachrach, Hindin, and Thomson 2000;

Edin and Kefalas 2005), and their marriage rate is disproportionately low (Raley 2000). Finally, personal attitudes and beliefs also affect cohabitation. Smock (2000) found cohabitation was more prevalent among people who are slightly more liberal, less religious, and more supportive of egalitarian gender roles and nontraditional family roles.

Based on these studies, I include several other measures in my study as well as family status and its change. Male economic opportunity, female economic opportunity, and welfare payment are included as macro factors, and family income in adolescence, race and ethnicity, religion and religiosity are included as micro factors.

According to Xie et al (2003), cohabitation can occur in three ways and prior studies often did not clearly distinguish these three despite the fact that each type of cohabitation has different meanings. They classify cohabitation into (1) an alternative to marriage, (2) an alternative to singlehood, and (3) a precursor to marriage. In the first case, cohabitation is closer to marriage, while it is closer to being single in the second, and the third case is intermediary. The meaning of cohabitation is crucial in studying changes in union formation. In my study, the data do not allow me to determine the meaning associated with cohabitation and thus I focus only on actual living arrangement leaving the meaning for future research.

CHAPTER II

RESEARCH DESIGN

Data: Population and Sample

To test my theoretical framework, the population under study should include a wide diversity of participants. For this purpose, I have chosen data from the National Longitudinal Study of Adolescent Health (Add Health). I also am interested in studying contemporary families and young adults. In order to examine more precise effects of family status, it is desirable for the population to be limited to relatively narrow age groups so to eliminate generation effects. As Add Health study's population was born in the late 1970s and in the early 1980s, they grew up when the US divorce rate was high but plateaued and childbearing outside marriage was on the rise. Therefore, this population is appropriate to study the effects of family status on cohabitation.

The data of Add Health study were collected by Carolina Population Center at the University of North Carolina at Chapel Hill for a school-based, longitudinal study of the health-related behaviors of adolescents and their outcomes in young adulthood. The population of Add Health data is adolescents in grades 7 through 12 in the United States in 1994 and 1995, and the sample was collected as nationally representative.

Three waves of interviews have been conducted to date, and I use the data from the Wave 1 survey in 1994-1995 and the Wave 3 survey in 2001-2002. First, a sample of 80 high schools and 52 middle schools was selected with unequal probability of selection from

groups sorted by size, school type, region, location, and percent white for sample representativeness. All students in attendance on the day of the survey participated in the in-school survey. For in-home interviews, multiple methods were used to obtain samples from school rosters-stratified random selection (core), purposeful selection (PAIRS), systematic selection (ethnic samples, genetic sample, disabled), and certainty (additional twins for genetic sample). Furthermore, additional adolescents were selected outside of the sampling frame as part of the genetic sample. Interviews for a family member of respondents (mostly mother) were also conducted in Wave 1. Approximately six years later, the Wave 3 survey was conducted. Original respondents of Wave 1 were re-interviewed with a response rate of 77 percent resulting in a sample size of 15,197. The strength of Add Health data lies in the fact that original respondents are re-interviewed, and therefore it is possible to measure directly the influence of experiences at an earlier point in the life course (childhood and adolescence) on subsequent behavior in young adulthood. Furthermore, outside databases such as census data are matched with each respondent according to their home residence, which provide information about the neighborhoods and communities in which they live.

According to Chantala (2003), the sampling design of Add Health data has several impacts on analysis. First, clustering of participants in schools causes biases. Respondents sampled from the same school are likely to respond more alike, and they are not statistically independent. They usually have a positive correlation and increased variance. Second, the sample includes oversample groups such as handicapped youths and identical twins. This problem can be solved by weighting. My analysis will use sample weights and will correct standard errors for clustering (e.g., non independence bias).

The sample may have other biases. First, the sample is expected to be

socioeconomically more advantaged than the population. This is driven from the fact that the sample does not include high-school dropouts who otherwise should have enrolled in 11th and 12th grade at the point of the In-School interview, as Add Health is a school-based survey and the core sample for in-home interview was chosen from the school rosters. However, the bias is thought not to be very substantial because high-school dropouts at Wave 1 are only a small part of sample, and those who dropped out of school after the In-School survey are still included in this longitudinal study. Next, attrition between Wave 1 and Wave 3 created some biases. In Wave 1 20,745 respondents participated in in-home interviews. In Wave 3 the number decreased to 15,197. Respondents of Wave 3 were more likely to be female, non-black, and enrolled in earlier grades when at Wave 1 than non-respondents (Chantala, Kalsbeek, and Andraca 2004: 3). Again, lost respondents between Wave 1 and Wave 3 are more likely to be estranged from family and friends, because those who had moved and disconnected from family members and friends were more likely to be undetected in Wave 3.

In the process of dropping cases with missing values on the analytic variables, the sample size reduced from 15,197 to 13,420. A large number of missing cases occur due to missing sampling weight (875 cases) and non-family member respondents to the parental questionnaire (528 cases). I eliminated the cases when the respondent to the parental questionnaire is not in the child's household roster in order to focus on the effects within a family. Because of this restriction, the analytic sample is expected to underrepresent more complex types of families, such as surrogate-parent families. Table 1 shows the frequency distributions of the analytic sample for each variable.

The dataset has some weaknesses to test the hypotheses. The sample includes several young cohorts not as useful for studying first union. Because the youngest cohort was

interviewed in the year immediately after they graduated from high school in Wave 3, they have had little chance to form a union by the Wave 3 interview. Hence, it is likely that the impact of their experience in their childhood and adolescence is not shown yet in cohabitation. This problem is partly solved by categorizing the sample by age group. The frequency distribution of a first union shows nearly half of all respondents had ever had a union by Wave 3 (Table 1), and the bivariate table (Table 2) shows 40.1 percent of the younger respondents born in 1979-1983 had experienced a first union by Wave 3. Therefore, although the younger members of the Add Health cohort have had less time to experience a first union, cohabitation is still prevalent enough in the Add Health data to test the theories.

Measurement and Operationalization

The measurements used to test the hypotheses are categorized into the following groups: family structure, family background, personal background, contextual background and first union. The independent variable of interest is family structure, and the dependent variable is first union, while the rest are control variables.

Independent variable: family structure Family structure is measured by family status type, the number of family status changes a respondent had ever experienced by the time of the Wave 1 survey, and experience of parental cohabitation. In the Wave 1 parental interview, which was mainly completed by mothers, the parent reports on her three most recent marriages or marriage-like relationships. Using these data with family structure at Wave 1, family structure from birth to Wave 1 can be determined. A combination of mother's and father's statuses represents one of eight family status types over the child's life: two biological parents, biological mother and stepfather, biological father and stepmother,

adoptive parent(s), foster parent(s), single mother, single father, and surrogate parent(s). I create four dummy variables using these eight longitudinal family status types. The first variable is for intact two-biological parent families. Growing up in a household with two biological parents without any family status change is coded as 1, and otherwise 0. The second variable is for stepfamilies. Having ever lived in a stepfamily is coded as 1, and otherwise 0. The third variable is for single parent families. Having ever lived with either a single mother or a single father is coded as 1, and otherwise 0. The fourth variable is for no-biological parent families. Having lived with either adoptive parent(s), foster parent(s), or surrogate parent(s) is coded as 1, and otherwise 0. These four dummy variables are used to test social control theory, which claims that a family without two parents has less control over child's behavior, and a stepfamily has less control than a two-biological parent family. These variables are also used to test socialization theory, which claims that growing up in an alternative family increases the chance of a child's cohabitation. In a frequency distribution after weighting (Table 1), 58.2 percent had always lived with two-biological parents up to the Wave 1 interview, while 18.6 percent had ever experienced a stepfamily, 35.2 percent had experienced a single-parent family, and 7.4 percent had experienced a household with no biological parent (adoptive, foster, and surrogate). Except for two-biological parent families, these categories are not mutually exclusive, as the respondents could experience multiple family forms over their lives.

In order to test the possibility that parental marital quality affects young adults' union formation, I further categorized two-biological parent family into three groups by marital quality: families of two biological parents with high marital quality (33.0 percent of the entire respondents), families of two biological parents with low marital quality (16.2 percent),

and families of two biological parents with no information about marital quality (8.9 percent). I measured marital quality with two variables: 1) if parents talked about separating during the previous year; and 2) how much parents fought or argued in the previous year. I coded marital quality high in the cases when parents did not talk about separation and they argued a little or not at all, while I coded marital quality low if parents talked about separating or if they argued some or a lot. For the cases neither information was available, I coded them as missing cases.

Next, the number of family status changes is used to test change and stability theory. The number of family status changes is counted as the total sum of status changes among the eight family statuses. When a respondent's family status changed from a two-biological parent family to a stepfamily in two consecutive years, the number of change is counted as two, as it is expected that he/she had temporarily experienced a one-parent family between a parental divorce and a remarriage. Otherwise, a family status change is counted as one change. I categorize the number of family status changes into three groups: no change, one change, and two or more changes. According to change and stability theory, the larger number of changes a child experiences, he/she is more likely to experience psychological turbulence and social network disconnection, and more likely to have distrust in a long-lasting couple relationship; therefore the probability of choosing marriage decreases, while that of cohabitation and staying single increases. Though a majority of respondents (65.9%) had never experienced a family status change, 15.8 percent had one change, and 18.4 percent had two or more status changes. The number of family status changes has a correlation of 0.71 with having experienced a stepfamily, and 0.67 with having experienced a single-parent family.

Finally, experience of parental cohabitation is used to measure socialization theory. As the dataset does not include a variable that measures experience of parental cohabitation directly, a new measure is created with four variables to cover as much of the child's life as possible. The first to third variables are parental union history of the three most recent marriage/marriage-like relationships as reported in the parental questionnaire in Wave 1. The fourth variable is a dummy variable for cohabiting parents at the time of Wave 1 created from resident parents' status. When a parent's status is biological parent's partner but not a stepparent of the respondent, the couple is considered as cohabiting. This variable is included in order to capture current parental cohabitation as fully as possible because report about cohabitation by parents is expected to be underreported due to their hesitancy about reporting non-marital relationship or their lack of understanding of the question. The respondents whose parents reported cohabitation in at least one of these four variables are considered to have experienced parental cohabitation. Although this variable has a weakness in that it covers only the three most recent parental unions, the number of parents who reported more than three unions is very small (189 among 13,420). Thus, this is the best variable to measure experience of parental cohabitation with this dataset. Those who experienced parental cohabitation are coded as 1, those who did not are coded as 0, and the missing cases are treated as one category in order to obtain as large sample size as possible by keeping missing cases, which account for 13.4 percent of the respondents. Not much parental cohabitation was reported: 11.1 percent of respondents had lived with a cohabiting parent. The family rosters in Wave 1 show that 2.17 percent of the respondents had a cohabiting parent. In the 1995 Current Population Survey, only 0.772 percent of parents living with children under 15 years reported that they have a cohabitation partner (calculated

from Table 8 in p.71 in Current population reports by Census Bureau). On the other hand, the Survey of Income and Program Participation (SIPP) shows that 4.5 percent of age 35-39, 3.4 percent of age 40-44, 2.7 percent of age 45-49 had a cohabitation partner in 1996 (Baughman, Dickert-Conlin, and House 2002). The undercount of cohabitation is explained by hesitancy of respondents to report cohabitation due to "taboos and possible stigmas associated with cohabitation" (Casper and Cohen 2000: 3). The higher cohabitation rates seen in SIPP are expected to derive from the fact that the population include adults without children as well as parents. However, Add Health parents are probably in range of 35-55 years old, and the percentages match quite well with SIPP.

Control variables The control variables consist of three groups of variables: family background, personal background, and contextual background.

Family background The family background variables include parental education level, family annual income, race and ethnicity, and the number of co-residing siblings. The data have many missing responses for parental education levels as they were reported by children. Therefore, I created a variable for parental education level as follows. (1) If responses on both resident parents' education are valid, employ the higher education level. (2) If a response on one of resident parents is invalid, employ the other parent's education level. (3) If neither of responses on resident parents is valid, employ the higher education level of non-resident biological parents. (4) If neither of responses on resident parents is valid, and if response on only one of non-resident biological parents is valid, employ the valid non-resident parent's education level. (5) If none of education level of these four types of parents is available, treat as a missing case. Parents' education is therefore measured by the following categorical variable of parent's final education level: less than high school (11.6%),

high school graduate (30.3%), some college (21.0%), and four-year college or higher (34.3%), and missing cases (2.8%).

Family income is acquired from the parental questionnaire in Wave 1, as estimates of income before tax in 1994. I recoded a continuous income reports into five categories: 0 to 15,999, 16,000 to 31,999, 32,000 to 50,999, and 51,000 and higher, and missing income. The first category is approximately below the poverty line in 1994, and the second category is twice the poverty line. The third category falls between near-poverty and middle-class income, and the fourth category represents middle-class income. I include missing as a category because approximately a fifth of the respondents (21.7%) had missing values. The frequency distribution shows 13.1 percent lived under the poverty line, and 17.2 percent lived below double of poverty line. Slightly more than a fifth of households had annual income between 33,000 dollars and 50,999 dollars, and 25.6 percent of households had annual income of 51,000 dollar or higher.

Race and ethnicity are measured as follows. Those who self-identified themselves as white, black, Native American, Asian or Pacific Islander and self-identified themselves as non-Hispanic are categorized into their racial group. Those who identified themselves more than one race are categorized as mixed race. Those who recognized themselves as Hispanic are categorized as Hispanic regardless of their racial category. The majority of respondents were white (66.2%) and 14.8 percent were black, followed by Hispanic (11.4%), Asian or Pacific Islander (3.5%), and Native American (0.6%), and 3.4 percent were mixed race.

Finally, a variable for the number of siblings is used to control family size. This variable is created from the household rosters at Wave 1 reported by the respondents, and treated as a continuous variable with values from 0 to 12. Though this measurement does not count the

number of siblings who did not reside with the respondents, it still gives an indication of a family size. At the time of Wave 1 about a fifth of the respondents did not have a sibling in the same household, while 39.5 percent had one and 24.3 percent had two. The rest of the respondents (14.8%) had more than two siblings.

Personal background Personal background is measured by biological sex, age, educational level, religion, and religiosity. Biological sex is male or female. In the analytic sample, female respondents outnumber male respondents (7,090 to 6,330), but the proportion of sex is approximately even after weighting.

Age is measured by categories of birth year. Those who were born between 1974 and 1978 are categorized as "older," and those who were born between 1979 and 1983 are categorized as "younger." In the analytic sample, the "younger" respondents outnumber the "older" respondents: after weighting, 40.1 percent were born in 1974 to 1978, and 59.9 percent were born in 1979 to 1983.

Educational level is measured by a dummy variable for lack of high school graduation. Those who did not graduate high school are categorized as 1, and those who did are categorized as 0. Because many respondents were enrolled in school at the time of the Wave 3 survey (e.g., post secondary), this is the best measurement for educational level with this dataset. Most respondents graduated high school, while 13.8 percent did not.

Religion is measured by six dummy variables of classified denominations: mainline Protestant, evangelical Protestant, black Protestant, Catholic, others and indeterminate, and no religious affiliation. I categorized religious denominations following Steensland et al. (2000). In my analysis, I set mainline Protestant as the reference group (22.3%). Evangelical Protestants made up 19.5 percent of the sample, black Protestant 10.0 percent, Catholics 24.8

percent, and those who had other religions were 11.1 percent, while 12.4 percent of the respondents did not have any religious affiliation.

Religiosity is measured by the frequency of religious service attendance in the previous year of the Wave 1 interview. The respondents are categorized into five groups: those who reported having a religion are categorized into four groups by the frequency of religious service attendance from 1 for "never" to 4 for "once a week or more often," and those who reported having no religion are coded as 0. While the non-religious respondents (those who do not have religious affiliation and those who never attend religious services) account for 23.9 percent, 17.9 percent of the respondents attended religious service less than once a month, 19.5 percent did several times a month, and 38.7 percent did once a week or more often.

Community background The respondent's address at Wave 1 is linked to Census data for certain geographic areas. I use male and female unemployment rate for the respondent's Census Tract in 1990 to test labor market gender role change theories. According to this theory, lower male employment rates decrease the marriageability of men, while higher female employment rates provide women more financial independence.

The unemployment rate, especially the female unemployment rate, may seem to be an inappropriate variable to test this theory, because it is the rate of jobseekers, and therefore potential labor force participants, such as those who gave up a job search, are not taken into consideration. Therefore, I tested another variable, female economic opportunity, which is an index of the expected number of jobs for female workers relative to the potential supply of female workers. It is an indicator for economic opportunity taking into account the sex-segregated nature of the labor market (Nakamura, Nakamura, & Cullen 1979). The

bivariate table shows there is a significant difference in first union formation depending on the level of female labor force opportunity (Table 2). Another reason for the preference for this measurement is a high collinearity between the male and female unemployment rates: while the male unemployment rate has a correlation of 0.672 with female unemployment, the pairwise correlation between male unemployment rate and female labor force opportunity is -0.271. Therefore, I use female labor force opportunity to test the hypotheses. They are treated as continuous variables. The mean of male unemployment rate was 7.46 percent with a linearized standard error of 0.003, and the mean of female labor force opportunity index was 0.063 with a linearlized standard error of 0.001.

Another hypothesis to be tested is welfare policy effects. According to this theory, higher welfare payment for a single mother lowers her motivation for marriage, because they lose eligibility for AFDC once they get married. I use the maximum AFDC payment in the state and treat it as a continuous variable. The mean maximum payment of state AFDC was 360.02 dollars with a standard error of 7.89.

Dependent variable: first union The dependent variable is a three-category measure of first union: marriage, cohabitation, and no union. First, I create variables for marriage and cohabitation. Marriage is a legal marriage, and cohabitation is a marriage-like relationship for more than a month. Next, a variable for first union is created from these two variables and their timing. The respondents who had never married or cohabited are categorized as "no union," those who had married but never cohabited before the first marriage are categorized as "marriage," and those who had cohabited but never married and those who cohabited before the first marriage are categorized as "cohabitation." While 50.8 percent of the respondents had never had a union, 8.7 percent had married and 40.5 percent

cohabited as a first union.

CHAPTER III

RESULTS

Bivariate Analysis

The data are first analyzed by conducting a bivariate analysis of the independent/control variables and the dependent variable, first union type at Wave 3. The results are shown in Table 2.

Family status Respondents who lived their entire life in an intact two-biological parent household, and whose parental relationship was high quality, were more likely to have never entered a first union (59.4%) and less likely to have cohabited (31.6%) than other respondents. On the other hand, those whose two biological parents had low marital quality or did not answer about marital quality were slightly more likely to have married or cohabited. However, these differences are minor compared to the differences between other types of families. Those who experienced a non-traditional family status were also more likely to have experienced a first union, and it was mostly due to cohabitation. While the percentage of marriages as a first union is between 7.4 percent and 11.4 percent across all family types, cohabitation was clearly more common among those who had experienced a non-traditional family: Stepfamily 50.7%; single-parent family 49.9%; and no-biological parent family 56.9%. The percentage of those who had never had a first union was particularly low among those who had experienced a family with no biological parent (33.0%).

Family status change As I expected, the respondents who had experienced a larger number of family status changes were more likely to have entered cohabitation. Those who had experienced two or more family status changes were more likely to have cohabited (52.6%) than those who had only one change and no change (48.9% and 35.1% respectively). On the other hand, marriage as a first union was more frequent among those who did not experience a family status change (9.1%) and those who experienced more than two changes (8.2%) than those who experienced only one change (7.6%).

Parental cohabitation About a half of the respondents who had ever lived with a cohabiting parent cohabited as a first union, while only 5.5 percent married. Among those who had never lived with a cohabiting parent, on the other hand, 38.2 percent cohabited and 8.7 percent were married as a first union. The respondents whose parents did not answer about marriage/marriage-like relationships were more likely to have been married in the first union (11.4%) and to have cohabited (45.0%) than those who did not experience parental cohabitation.

Parental education The first union formation rate was lower as the parental education increased. For example, the marriage rate was significantly higher among those whose parent did not finish high school (12.9%) than those whose parent received a bachelor degree or more education (6.7%). The cohabitation rate was highest among those whose parent did not receive any higher education (51.6% among non-high school graduates and 48.2% among high school graduates), but less than 30 percent among those whose parent received bachelor degree or higher cohabited as a first union.

Income Respondents who had higher family annual income in adolescence were less likely to have experienced a first union. The bivariate analysis shows that having

middle-class income has a negative effect both on marriage (6.0%) and on cohabitation (32.1%). Both the cohabitation rate (49.7%) and marriage rate (9.8%) were the highest among the lowest income group below the poverty line, and they were the second highest among the second-lowest income group (45.1% and 9.6%).

Race and ethnicity Blacks and Asians were more likely to have never had a first union (52.7% and 66.5% respectively) compared to whites (50.3%), Native Americans (36.8%), Hispanics (49.2%), and non-Hispanic mixed (44.2%). Native Americans and mixed-race respondents were more likely to have cohabited as a first union (58.8% and 48.2% respectively) than whites (41.1%), blacks (41.0%), Hispanics (37.5%), and Asians (25.8%). Hispanics were more likely to have married (13.3%), while blacks (6.3%) and Native Americans (4.5%) were less likely to have married.

Number of siblings Respondents who had no sibling were more likely to have had a first union, especially in the form of cohabitation (47.4%). On the other hand, those who had one or two siblings were least likely to have had a first union (53.8%). Although about 39 percent of both those who had one or two siblings and those who had three or more siblings had cohabited as a first union, marriage was more common among the latter (12.3%) than the former (7.7%).

Sex The male respondents were more likely to have never had a union (55.7%) than the females (45.9%). Only 7.2 percent of the males were married as a first union, while 10.2 percent of the female respondents married. The sex difference in cohabitation (37.1% among males and 43.9% among females) was smaller than that of marriage. This is because women are more likely to have a union with an older partner and to have a union at a younger age than men, and because marriage is less common than cohabitation among younger adults.

Age Among the younger group born between 1979 and 1983, 59.9 percent had never experienced a union, while 37.3 percent of the older group born between 1974 and 1978 had no union. The percentage of marriage as a first union of the older group (13.7%) was more than twice of that of the younger group (5.4%), while the age-group difference in cohabitation ratio was smaller (49.0% to 34.8%). I think this is because many people cohabit before marriage, and because the younger group had not reached the phase that many people get married.

Education Cohabitation is apparently the major choice of first union for high school dropouts. About two third of high school dropouts had a first union in the form of cohabitation (67.5%), while 36.2 percent of high school graduates cohabited as a first union. On the other hand, high-school dropouts' marriage rate (7.7%) was lower than those who graduated high school (8.9%).

Religion The majority of evangelical Protestants and the respondents with no religious affiliation have had a first union, while less than half of mainline Protestants, black Protestants, Catholics, and other religion believers had a first union. Marriage was more common among evangelical Protestants (15.3%) and other religion believers (11.4%), while marriage rate among no-religion respondents was only 5.8 percent. On the other hand, cohabitation was the most common among no-religion respondents (55.3%), whose percentage was 13 to 19 points higher than other religious groups.

Religiosity Religiosity had a negative relationship with union formation in young adulthood, a positive relationship with marriage, and a negative relationship with cohabitation. The more frequently a respondent attended religious service in adolescence, the less likely he/she is to have a union in young adulthood. While 42.6 percent of the

non-religious respondents had no union, 59.0% of the most religious respondents (those who attended religious service once a week or more) had no union. In spite of the low union-formation rates among more religious respondents, the more religious respondents were more likely to have married: while only 5.5 percent in the non-religious group were married, 10.9 percent of the religious group were married. On the other hand, more religious youths were less likely to have cohabited: 51.9% of the non-religious group cohabited in a first union, while 30.1% in the most religious group did so.

Male unemployment rate In order to examine the bivariate relationship between male unemployment rate and first union formation, I categorized the continuous variable into two groups: lower than 5 percent and 5 percent or higher. Union formation was less common in the tracts with low male unemployment rate, and both marriage and cohabitation were more prevalent in the tracts with higher male unemployment rate. In the tracts where the male unemployment rate in 1990 was lower than 5 percent, 57.0 percent had no union, and the percentages of both marriage (7.6%) and cohabitation (35.4%) in young adulthood were lower than in the tracts where the male unemployment rate was 5 percent or higher. In the tracts with the higher male-unemployment rate, 47.4 percent had no union, approximately 9.3 percent were married as a first union, and 43.3 percent cohabitated.

Female labor force opportunity I categorized the variable into two groups: lower than 0.06 and 0.06 or higher. The percent of those who had never had a union is higher in the tracts with the higher female labor force opportunity (54.3%). On the contrary, marriage was more prevalent where female labor force opportunity was lower (10.9% in the lower-opportunity tracts; 7.5% in the higher-opportunity tracts). Cohabitation was also more frequently seen in the tracts with lower female labor force opportunity (44.7% in lower-opportunity tracts;

38.2% in higher opportunity tracts).

AFDC In order to examine the bivariate relationship between AFDC payment and first union type, I categorized the variable into three groups by the maximum monthly AFDC payment: lower than $250, between $250 dollars and $499, and $500 dollars and higher. The respondents who lived in a state with a higher AFDC payment were most likely to have never had a union (59.1%), and least likely to have married (5.3%) and to have cohabited (35.6%). In the states with middle-amount welfare allowance, marriage rate was 7.1%, but the cohabitation rate was the highest among the three groups (43.9%). In the states with small welfare allowance, on the other hand, the union formation rate was the highest, and the percentage marriage as a first union was more than double of other states.

Multinomial logistic regression

In the next step of the analysis, the data were analyzed by multinomial logistic regression predicting type of first union. As family status has high collinearity with the number of family status changes, I built two sets of regression models. The first set of models uses family status to test economic hardship theory, socialization theory, social control theory, and three macro-level theories. Model 1 includes family status measurements and parental cohabitation to test socialization theory and social control theory. In model 2, family income and respondent's educational level are added to test economic hardship theory. In Model 3, male unemployment rate, female labor market opportunity index, and AFDC are added to test three macro-level theories. Finally, all my control variables are added in Model 4 (Table 3 shows the odds ratios, and Appendix I shows the coefficients and standard errors). The second set of models is identical to the first, except that they use the number of family status

changes instead of family status (Table 4 shows the odds ratios, and Appendix II shows the coefficients and standard errors). This set of models tests economic hardship theory, socialization theory, change and stability theory, and three macro-level theories. In both Set 1 and Set 2, I conducted a Wald chi-square test for the significance of adding each set of variables to the model in terms of explaining variation in the dependent variable[1].

With these two sets of models, I first set "no union" as a reference category, and compare those who had cohabitated and those who married as a first union to those who had no union. Next, I set "marriage" as a reference category so that I can compare those who had cohabitated to those who married as a first union.

The following section describes the results of groups of variables in each set of analysis. In Model 1 in Set 1, compared to the respondents who lived in a family with two biological parents in a good marital relationship, those who had two biological parents whose marital quality was low or missing are not significantly different in first union type. This result shows that parental marital quality does not have a significant influence on first union formation in young adulthood as long as youths lived with two biological parents in childhood and adolescence. Meanwhile, all types of alternative family increased the likelihood of cohabitation compared to singlehood. Respondents who have experienced a stepfamily and a single-parent family have a nearly 50 percent higher likelihood of cohabitation over singlehood compared to those who have experienced only two-biological parent family in a good marital relationship. Those who have lived in a family with no biological parent had 91 percent higher likelihood of cohabitation over singlehood. Having experienced a stepfamily or a no-biological parent family also increased the likelihood of

[1] I also ran the multivariate analysis unweighted to compare with weighted results, and the results were not qualitatively different.

marriage over singlehood (odds ratio 1.66 and 1.86 respectively). The only significant contrast for cohabitation versus marriage occurs for respondents who had experienced a single-parent family who were 1.7 times more likely to cohabit over marriage.

In Model 1 in Set 2, family status changes increased the likelihood of cohabitation over singlehood (odds ratio 1.73 for one change; 2.05 for multiple changes) and over marriage, (1.59 for one change; 1.47 for multiple changes) compared to those who did not experience a family status change. In addition, multiple family status changes also increased the likelihood of marriage over singlehood by 39 percent. In both Set 1 and Set 2, parental cohabitation decreased the likelihood of marriage over singlehood by 33 to 36 percent, while increasing the likelihood of cohabitation over marriage by 71 to 74 percent. Respondents whose parental cohabitation was missing response were more likely to have had a first union (odds ratio 1.34 for cohabitation over singlehood; 1.56 for marriage over singlehood) compared to those who had never experienced parental cohabitation.

A set of variables that measure economic deprivation significantly improved the model ($p<.0001$). After introducing economic variables in Model 2, the effects of family structure variables remain almost the same as in Model 1 except that the influence of missing response in parental cohabitation disappears. In general, higher family income decreases the likelihood of both cohabitation and marriage over singlehood. Not finishing high school had a major impact on first union, especially on cohabitation. It increased the odds ratio of cohabitation to singlehood about 3.5 times, marriage to singlehood about 1.65 times, and cohabitation to marriage more than double[2].

Model 3 includes community background variables as well as the variables in Model 2.

[2] I ran the models without adolescent's education due to concern about the endogeneity of education with union formation, and the results did not change. Therefore, I left education in the models.

Community background variables significantly improved the model ($p<0.001$). The effects of family structure variables are almost the same as in Model 2. However, many of the low family income effects lose significance, except the higher likelihood of marriage over singlehood among the lowest income group, which remains significant. Contrary to the hypotheses, the male unemployment rate and the female labor force opportunity index have no significant influence on first union. Higher AFDC amount had an effect to reduce the likelihood of marriage over singlehood, but increases the likelihood of cohabitation over marriage in first union.

Model 4 is the most comprehensive model with all control variables included as well as family structure variables, economic variables, and community background variables. The set of control variables significantly improved the model ($p<0.001$). The following details the results of Model 4.

Family Structure

Family Status As seen in other models in Table 3, marital quality of two biological parents did not have significant influence on first union in Model 4. Compared to the respondents who lived with two biological parents in a good marital relationship at the time of Wave 1, those who had lived in a stepfamily had higher odds ratio of cohabitation compared to singlehood (1.46) and marriage compared to singlehood (1.63). Similarly, having lived in a family with no biological parent also increased the odds ratio of both cohabitation (1.53) and marriage over singlehood (1.70). Having lived in a single-parent family increased the odds ratio of cohabitation over singlehood by 20 percent and over marriage by 53 percent compared to have lived in only two biological parents in a good marital relationship. These results indicate that the effect of family status on first union differs by its type: having lived

in a stepfamily or a family with no biological parent increases union formation in early adulthood in both cohabitation and marriage, while having lived in a single-parent family increases the likelihood of cohabitation but not of marriage.

Family Status Change In Model 4 of Table 4, the effects of number of family status changes decline somewhat, but remain significant. Respondents who experienced family status changes in childhood and/or adolescence were more likely to cohabit than remain single or marry in a first union and more likely to marry than remain single compared to those who experienced no family status changes. Furthermore, the respondents who had experienced multiple family status changes were even more likely to enter a first union in early adulthood than those who had experienced a single family status change. The odds ratio of cohabitation compared to marriage among those who experienced a change is 36 percent higher than those who experienced no changes.

Parental Cohabitation The effect of parental cohabitation in childhood and adolescence remains the same in the presence of all theoretical and control variables in Model 4. The respondents who had ever lived with a cohabiting parent were less likely to marry and more likely to cohabit over marriage.

Economic Deprivation

Income With all controls in Model 4, having lower family income itself did not have a significant effect on first union formation. However, the middle-class income and higher group (more than $51,000 per year) was less likely to cohabit or marry than the income group of $33,000 to 50,999. These results show that children from a middle-class family were less likely to have a first union in early adulthood, probably because they are more likely to be receiving higher education.

Education Education effects remain strong and even increase in Model 4. High school dropouts are much more likely to cohabit (odds=3.67), and marry (odds=1.84) than remain single and nearly twice as likely to cohabit as marriage in a first union.

Community Background

Male unemployment rate After introducing control variables in Model 4, the male unemployment rate significantly increased the likelihood of cohabitation over singlehood such that cohabitation increased 19 percent for every increase of 10 percentage points in male unemployment rate. Therefore, the respondents who lived in an area with higher male unemployment rate were more likely to cohabit as a first union.

Female Economic Opportunity Higher female labor force opportunity decreased the choice of marriage over singlehood such that when the ratio of supply of jobs to 100 female workers increase, the choice of marriage over singlehood declines by 15 percent. Therefore, the respondents who lived in an area with higher female labor force opportunity were less likely to marry.

AFDC Living in a state with a more generous AFDC allowance reduced the likelihood of marriage over singlehood, and increased the chances of cohabitation over marriage. With each additional $100 monthly AFDC allowance, the choice of marriage over singlehood decreased by 21 percent, and the choice of cohabitation over marriage increases by 25 percent. Therefore, the respondents who lived in a state with higher AFDC allowance chose cohabitation in first union formation over marriage in order not to lose their benefits.

Control Variables

Religion Results in Model 4 indicate that evangelical Protestants were more likely to enter a first union in early adulthood than mainline Protestants, and they were more likely to

choose marriage over cohabitation. On the other hand, being Catholic decreased the odds ratio of both cohabitation and marriage. Those who were affiliated with other religions were more likely to marry and less likely to cohabit in early adulthood.

Religiosity In general, the more often the respondents attended religious services in adolescence, the less likely they cohabited and the more likely they married in a first union. Compared to those who did not attend religious services, cohabitation over singlehood was 32 percent less prevalent among the most religious respondents. The odds ratio of marriage to singlehood was highest among those who attended religious services most frequently during adolescence (1.81 to 1.82). In addition, the odds ratio of cohabitation to marriage decreased sharply as the religiosity level increased.

Sex Model 4 shows that females were more likely to have experienced a first union, and the gender gap is wider in marriage than cohabitation. This result reveals a common gender difference in the life course: females enter a first union younger than males do. At the same time, however, the result indicates that cohabitation is more common than marriage among males who are not at the stage to have a marital partner.

Age The odds ratio of cohabitation to singlehood among the older respondents was about 2.6 times higher and the odds ratio of marriage to singlehood was more than five times higher than the younger members of the Add Health cohort. The odds ratio of cohabitation to marriage among older respondents was about 0.50, indicating that cohabitation is more often a choice among the younger respondents.

Race and ethnicity Compared to whites, black respondents were less likely to have cohabited and even less likely to have married, as is consistent with other research (Raley 2000). The odds ratio of cohabitation to singlehood among black respondents was nearly half

that of white respondents (0.54 in Set 1 and 0.57 in Set 2), and their odds ratio of marriage to singlehood was less than a third of whites' (0.49). Among Hispanics, marriage was a more popular first union arrangement than cohabitation. Compared to whites, their odds ratio of marriage to singlehood was 1.62 to 1.63, and the odds ratio of cohabitation to marriage was only 0.48. Being non-Hispanic mixed race did not show any significant difference in the first union type.

Parental education Consistent with other results on socioeconomic status, as parents' education increases, the likelihood of both cohabitation and marriage decline.

Number of siblings A larger number of siblings increased the chances of marriage. Each additional one sibling increased the odds ratio of marriage over singlehood by 15 percent, and it decreased the odds ratio of cohabitation over marriage by 16 percent.

Model 5: Interaction terms

In the next step of the analysis, I tested the interaction effects of age and gender with family structure experiences in childhood and adolescence (experienced family status type, the number of family status changes, and parental cohabitation) on first union. While the age interaction did not explain a significant increase in model variation at the .05 level, the gender interaction did significantly improve the model fit ($p<.05$). Two interaction terms with sex, having experienced a stepfamily, and having experienced family status change twice or more, had significant effects on first union type. More specifically, female respondents who had experienced a stepfamily were 79 percent more likely to cohabit over singlehood compared to those from a two-biological parent family, while male respondents who had experienced a stepfamily were 21 percent more likely to do so. Appendix III shows the calculation of these effects from parameter estimates in the

interactive Model 5. Similarly, female respondents who had experienced multiple family status changes were twice as likely to cohabit over singlehood, while the likelihood of cohabitation among male counterparts was 42 percent higher than for respondents from a two-biological parent family. Therefore, the effects of experiencing a stepfamily and multiple family status changes are stronger among females.

CHAPTER IV

DISCUSSION

In this study, I examined the influence of longitudinal histories of family structure of the family of origin on cohabitation as a first union using a nationally representative dataset of young adults age 18 to 26. Based on the results of the analyses above, the following conclusions were deduced.

Hypothesis 1 (Lower socioeconomic status of the family of origin and reduced education increase the chance of cohabitation over both singlehood and marriage.) was partly supported. Although the effects of lower family income did not directly influence cohabitation choices, having lower education was a strong predictor of cohabitation in early adulthood. Therefore, economic deprivation theory was supported in terms of reduced education, but not in terms of reduced income. In order to see the influence of family income on education, I examined the correlation between family income and education, and it was only -.1122. But higher income was associated with lower cohabitation and marriage, so this does support the income effect, but not economic deprivation.

Hypothesis 2 (Growing up in a cohabiting-parent family increases the chance of cohabitation over marriage.) was supported. The respondents who had ever lived with a cohabiting parent were more likely to cohabit over marriage in young adulthood than those who experienced no parental cohabitation. Interestingly, multinomial analysis shows that this disproportionately high cohabitation choice is not due to the higher likelihood of cohabitation

but due to the lower likelihood of marriage despite the fact that their crude cohabitation rate in Table 2 is very high (50.7%). According to this analysis, what children from a cohabiting-parent family learn is avoidance of marriage rather than active choice of cohabitation, given that all other conditions are the same. Therefore, more studies are needed in order to examine the mechanism of socialization in the family of origin.

Hypothesis 3 (Growing up in a two-biological parent family decreases the chance of cohabitation over both singlehood and marriage, while growing up in a single-parent family or non-biological parent family increases the chance of cohabitation over singlehood.) was mostly supported. Experiencing a stepfamily or a non-biological parent family significantly increased the likelihood of early onset of a union, although the odds ratio of cohabitation over marriage was not significantly higher. Similarly, experiencing a single-parent family significantly increased the early onset of cohabitation. Meanwhile, marital quality did not have significant influence on union formation and cohabitation among the respondents who had always lived with two biological parents. This result is accordant with social control theory. However, this point should be examined more carefully because some studies indicate that discordant marriage has significant long-term influences on children's life. For example, Amato and Sobolewski (2001) shows that growing up in a high-conflict two-parent family is as detrimental as experiencing parental divorce for children's quality and stability in heterosexual relationships and psychological adjustment in adulthood. A possible explanation for the non-significance of marital quality in my study is that the measurement of marital conflict concerned only the previous year of the survey. Still, it will be interesting to examine the effect of marital conflict more precisely in future studies.

Hypothesis 4 (Experiencing a number of family status changes increases the chance of

cohabitation over both singlehood and marriage.) was supported. The respondents who had experienced a family status change were more likely to cohabit in early adulthood, and those who had experienced multiple status changes were even more likely to do so. Furthermore, they were more likely to cohabit over marriage. This result supports change and stability theory.

In addition to the strong influence of family structure in the family of origin on cohabitation as a first union formation, male economic opportunity, religion and religiosity, race/ethnicity, and parental education also had significant influences on young adults' cohabitation. In addition, both higher female labor force opportunity and higher welfare allowance decreased the likelihood of marriage over singlehood. By decreasing the likelihood of marriage in a first union, higher AFDC allowance made cohabitation a more popular union type than marriage. On the other hand, male labor force opportunity had a direct influence on cohabitation. The higher male unemployment rate increased the likelihood of cohabitation over singlehood. This seems accordant with male economic opportunity theory.

As for religion and religiosity, members of more conservative denominations were less likely to enter a first union at young age, and they were less likely to cohabit over marriage. A first union formation in young adulthood was more commonly seen among those who did not have religious affiliation and those who attended religious services less frequently in adolescence, and cohabitation was more often their living arrangement.

The respondents whose parent had bachelor's degrees were less likely to enter a first union in young adulthood, probably due to pursuing higher education for themselves. Finally, those who lived with many siblings were more likely to be married over singlehood as a first

union, while their likelihood of cohabitation over singlehood was approximately equal regardless of the number of siblings. This result suggests that respondents from large families may feel the push to move out of their family of origin and are socialized into family building trajectory.

This study has several contributions. First, I reexamined Teachman's study with data that have a full family status history from birth to adolescence. While Teachman's dataset did not have measures for family income and respondents' education level, I tested economic deprivation theory with these direct measures. Although the results did not support a hypothesis that those who are from low-income families are more likely to cohabit, reduced education was the strongest predictor of cohabitation in young adulthood and youth from middle-class and higher income families are less likely to form unions in early adulthood.

Second, the dataset enables me to examine gender differences in the influence of the family of origin on a first union formation. Model 5s with gender interaction terms show that experiencing a stepfamily and experiencing multiple family status changes have a more prominent impact among females. However, it is still unknown how these gender differences arise. If these gender differences are not spurious, it will be an important factor to take into consideration in future studies.

Third, community background data matched with respondents' residential area made it possible to include macro level measures in the analysis. The result gives us useful implication for macro level theories. It is an interesting finding that worse male economic opportunity increases the likelihood of cohabitation while it does not have significant influence on the likelihood of marriage over singlehood, whereas better female economic opportunity and generous welfare decreases the likelihood of marriage while they do not

have significant influence on the likelihood of cohabitation over singlehood. The finding that higher AFDC allowance increased the choice of cohabitation over marriage demonstrates the impact of welfare policy on people's union type choice.

Fourth, the cohort in this study grew up in a period when divorce rates reached a plateau and nonmarital childbearing was rising rapidly, especially among whites in the United States. Therefore, they are a generation that includes those who have experienced parental divorces and new family formations through their childhood and adolescence. In terms of socialization and the influence of the social environment, their perception of family may be different from that of earlier generations who grew up when a union was believed to be a lifelong relationship and when childbearing mainly occurred within marriage. This study gives us clues to understand how historical time influence in the life course differs in terms of family life if the results are compared with studies conducted in other time periods.

This study has several limitations. The most noteworthy limitation is the age of the respondents. Because their first union was surveyed when they were between age 18 and 26, many of them had not experienced a first union yet. The patterns of cohabitation, as well as the impact of the family of origin, may change as they age. Further study is needed as more data are collected subsequently.

Another limitation is that many measures rely on the information up until the wave 1 survey. Because of this limitation, the experience and status of the respondents are not homogeneous. For example, a 13-year-old respondent who lived with two biological parents might have experienced a family status change, which is expected to have influences on his/her life in various aspects, but the dataset does not give information about experiences during adolescence after the survey for the younger respondents.

Furthermore, I did not invoke any meaning of cohabitation in this study, but it will be essential to assess its meaning in relation to marriage and singlehood. For example, Manning and Smock (2005)'s qualitative study provides some important insights. They pointed out that direct measurement of cohabitation in quantitative studies have limitations and ambiguity, such as unclear onset and end, definition, and terminology. Their interviews with cohabitors show that (1) many cohabitors "slide into" coresidential arrangements rather than having a distinctive starting date of cohabitation, (2) many cohabitors do not understand the term "unmarried partner" to mean a cohabiting partner, and (3) cohabitation is a choice between singlehood and coresidentialship rather than a choice between marriage and non-marital coresidentialship. Although the Add Health study defines cohabitation as a marriage-like relationship for more than a month, it is not certain how precisely this definition measures actual living arrangements.

While my study shows the impacts of family structures histories in the family of origin on cohabitation in forms of socialization, social control, family stability, and family economic condition, many aspects remain unclear. For example, how does family type influence the reduced education of children? Exactly which alternative families are different from two-biological parent families? What are the commonalities and differences among single-parent families, stepfamilies, and surrogate families in terms of their influence on children's union formation? Does the timing of an event such as family status change make a difference in the influence on first union formation? What type of life course do young adults follow after a first union formation, and how does the family of origin affect this life course? In the trend of increasing cohabitation and family diversity, answering these questions will provide new insights to understanding changing union formation behaviors.

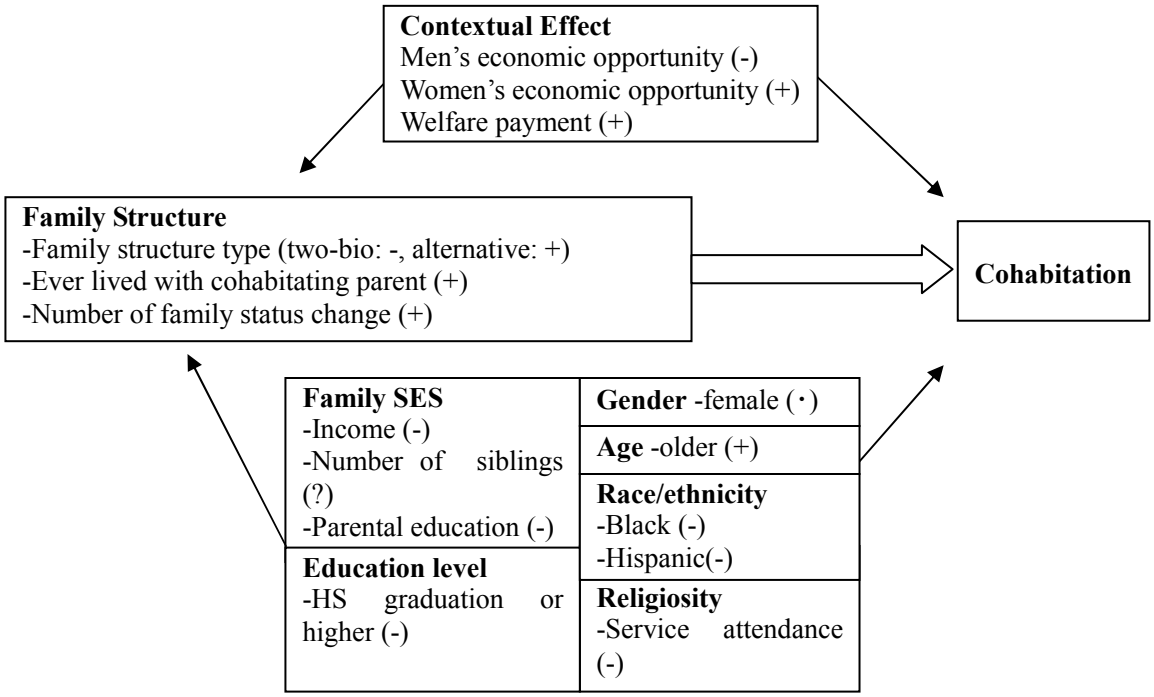

Figure 1:

Conceptual model of family structure effects in childhood and adolescence on cohabitation

Table 1:

Frequency Distribution of Variables Used in Analysis (N=13,420)

Variable	Category	Freq	weight %
Experienced family type	Intact two bio only	7,512	**58.2**
	-marital relationship-good	4,077	**33.0**
	-marital relationship-bad	2,091	**16.2**
	-marital relationship-missing	1,344	**8.9**
	Stepfamily	2,462	**18.6**
	Single parent	4,861	**35.2**
	No biological parent	1,217	**7.4**
Number of changes	None	8,777	**65.9**
	One	2,192	**15.8**
	Two or more	2,451	**18.4**
Parental cohabitation	No	9,900	**75.6**
	Yes	1,464	**11.1**
	Missing	2,056	**13.4**
Parental education	Less than high school	1,630	**11.6**
	High school	3,780	**30.3**
	Some college	2,777	**21.0**
	Bachelor or higher	4,879	**34.3**
	Missing	354	**2.8**
Household income in 1994	$0-15,999	1,687	**13.1**
	$16,000-31,999	2,296	**17.2**
	$32,000-50,999	2,834	**22.3**
	$51,000-	3,343	**25.6**
	Missing	3,260	**21.7**
Race/ethnicity	White	7,090	**66.2**
	Black	2,681	**14.8**
	Native American	100	**0.6**
	Asian	919	**3.5**
	Hispanic	2,105	**11.4**
	Mixed non-Hisapnic	525	**3.4**
Number of siblings	0	2,654	**21.4**
	1	5,213	**39.5**
	2	3,410	**24.3**
	3 or more	2,143	**14.8**
Sex	Male	6,330	**50.6**
	Female	7,090	**49.4**
Age	Older (born in '74-'78)	7,453	**40.1**
	Younger (born in '79-'83)	5,967	**59.9**
Education	Not finished high school	1,583	**13.8**
	Finished high school	11,837	**86.2**

Religion	Mainline Protestant	2,999	**22.3**
	Evangelical Protestant	2,148	**19.5**
	Black Protestant	1,743	**10.0**
	Catholic	3,544	**24.8**
	Other religion	1,397	**11.1**
	No religion	1,589	**12.4**
Religiosity (church attendance)	No attendance	3,008	**23.9**
	Less than 1/mo	2,364	**17.9**
	1/mo or more	2,612	**19.5**
	1/wk or more	5,436	**38.7**
First union	None	6,912	**50.8**
	Marriage	1,264	**8.7**
	Cohabitation	5,244	**40.5**

Community background variables	weighted mean	linearized Std. Err.
Male unemployment rate (%)	7.455	**0.003**
Female LFO index	0.0633	**0.001**
State AFDC allowance (dollar)	360.02	**7.89**

Table 2:

Bivariate Relationship between Covariates and First Union Status (weighted)

Variable	Category	No Union	Marriage	Cohabitation	$\chi 2$ Pr
Family status	Two bio relation-good	59.4	9.0	31.6	0.000
	Two bio relation-bad	55.8	8.6	35.7	0.002
	Two bio relation-missing	53.0	11.4	35.6	0.006
	Stepfamily	40.3	8.9	50.7	0.000
	Single parent	42.6	7.4	49.9	0.000
	No bilological parent	33.0	10.1	56.9	0.000
Number of status changes	None	55.8	9.1	35.1	0.000
	One	43.5	7.6	48.9	
	Two or more	39.2	8.2	52.6	
Parental cohabitation	No	53.1	8.7	38.2	0.000
	Yes	43.8	5.5	50.7	
	Missing	43.6	11.4	45.0	
Parental education	Less than high school	35.5	12.9	51.6	0.000
	High school	42.9	8.9	48.2	
	Some college	50.0	9.5	40.5	
	Bachelor or higher	63.4	6.7	29.9	
	Missing	52.8	6.9	40.3	
Household income in 1994	$0-15,999	40.5	9.8	49.7	0.000
	$16,000-31,999	45.3	9.6	45.1	
	$32,000-50,999	53.2	8.6	38.2	
	$51,000-	61.9	6.0	32.1	
	Missing	45.9	10.6	43.5	
Race/ethnicity	White	50.3	8.6	41.1	0.000
	Black	52.7	6.3	41.0	
	Native American	36.8	4.5	58.8	
	Asian	66.5	7.7	25.8	
	Hispanic	49.2	13.3	37.5	
	Mixed non-Hisapanic	44.2	7.6	48.2	
Number of siblings	0	43.4	9.2	47.4	0.000
	1 or 2	53.8	7.7	38.5	
	3 or more	48.8	12.3	38.9	
Sex	Male	55.7	7.2	37.1	0.000
	Female	45.9	10.2	43.9	
Age	Older (born '74-'78)	37.3	13.7	49.0	0.000
	Younger (born '79-'83)	59.9	5.4	34.8	
Education	Not finished HS	24.8	7.7	67.5	0.000
	Finished high school	55.0	8.9	36.2	

Religion	Mainline Protestant	54.4	6.8	38.8	0.000
	Evangelical Protestant	42.0	15.3	42.6	
	Black Protestant	52.5	5.8	41.7	
	Catholic	58.5	6.6	34.9	
	Other religion	53.7	11.4	34.9	
	No religion	38.9	5.8	55.3	
Religiosity	No attendance	42.6	5.5	51.9	0.000
	Less than 1/mo	45.8	8.6	45.6	
	1/mo or more	49.3	8.3	42.5	
	1/wk or more	59.0	10.9	30.1	
Male unemployment rate	Less than 5%	57.0	7.6	35.4	0.002
	5% or higher	47.4	9.3	43.3	
Female LFO index	Less than .06	44.4	10.9	44.7	0.001
	.06 or higher	54.3	7.5	38.2	
State AFDC /mo	Less than $250	47.7	14.5	37.8	0.000
	$250-499	49.1	7.1	43.9	
	$500 or higher	59.1	5.3	35.6	

Table 3:

Odds Ratios of Paramater Estimates for Multinomial Logistic Regression of First Union Type: Set 1

		Model 1			Model 2		
		c/s	m/s	c/m	c/s	m/s	c/m
Family Structure							
Family status	Two bio relation bad	1.11	1.02	1.09	1.10	1.00	1.09
	Two bio relation missing	0.96	1.07	0.90	0.86	0.91	0.95
	Stepfamily	1.45***	1.66***	0.87	1.51***	1.76***	0.86
	Single parent	1.50***	0.88	1.70***	1.25**	0.70***	1.78***
	No biological parent	1.91***	1.86***	1.02	1.76***	1.75***	1.01
Parental cohabitation	Yes	1.12	0.64*	1.74**	0.96	0.53**	1.80**
	Missing	1.32**	1.50**	0.89	1.24*	1.35	0.92
Economic							
Family income	$0-15,999				1.24*	1.66**	0.75
	$16,000-31,999				1.17	1.36*	0.86
	$51,000-				0.78**	0.60***	1.31
	Missing				1.09	1.22	0.89
Education	Not finished high school				3.49***	1.63**	2.14***
F		16.92	***		30.57	***	
df		14			24		

		Model 3			Model 4		
		c/s	m/s	c/m	c/s	m/s	c/m
Family Structure							
Family status	Two bio relation bad	1.10	1.04	1.07	1.11	1.01	1.10
	Two bio relation missing	0.87	0.91	0.95	0.87	0.85	1.02
	Stepfamily	1.52***	1.75***	0.87	1.46***	1.63**	0.90
	Single parent	1.25**	0.70***	1.79***	1.20*	0.78*	1.53***
	No biological parent	1.75***	1.74***	1.01	1.53***	1.70**	0.90
Parental cohabitation	Yes	0.95	0.58**	1.64**	0.96	0.66*	1.45*
	Missing	1.24*	1.32	0.94	1.17	1.18	0.99
Economic							
Family income	$0-15,999	1.15	1.43*	0.80	1.10	1.24	0.88
	$16,000-31,999	1.13	1.29	0.88	1.10	1.21	0.91
	$51,000-	0.81**	0.67**	1.22	0.84*	0.72*	1.16
	Missing	1.07	1.19	0.90	1.04	1.06	0.98
Education	Not finished high school	3.46***	1.56**	2.21***	3.67***	1.84***	2.00***
Community Background							
Male econ	Male unemployment*10	1.16	1.05	1.11	1.19*	1.07	1.11
Female econ	Female LFO*100	0.92	0.88	1.05	0.95	0.85**	1.11
AFDC	AFDC allowance/100 per mo	1.01	0.78***	1.29***	0.99	0.79***	1.25***
Control							
Religion	Evangelical Protestant				1.06	1.68**	0.63**
	Black Protestant				1.16	0.73	1.59
	Catholic				0.79*	0.71*	1.12
	Other religion				0.87	1.51**	0.58**
	No religion				1.30*	1.60	0.81
Religiosity	Less than 1/mo				1.06	1.70*	0.63*
	1/mo or more				1.03	1.64*	0.63*
	1/wk or more				0.68***	1.82**	0.37***
Sex	Female				1.71***	2.05***	0.83
Age	Older				2.58***	5.11***	0.51***
Race/ ethnicity	Black				0.54***	0.49**	1.10
	Native American				1.33	1.15	1.16
	Asian				0.64	0.77	0.83
	Hispanic				0.78	1.62**	0.48***
	Mixed non-Hisapnic				1.19	0.92	1.29
Parental education	Less than high school				1.06	1.28	0.82
	Some college				0.79**	0.95	0.84
	Bachelor or higher				0.59***	0.64**	0.92
	Missing				0.67	0.71	0.94
Family size	Number of siblings				0.97	1.15***	0.84***
F		29.67	**		22.61	***	
df		30			70		

		Model 5		
		c/s	m/s	c/m
Family Structure				
Family status	Two bio relation bad	1.23	0.98	1.25
	Two bio relation missing	0.86	0.97	0.89
	Stepfamily	1.21	1.37	0.88
	Single parent	1.20	0.82	1.46*
	No biological parent	1.33	1.80	0.74
Parental cohabitation	Yes	0.96	0.66	1.44*
	Missing	1.17	1.19	0.99
Economic				
Family income	$0-15,999	1.09	1.24	0.88
	$16,000-31,999	1.10	1.20	0.92
	$51,000-	0.83*	0.72*	1.15
	Missing	1.03	1.06	0.98
Education	Not finished high school	3.68***	1.85***	1.99***
Community Background				
Male econ	Male unemployment*10	1.19*	1.07	1.11
Female econ	Female LFO*100	0.95	0.85**	1.11
AFDC	AFDC allowance/100 per mo	0.99	0.79***	1.26***
Control				
Religion	Evangelical Protestant	1.06	1.67**	0.63**
	Black Protestant	1.15	0.73	1.57
	Catholic	0.79*	0.71*	1.12
	Other religion	0.87	1.50*	0.58**
	No religion	1.30*	1.59	0.82
Religiosity	Less than 1/mo	1.06	1.69*	0.63*
	1/mo or more	1.02	1.63*	0.63*
	1/wk or more	0.68***	1.82**	0.37***
Sex	Female	1.62***	2.07***	0.78
Age	Older	2.58***	5.11***	0.50***
Race/ ethnicity	Black	0.54***	0.49**	1.11
	Native American	1.33	1.16	1.15
	Asian	0.64	0.77	0.83
	Hispanic	0.78*	1.61**	0.48***
	Mixed non-Hisapnic	1.19	0.92	1.29
Parental education	Less than high school	1.05	1.27	0.83
	Some college	0.79**	0.95	0.83
	Bachelor or higher	0.59***	0.64**	0.92
	Missing	0.66	0.71	0.94
Family size	Number of siblings	0.97	1.15***	0.84***
Interaction				
Gender interaction	Two bio relation bad*female	0.81	1.03	0.78
	Two bio relation missing*female	1.00	0.78	1.29
	Stepfamily*female	1.45**	1.42	1.04
	Single parent*female	0.98	0.92	1.07
	No biological parent*female	1.37	0.95	1.44
F		22.04	***	
df		80		

*=p<.05, **=p<.01. ***=p<.001
c/s= cohabitation vs. singlehood; m/s=marriage vs. singlehood; c/m=cohabitation vs. marriage

Table 4:

Odds Ratios of Paramater Estimates for Multinomial Logistic Regression of First Union Type: Set 2

		Model 1			Model 2		
		c/s	m/s	c/m	c/s	m/s	c/m
Family Structure							
Number of changes	One	1.73***	1.09	1.59***	1.52***	0.94	1.63***
	Two or more	2.05***	1.39*	1.47**	1.89***	1.30*	1.45**
Parental cohabitation	Yes	1.15	0.67*	1.71**	0.96	0.55**	1.75**
	Missing	1.34***	1.56***	0.86	1.16	1.29	0.90
Economic							
Family income	$0-15,999				1.26*	1.54*	0.82
	$16,000-31,999				1.16	1.32*	0.88
	$51,000-				0.79**	0.61**	1.31
	Missing				1.12	1.20	0.93
Education	Not finished high school				3.55***	1.65**	2.15***
F		21.04	***		34.07	***	
df		8			18		

		Model 3			Model 4		
		c/s	m/s	c/m	c/s	m/s	c/m
Family Structure							
Number of changes	One	1.53***	0.94	1.63***	1.48***	1.09	1.36*
	Two or more	1.90***	1.29	1.47**	1.67***	1.33*	1.26
Parental cohabitation	Yes	0.95	0.59**	1.61**	0.96	0.67*	1.43*
	Missing	1.16	1.26	0.92	1.07	1.10	0.97
Economic							
Family income	$0-15,999	1.15	1.32	0.87	1.08	1.17	0.93
	$16,000-31,999	1.13	1.24	0.91	1.09	1.17	0.92
	$51,000-	0.82*	0.68**	1.22	0.85*	0.74*	1.15
	Missing	1.09	1.17	0.94	1.04	1.04	1.00
Education	Not finished high school	3.51***	1.58**	2.22***	3.70***	1.84***	2.00***
Community Background							
Male econ	Male unemployment*10	1.18	1.04	1.14	1.20*	1.07	1.12
Female econ	Female LFO*100	0.92	0.88	1.05	0.95	0.85**	1.11
AFDC	AFDC allowance/100 per mo	1.01	0.78***	1.29***	0.99	0.79***	1.25***
Control							
Religion	Evangelical Protestant				1.07	1.70***	0.63**
	Black Protestant				1.14	0.72	1.58
	Catholic				0.79*	0.71*	1.12
	Other religion				0.87	1.50**	0.58**
	No religion				1.31*	1.59	0.82
Religiosity	Less than 1/mo				1.06	1.68*	0.63*
	1/mo or more				1.03	1.63*	0.63*
	1/wk or more				0.68***	1.81**	0.37***
Sex	Female				1.71***	2.04***	0.84
Age	Older				2.60***	5.13***	0.51***
Race/ ethnicity	Black				0.57***	0.49**	1.16
	Native American				1.37	1.17	1.18
	Asian				0.64	0.78	0.82
	Hispanic				0.78	1.63**	0.48***
	Mixed non-Hispanic				1.21	0.91	1.33
Parental education	Less than high school				1.07	1.27	0.84
	Some college				0.80**	0.95	0.84
	Bachelor or higher				0.58***	0.64**	0.92
	Missing				0.67	0.72	0.94
Family size	Number of siblings				0.97	1.15***	0.84***
F		29.77	***		24.06	***	
df		24			64		

		Model 5		
		c/s	m/s	c/m
Family Structure				
Number of changes	One	1.41**	1.29	1.09
	Two or more	1.42	1.06	1.34
Parental cohabitation	Yes	0.96**	0.67	1.43*
	Missing	1.08	1.11	0.97
Economic				
Family income	$0-15,999	1.08	1.17	0.92
	$16,000-31,999	1.08	1.17	0.92
	$51,000-	0.85*	0.74*	1.15
	Missing	1.04	1.03	1.01
Education	Not finished high school	3.71***	1.84***	2.01***
Community Background				
Male econ	Male unemployment*10	1.20*	1.08	1.12
Female econ	Female LFO*100	0.95	0.85**	1.11
AFDC	AFDC allowance/100 per mo	0.99	0.79***	1.25***
Control				
Religion	Evangelical Protestant	1.07	1.70***	0.63***
	Black Protestant	1.14	0.72	1.58
	Catholic	0.79*	0.71*	1.12
	Other religion	0.87	1.49**	0.58**
	No religion	1.31*	1.57	0.83
Religiosity	Less than 1/mo	1.05	1.67*	0.63*
	1/mo or more	1.02	1.62*	0.63*
	1/wk or more	0.68***	1.79**	0.38***
Sex	Female	1.58***	1.99***	0.79*
Age	Older	2.60***	5.11***	0.51***
Race/ ethnicity	Black	0.56***	0.49**	1.15
	Native American	1.37	1.15	1.19
	Asian	0.63	0.78	0.82
	Hispanic	0.78	1.63**	0.48***
	Mixed non-Hispanic	1.20	0.92	1.31
Parental education	Less than high school	1.06	1.27	0.84
	Some college	0.79**	0.95	0.84
	Bachelor or higher	0.58***	0.64**	0.91
	Missing	0.67	0.71	0.95
Family size	Number of siblings	0.97	1.16***	0.84***
Interaction				
Number of changes* female	One*female	1.11	0.73	1.51
	Two or more*female	1.41*	1.54	0.92
F		23.75	***	
df		68		

*=p<.05, **=p<.01. ***=p<.001
c/s= cohabitation vs. singlehood; m/s=marriage vs. singlehood; c/m=cohabitation vs. marriage

Appendix I:

Parameter estimates of multinomial logistic regression of first union type: Set 1

	Model 1			Model 2		
	c/s	m/s	c/m	c/s	m/s	c/m
Family Structure						
Family status						
Two bio	0.10	0.02	0.08	0.09	0.00	0.09
relation bad	(0.08)	(0.13)	(0.12)	(0.08)	(0.13)	(0.12)
Two bio	-0.04	0.07	-0.11	-0.15	-0.09	-0.06
relation missing	(0.12)	(0.18)	(0.19)	(0.12)	(0.18)	(0.19)
Stepfamily	0.37***	0.50***	-0.13	0.41***	0.57***	-0.15
	(0.07)	(0.13)	(0.13)	(0.07)	(0.13)	(0.13)
Single parent	0.41***	-0.13	0.53***	0.23**	-0.35***	0.58***
	(0.07)	(0.09)	(0.11)	(0.07)	(0.09)	(0.11)
No biological	0.65***	0.62***	0.02	0.56***	0.56***	0.01
parent	(0.11)	(0.15)	(0.15)	(0.11)	(0.15)	(0.16)
Parental cohabitation						
Yes	0.11	-0.44*	0.56**	-0.04	-0.63**	0.59**
	(0.10)	(0.19)	(0.18)	(0.10)	(0.19)	(0.19)
Missing	0.28***	0.40**	-0.12	0.22*	0.30	-0.08
	(0.10)	(0.14)	(0.15)	(0.11)	(0.19)	(0.19)
Economic						
Family income						
$0-15,999				0.22*	0.51**	-0.29
				(0.10)	(0.17)	(0.17)
$16,000-31,999				0.15	0.31*	-0.16
				(0.09)	(0.13)	(0.14)
$51,000-				-0.25**	-0.52**	0.27
				(0.08)	(0.14)	(0.14)
Missing				0.09	0.20	-0.11
				(0.09)	(0.16)	(0.16)
Education						
Not finished				1.25***	0.49**	0.76***
high school				(0.07)	(0.14)	(0.12)
Constant	-0.55	-1.89***	1.33***	-0.63***	-1.86	1.22***
	(0.07)	(0.11)	(0.10)	(0.09)	(0.14)	(0.13)
F	16.92***			30.57***		
df	14			24		

	Model 3			Model 4		
	c/s	m/s	c/m	c/s	m/s	c/m
Family Structure						
Family status						
Two bio	0.10	0.04	0.06	0.10	0.01	0.09
relation bad	(0.08)	(0.13)	(0.12)	(0.09)	(0.14)	(0.14)
Two bio	-0.14	-0.09	-0.05	-0.14	-0.16	0.02
relation missing	(0.13)	(0.18)	(0.19)	(0.14)	(0.18)	(0.18)
Stepfamily	0.42***	0.56***	-0.14	0.38***	0.49**	-0.11***
	(0.07)	(0.13)	(0.13)	(0.07)	(0.14)	(0.14)
Single parent	0.22**	-0.36***	0.58***	0.18*	-0.24*	0.43
	(0.07)	(0.09)	(0.11)	(0.08)	(0.10)	(0.11)
No biological	0.56***	0.55***	0.01	0.42***	0.53**	-0.11*
parent	(0.11)	(0.15)	(0.16)	(0.12)	(0.16)	(0.17)
Parental cohabitation						
Yes	-0.05	-0.55**	0.49**	-0.05	-0.41*	0.37
	(0.10)	(0.18)	(0.18)	(0.10)	(0.19)	(0.18)
Missing	0.22*	0.28	-0.06	0.15	0.17	-0.01
	(0.11)	(0.19)	(0.19)	(0.12)	(0.21)	(0.20)
Economic						
Family income						
$0-15,999	0.14	0.36*	-0.22	0.09	0.22	-0.12
	(0.11)	(0.17)	(0.17)	(0.11)	(0.17)	(0.16)
$16,000-31,999	0.12	0.25	-0.13	0.10	0.19	-0.09
	(0.09)	(0.13)	(0.14)	(0.11)	(0.14)	(0.14)
$51,000-	-0.21**	-0.41**	0.20	-0.18*	-0.32*	0.14
	(0.08)	(0.14)	(0.14)	(0.08)	(0.12)	(0.14)
Missing	0.07	0.18	-0.11	0.04	0.06	-0.02
	(0.09)	(0.17)	(0.16)	(0.09)	(0.18)	(0.16)
Education						
Not finished	1.24***	0.45**	0.80***	1.30***	0.61***	0.69***
high school	(0.07)	(0.15)	(0.13)	(0.09)	(0.16)	(0.13)
Community Background						
Male econ						
Male	0.15	0.05	0.10	0.18*	0.07	0.11
unemployment*10	(0.11)	(0.14)	(0.12)	(0.08)	(0.12)	(0.14)
Female econ						
Female	-0.08	-0.13	0.05	-0.06	-0.16**	0.10
LFO*100	(0.05)	(0.08)	(0.07)	(0.04)	(0.06)	(0.06)
AFDC						
AFDC allowance	0.01	-0.25***	0.25***	-0.01	-0.23***	0.23***
/100 per mo	(0.04)	(0.07)	(0.06)	(0.03)	(0.05)	(0.05)
Control						
Religion						
Evangelical				0.06	0.52**	-0.46**
Protestant				(0.10)	(0.15)	(0.15)
Black Protestant				0.15	-0.31	0.46
				(0.15)	(0.21)	(0.24)
Catholic				-0.23*	-0.34*	0.11
				(0.10)	(0.14)	(0.14)
Other religion				-0.14	0.41**	-0.55**
				(0.12)	(0.15)	(0.16)
No religion				0.26*	0.47	-0.21
				(0.12)	(0.25)	(0.25)

	Model 3			Model 4		
	c/s	m/s	c/m	c/s	m/s	c/m
Religiosity						
Less than 1/mo				0.06	0.53*	-0.47*
				(0.10)	(0.21)	(0.21)
1/mo or more				0.03	0.50*	-0.47*
				(0.10)	(0.20)	(0.19)
1/wk or more				-0.39***	0.60**	-0.99***
				(0.10)	(0.19)	(0.19)
Sex						
Female				0.54***	0.72***	-0.18
				(0.06)	(0.10)	(0.10)
Age						
Older				0.95***	1.63***	-0.68***
				(0.07)	(0.10)	(0.10)
Race/ ethnicity						
Black				-0.61***	-0.70**	0.09
				(0.12)	(0.21)	(0.21)
Native American				0.28	0.14	0.15
				(0.16)	(0.38)	(0.34)
Asian				-0.45	-0.27	-0.18
				(0.23)	(0.29)	(0.36)
Hispanic				-0.25*	0.48**	-0.73***
				(0.13)	(0.14)	(0.15)
Mixed				0.17	-0.08	0.26
non-Hispanic				(0.15)	(0.22)	(0.18)
Parental education						
Less than				0.06	0.25	-0.19
high school				(0.11)	(0.19)	(0.19)
Some college				-0.23**	-0.05	-0.18
				(0.08)	(0.12)	(0.12)
Bachelor or				-0.53***	-0.45**	-0.08
higher				(0.08)	(0.15)	(0.15)
Missing				-0.41	-0.35	-0.06
				(0.22)	(0.33)	(0.31)
Family size						
Number of				-0.03	0.14***	-0.17***
siblings				(0.02)	(0.04)	(0.04)
Constant	-0.26	-0.25	-0.01	-0.42	-1.86***	1.43**
	(0.32)	(0.55)	(0.45)	(0.26)	(0.49)	(0.49)
F	29.67***			22.61***		
df	30			70		

	Model 5		
	c/s	m/s	c/m
Family Structure			
Family status			
Two bio	0.21	-0.02	0.22
relation bad	(0.11)	(0.21)	(0.21)
Two bio	-0.15	-0.03	-0.12
relation missing	(0.17)	(0.25)	(0.27)
Stepfamily	0.19	0.32	-0.13
	(0.11)	(0.23)	(0.24)
Single parent	0.19	-0.20	0.38*
	(0.12)	(0.15)	(0.16)
No biological	0.29	0.59	-0.30
parent	(0.16)	(0.20)	(0.23)
Parental cohabitation			
Yes	-0.04	-0.41	0.37*
	(0.10)	(0.19)	(0.18)
Missing	0.16	0.17	-0.01
	(0.12)	(0.21)	(0.20)
Economic			
Family income			
$0-15,999	0.09	0.22	-0.13
	(0.11)	(0.17)	(0.16)
$16,000-31,999	0.10	0.18	-0.09
	(0.11)	(0.14)	(0.14)
$51,000-	-0.18*	-0.33*	0.14
	(0.08)	(0.13)	(0.14)
Missing	0.03	0.05	-0.02
	(0.09)	(0.18)	(0.16)
Education			
Not finished	1.30***	0.62***	0.68***
high school	(0.09)	(0.16)	(0.13)
Community Background			
Male econ			
Male	0.18*	0.07	0.11
unemployment*10	(0.08)	(0.13)	(0.14)
Female econ			
Female	-0.05	-0.16**	0.10
LFO*100	(0.04)	(0.06)	(0.06)
AFDC			
AFDC allowance	-0.01	-0.24***	0.23***
/100 per mo	(0.03)	(0.05)	(0.05)
Control			
Religion			
Evangelical	0.06	0.52**	-0.46**
Protestant	(0.10)	(0.15)	(0.15)
Black Protestant	0.14	-0.31	0.45
	(0.10)	(0.21)	(0.25)
Catholic	-0.23*	-0.35*	0.11
	(0.14)	(0.14)	(0.14)
Other religion	-0.14	0.40*	-0.55**
	(0.11)	(0.15)	(0.16)
No religion	0.26*	0.46	-0.20
	(0.12)	(0.25)	(0.25)

	Model 5		
	c/s	m/s	c/m
Religiosity			
Less than 1/mo	0.06	0.52*	-0.46*
	(0.10)	(0.21)	(0.21)
1/mo or more	0.02	0.49*	-0.46*
	(0.10)	(0.19)	(0.19)
1/wk or more	-0.39***	0.60**	-0.99***
	(0.10)	(0.19)	(0.19)
Sex			
Female	0.48***	0.73***	-0.24
	(0.10)	(0.17)	(0.17)
Age			
Older	0.95***	1.63***	-0.68***
	(0.07)	(0.10)	(0.10)
Race/ ethnicity			
Black	-0.61***	-0.71**	0.11
	(0.11)	(0.21)	(0.21)
Native American	0.29	0.15	0.14
	(0.16)	(0.38)	(0.34)
Asian	-0.45	-0.26	-0.19
	(0.23)	(0.29)	(0.36)
Hispanic	-0.25*	0.48**	-0.73***
	(0.12)	(0.14)	(0.15)
Mixed	-0.18	-0.08	0.26
non-Hispanic	(0.15)	(0.22)	(0.18)
Parental education			
Less than	0.05	0.24	-0.19
high school	(0.11)	(0.19)	(0.19)
Some college	-0.24**	-0.05	-0.19
	(0.08)	(0.12)	(0.12)
Bachelor or	-0.53***	-0.45**	-0.08
higher	(0.08)	(0.15)	(0.15)
Missing	-0.42	-0.35	-0.07
	(0.22)	(0.33)	(0.30)
Family size			
Number of	-0.03	0.14***	-0.17***
siblings	(0.02)	(0.04)	(0.04)
Interaction			
Family Status*female			
Two bio bad	-0.21	0.03	-0.24
*female	(0.14)	(0.27)	(0.28)
Two bio missing	0.00	-0.25	0.26
*female	(0.21)	(0.34)	(0.33)
Stepfamily	0.39**	0.35	0.04
*female	(0.13)	(0.27)	(0.27)
Single parent	-0.02	-0.09	0.07
*female	(0.14)	(0.21)	(0.22)
No bio parent	0.31	-0.05	0.37
*female	(0.21)	(0.29)	(0.32)
Constant	-0.39	-1.85***	1.46**
	(0.27)	(0.51)	(0.52)
F	22.04***		
df	80		

Appendix II:

Parameter estimates of multinomial logistic regression of first union type: Set 2

	Model 1			Model 2		
	c/s	m/s	c/m	c/s	m/s	c/m
Family Structure						
Number of changes						
One	0.55***	0.09	0.46***	0.42***	-0.07	0.49***
	(0.07)	(0.11)	(0.12)	(0.08)	(0.11)	(0.12)
Two or more	0.72***	0.33*	0.39**	0.64***	0.26*	0.37**
	(0.07)	(0.13)	(0.13)	(0.07)	(0.13)	(0.13)
Parental cohabitation						
Yes	0.14	-0.40*	0.54**	-0.04	-0.60**	0.56**
	(0.10)	(0.19)	(0.18)	(0.10)	(0.18)	(0.18)
Missing	0.29***	0.45***	-0.16	0.15	0.25	-0.10
	(0.08)	(0.12)	(0.12)	(0.09)	(0.17)	(0.17)
Economic						
Family income						
$0-15,999				0.23*	0.43*	-0.20
				(0.10)	(0.17)	(0.17)
$16,000-31,999				0.15	0.28*	-0.13
				(0.09)	(0.13)	(0.14)
$51,000-				-0.23**	-0.50**	0.27
				(0.08)	(0.14)	(0.15)
Missing				0.11	0.18	-0.07
				(0.09)	(0.16)	(0.16)
Education						
Not finished				1.27***	0.50**	0.76***
high school				(0.07)	(0.15)	(0.12)
Constant	-0.51***	-1.86***	1.35***	-0.62***	-1.85***	1.23***
	(0.06)	(0.10)	(0.09)	(0.08)	(0.14)	(0.13)
F	21.04***			34.07***		
df	8			18		

	Model 3			Model 4		
	c/s	m/s	c/m	c/s	m/s	c/m
Family Structure						
Number of changes						
One	0.43***	-0.06	0.49***	0.39***	0.09	0.31*
	(0.08)	(0.11)	(0.12)	(0.08)	(0.12)	(0.12)
Two or more	0.64***	0.26	0.39**	0.51***	0.28*	0.23
	(0.07)	(0.13)	(0.13)	(0.07)	(0.14)	(0.13)
Parental cohabitation						
Yes	-0.05	-0.53**	0.48**	-0.04	-0.39*	0.36*
	(0.10)	(0.18)	(0.18)	(0.11)	(0.18)	(0.17)
Missing	0.15	0.23	-0.08	0.07	0.10	-0.03
	(0.09)	(0.18)	(0.17)	(0.09)	(0.19)	(0.18)
Economic						
Family income						
$0-15,999	0.14	0.28	-0.14	0.08	0.16	-0.08
	(0.10)	(0.17)	(0.17)	(0.11)	(0.17)	(0.16)
$16,000-31,999	0.12	0.22	-0.10	0.08	0.16	-0.08
	(0.09)	(0.13)	(0.13)	(0.11)	(0.13)	(0.13)
$51,000-	-0.20*	-0.39**	0.20	-0.16*	-0.30*	0.14
	(0.08)	(0.14)	(0.14)	(0.08)	(0.13)	(0.14)
Missing	0.09	0.16	-0.07	0.04	0.04	0.00
	(0.09)	(0.17)	(0.16)	(0.09)	(0.18)	(0.16)
Education						
Not finished	1.25***	0.46**	0.79***	1.31***	0.62***	0.69***
high school	(0.07)	(0.15)	(0.13)	(0.09)	(0.16)	(0.13)
Community Background						
Male econ						
Male	0.17	0.04	0.13	0.18*	0.07	0.11
unemployment*10	(0.11)	(0.14)	(0.12)	(0.08)	(0.13)	(0.14)
Female econ						
Female	-0.08	-0.13	0.05	-0.06	-0.16**	0.10
LFO*100	(0.05)	(0.08)	(0.07)	(0.04)	(0.06)	(0.06)
AFDC						
AFDC allowance	0.01	-0.24***	0.25***	-0.01	-0.23***	0.23***
/100 per mo	(0.04)	(0.07)	(0.06)	(0.03)	(0.05)	(0.05)
Control						
Religion						
Evangelical				0.07	0.53***	-0.47**
Protestant				(0.10)	(0.15)	(0.15)
Black Protestant				0.13	-0.32	0.46
				(0.15)	(0.21)	(0.25)
Catholic				-0.23*	-0.35*	0.11
				(0.10)	(0.14)	(0.14)
Other religion				-0.14	0.40**	-0.55**
				(0.12)	(0.15)	(0.16)
No religion				0.27*	0.47	-0.20
				(0.13)	(0.25)	(0.24)

	Model 3			Model 4		
	c/s	m/s	c/m	c/s	m/s	c/m
Religiosity						
Less than 1/mo				0.06	0.52*	-0.47*
				(0.10)	(0.21)	(0.19)
1/mo or more				0.03	0.49*	-0.47*
				(0.10)	(0.20)	(0.19)
1/wk or more				-0.39***	0.60**	-0.99***
				(0.10)	(0.19)	(0.19)
Sex						
Female				0.54***	0.71***	-0.18
				(0.06)	(0.10)	(0.10)
Age						
Older				0.96***	1.63***	-0.68***
				(0.07)	(0.10)	(0.10)
Race/ ethnicity						
Black				-0.57***	-0.71**	0.15
				(0.11)	(0.21)	(0.21)
Native American				0.32	0.15	0.16
				(0.16)	(0.38)	(0.35)
Asian				-0.45	-0.25	-0.20
				(0.23)	(0.29)	(0.36)
Hispanic				-0.25	0.49**	-0.73***
				(0.13)	(0.14)	(0.15)
Mixed				0.19	-0.10	0.28
non-Hispanic				(0.15)	(0.21)	(0.17)
Parental education						
Less than				0.07	0.24	-0.17
high school				(0.11)	(0.19)	(0.19)
Some college				-0.23**	-0.05	-0.18
				(0.08)	(0.12)	(0.12)
Bachelor or				-0.54***	-0.45**	-0.09
higher				(0.08)	(0.15)	(0.15)
Missing				-0.39	-0.33	-0.06
				(0.22)	(0.33)	(0.30)
Family size						
Number of siblings				-0.03	0.14***	-0.17***
				(0.02)	(0.04)	(0.04)
Constant	-0.26	-0.23	-0.03	-0.41	-1.85***	1.44**
	(0.32)	(0.56)	(0.46)	(0.26)	(0.50)	(0.50)
F	29.77***			24.06***		
df	24			64		

	Model 5		
	c/s	m/s	c/m
Family Structure			
Number of changes			
One	0.34**	0.26	0.08
	(0.11)	(0.18)	(0.18)
Two or more	0.35	0.06	0.29
	(0.10)	(0.20)	(0.20)
Parental cohabitation			
Yes	-0.04**	-0.40	0.36*
	(0.11)	(0.18)	(0.17)
Missing	0.08	0.11	-0.03
	(0.10)	(0.19)	(0.18)
Economic			
Family income			
$0-15,999	0.08	0.16	-0.08
	(0.11)	(0.17)	(0.16)
$16,000-31,999	0.08	0.16	-0.08
	(0.11)	(0.13)	(0.13)
$51,000-	-0.17*	-0.31*	0.14
	(0.08)	(0.13)	(0.14)
Missing	0.04	0.03	0.01
	(0.09)	(0.18)	(0.16)
Education			
Not finished	1.31***	0.61***	0.70***
high school	(0.09)	(0.16)	(0.13)
Community Background			
Male econ			
Male	0.18*	0.07	0.11
unemployment*10	(0.08)	(0.13)	(0.14)
Female econ			
Female	-0.06	-0.16**	0.10
LFO*100	(0.04)	(0.06)	(0.06)
AFDC			
AFDC allowance	-0.01	-0.23***	0.23***
/100 per mo	(0.03)	(0.05)	(0.05)
Control			
Religion			
Evangelical	0.07	0.53***	-0.47**
Protestant	(0.10)	(0.15)	(0.15)
Black Protestant	0.13	-0.32	0.46
	(0.15)	(0.22)	(0.25)
Catholic	-0.23*	-0.35*	0.12
	(0.10)	(0.14)	(0.14)
Other religion	-0.14	0.40**	-0.55**
	(0.12)	(0.15)	(0.16)
No religion	0.27*	0.45	-0.18
	(0.12)	(0.25)	(0.24)

	Model 5		
	c/s	m/s	c/m
Religiosity			
Less than 1/mo	0.05	0.51*	-0.46*
	(0.10)	(0.21)	(0.20)
1/mo or more	0.02	0.49*	-0.46*
	(0.10)	(0.20)	(0.20)
1/wk or more	-0.39***	0.58**	-0.97***
	(0.10)	(0.19)	(0.19)
Sex			
Female	0.46***	0.69***	-0.23*
	(0.07)	(0.11)	(0.11)
Age			
Older	0.95***	1.63***	-0.68***
	(0.07)	(0.10)	(0.10)
Race/ ethnicity			
Black	-0.57***	-0.72**	0.14
	(0.11)	(0.21)	(0.21)
Native American	0.32	0.14	0.18
	(0.16)	(0.38)	(0.34)
Asian	-0.46	-0.25	-0.20
	(0.23)	(0.29)	(0.36)
Hispanic	-0.25	0.49**	-0.74***
	(0.13)	(0.14)	(0.15)
Mixed	0.18	-0.08	0.27
non-Hispanic	(0.15)	(0.21)	(0.17)
Parental education			
Less than	0.06	0.24	-0.17
high school	(0.11)	(0.19)	(0.19)
Some college	-0.23**	-0.05	-0.18
	(0.08)	(0.12)	(0.12)
Bachelor or	-0.54***	-0.45**	-0.09
higher	(0.08)	(0.15)	(0.15)
Missing	-0.40	-0.35	-0.06
	(0.22)	(0.33)	(0.30)
Family size			
Number of siblings	-0.03	0.15***	-0.17***
	(0.02)	(0.04)	(0.04)
Interaction			
Number of changes*female			
One	0.10	-0.31	0.41
*female	(0.16)	(0.24)	(0.24)
Two or more	0.35*	0.43	-0.09
*female	(0.14)	(0.23)	(0.25)
Constant	-0.37	-1.82***	1.45**
	(0.26)	(0.51)	(0.51)
F	23.75		
df	68		

Appendix III:

Calculation for Interaction Terms: Set 1 Family Structure

		Coefficients		Total effects	
		Family structure	Family structure* female	Coefficient	Odds ratio
Cohabitation/Single					
Female	two bio bad relationship	0.21	-0.21	-0.01	0.99
	two bio missing relationship	-0.15	0.00	-0.15	0.86
	stepfamily	0.19	0.39**	0.58	1.79
	single parent	0.19	-0.02	0.17	1.19
	no bio parent	0.29	0.31	0.60	1.82
Male	two bio bad relationship	0.21	0.00	0.21	1.23
	two bio missing relationship	-0.15	0.00	-0.15	0.86
	stepfamily	0.19	0.00	0.19	1.21
	single parent	0.19	0.00	0.19	1.20
	no bio parent	0.29	0.00	0.29	1.33
Marriage/Single					
Female	two bio bad relationship	-0.02	0.03	0.01	1.01
	two bio missing relationship	-0.03	-0.25	-0.28	0.76
	stepfamily	0.32	0.35	0.67	1.95
	single parent	-0.20	-0.09	-0.28	0.75
	no bio parent	0.59	-0.05	0.53	1.71
Male	two bio bad relationship	-0.02	0.00	-0.02	0.98
	two bio missing relationship	-0.03	0.00	-0.03	0.97
	stepfamily	0.32	0.00	0.32	1.37
	single parent	-0.20	0.00	-0.20	0.82
	no bio parent	0.59	0.00	0.59	1.80
Cohabitation/Marriage					
Female	two bio bad relationship	0.22	-0.24	-0.02	0.98
	two bio missing relationship	-0.12	0.26	0.13	1.14
	stepfamily	-0.13	0.04	-0.09	0.92
	single parent	0.38	0.07	0.45	1.57
	no bio parent	-0.30	0.37	0.07	1.07
Male	two bio bad relationship	0.22	0.00	0.22	1.25
	two bio missing relationship	-0.12	0.00	-0.12	0.89
	stepfamily	-0.13	0.00	-0.13	0.88
	single parent	0.38	0.00	0.38	1.46
	no bio parent	-0.30	0.00	-0.30	0.74

Appendix IV:

Calculation for Interaction Terms: Set 2 Number of Family Status Changes

		Coefficients		Total effects	
		Number of changes	Number of changes* female	Coefficient	Odds ratio
Cohabitation/Single					
Female	one	0.34	0.10	0.44	1.56
	two	0.35	0.35*	0.69	2.00
Male	one	0.34	0.00	0.34	1.41
	two	0.35	0.00	0.35	1.42
Marriage/Single					
Female	one	0.26	-0.31	-0.06	0.95
	two	0.06	0.43	0.49	1.63
Male	one	0.26	0.00	0.26	1.29
	two	0.06	0.00	0.06	1.06
Cohabitation/Marriage					
Female	one	0.08	0.41	0.50	1.65
	two	0.29	-0.09	0.21	1.23
Male	one	0.08	0.00	0.08	1.09
	two	0.29	0.00	0.29	1.34

Appendix V:

Calculation for Interaction Terms: Odds Ratios of Female and Males

		Female	Male	Female/Male
Cohabitation/Single				
Family Type	two bio bad relationship	0.99	1.23	0.81
	two bio missing relationship	0.86	0.86	1.00
	stepfamily	1.79	1.21	1.48 **
	single parent	1.19	1.20	0.99
	no bio parent	1.82	1.33	1.37
Number of changes	one	1.56	1.41	1.11
	two	2.00	1.42	1.41*
Marriage/Single				
Family Type	two bio bad relationship	1.01	0.98	1.03
	two bio missing relationship	0.76	0.97	0.78
	stepfamily	1.95	1.37	1.42
	single parent	0.75	0.82	0.91
	no bio parent	1.71	1.80	0.95
Number of changes	one	0.95	1.29	0.74
	two	1.63	1.06	1.54
Cohabitation/Marriage				
Family Type	two bio bad relationship	0.98	1.25	0.78
	two bio missing relationship	1.14	0.89	1.28
	stepfamily	0.92	0.88	1.04
	single parent	1.57	1.46	1.08
	no bio parent	1.07	0.74	1.44
Number of changes	one	1.65	1.09	1.51
	two	1.23	1.34	0.92

REFERENCES

Acock, Alan C. and K. Jill Kiecolt. 1989. "Is it family structure of socioeconomic status? Family structure during adolescence and adult adjustment." *Social Forces* 68: 553-71.

Albrecht, Chris and Jay Teachman, 2003. "Childhood living arrangement and the risk of premarital intercourse." *Journal of Family Issues* 27: 867-94.

Amato, Paul R. 1993. "Children's adjustment to divorce: Theories, hypotheses, and empirical support." *Journal of Marriage and the Family* 55: 23–38.

Amato, Paul R. and Alan Booth. 1991. "The consequences of Divorce for Attitudes toward Divorce and Gender Roles." *The Journal of Family Issues* 12: 306-22

Amato, Paul R. and Bruce Keith. 1991. "Parental divorce and adult well-being: A meta-analysis." *Journal of Marriage and the Family*, 53: 43–58.

Amato, Paul R. and Juliana M. Sobolewski. 2001. "The effects of divorce and marital discord on adult children's psychological well-being." *American Sociological Review* 66: 900-21.

Astone, Nan M. and Sara S. McLanahan. 1991. "Family structure, parental practices, and high school completion." *American Sociological Review* 56: 309–20.

Axinn, William, G. and Arland Thornton. 1993. "Mothers, children, and cohabitation: the intergenerational effects of attitudes and behavior." *American Sociological Review* 58: 233-46.

Axinn, William and Arland Thornton. 1996. The influence of parents' marital dissolutions on children's attitudes toward family formation. *Demography* 33: 66–81.

Bachrach, Christine, Michelle J.Hindin, and Elizabeth Thomson. 2000. Pp.3-16 in *The Changing Shape of Ties That Bind. The ties that bind: Perspectives on marriage and cohabitation*. edited by Linda J. Waite. New York: Aldine de Gruyter.

Baughman, Reagan, Stacy Dickert-Conlin, and Scott House. 2002. "How well can we track cohabitation using the SIPP?: A consideration of direct and inferred measures." *Demography* 39: 455-65.

Bumpass, Larry L. 1990. "What's happening to the family? Interaction between demographic and institutional change." *Demography* 27: 483-98.

Bumpass, Larry L. and Hsien-Hen Lu. 2000. "Trends in cohabitation and implications for children's family contexts in the U.S." *Population Studies* 54: 29-41.

Bumpass, Larry L., James A. Sweet, and Andrew J. Cherlin. 1991. "The role of cohabitation in declining rates of marriage." *The Journal of Marriage and the Family* 53: 913-27.

Casper, Lynne M. and Philip N. Cohen. 2000. “How does POSSLQ measures up? Historical estimates of cohabitation.” *Demography* 37: 237-45

Census Bureau. Current population reports: P20-491 Marital status and living arrangements March 1995. http://www.census.gov/prod/2/pop/p20/p20-491.pdf

Chantala, Kim. 2003. “Introduction to Analyzing Add Health Data.” Prepared for the Add Health Users Workshop National Institutes of Health, July 28-29 Bethesda, MD.

Chantala, Kim, William D. Kalsbee, and Eugenio Andraca. 2004. Non-response in Wave Ⅲ of the Add Health Study. http://www.cpc.unc.edu/projects/addhealth/files/W3nonres.pdf

Cherlin, Andrew. 1978. “Remarriage as an incomplete institution.” *American Journal of Sociology* 84: 634–50.

Cherlin, Andrew, P. Lindsay Chase-Lansdale, and Christine McRae. 1998. “Effects of parental divorce on mental health throughout the life course.” *American Sociological Review* 63: 239–49.

Cherline, Andrew and Frank F. Furstenberg. 1988. “The changing European family: lessons for the American reader.” *The journal of family issues* 9:291-97.

Clarkberg, Marin., Ross M. Stolzenberg, and Linda J. Waite. 1995. Attitudes, values, and entrance into cohabitational versus marital unions. *Social Forces* 74: 609–34.

Coleman, James S. 1988. “Social capital in the creation of human capital.” *American Journal of Sociology* 94 (Suppl): S95–S120.

Coleman, James S. 1990. *Foundations of social theory*. Cambridge, MA: Harvard University Press.

Edin, Kathryn and Maria Kefalas. 2005. *Promises I can keep : why poor women put motherhood before marriage*. Berkeley, CA: University of California Press

Furstenberg, Frank. Jr. 1987. “The new extended family: The experience of parents and children after remarriage.” Pp. 41-62 in *Remarriage and stepparenting: Current research and theory*. edited by K. Pasley and M. Ihinger-Thallman New York: Guilford Press.

Gibson, Christina, Kathryn Edin, and Sara McLanahan. 2003. “High hopes but even higher expectations: The retreat from marriage among low-income”. Center for Research on Child Well-being Working Paper #03-06-FF.
http://wwcrcw.princeton.edu/workingpapers/WP03-05-FF-Givson.pdf

Goode, William J. 1960. “The theory of role strain.” *American Sociological Review* 25: 483-96.

Greensberg, Ellen F. and W. Robert Nay. 1982. “The intergenerational transmission of marital instability reconsidered.” *Journal of Marriage and the Family* 44: 335-47.

Hagan, John., Ross MacMillan, and Blair Wheaton. 1996. “New kid in town: Social capital and the life course effects of family migration on children.” *American Sociological Review* 61: 368–85.

Lesthaeghe, Ron. 1983. “A century of demographic and cultural change in Western Europe: an exploration of underlying dimensions.” *Population development review* 9: 411-35.

Lesthaeghe, Ron and Johan. Surkyn.1988. “Cultural dynamics and economic theories of fertility change.” *Population and development review* 14: 1-45.

Lichter, Daniel T., Felicia B. LeClere, and Diane K. McLaughlin. 1991. “Local marriage markets and the marital behavior of black and white women.” *American Journal of Sociology* 96: 843-67.

Luker, Kristin. 1996. *Dubious Conception: The politics of teenage pregnancy*. Cambridge, MA: Harvard University Press.

Manning, Wendy D. and Pamela J. Smock. 2005. “Measuring and modeling cohabitation: New perspectives from qualitative data.” *Journal of Marriage and Family* 67: 989-1002.

McLanahan, Sara. 1988. “Family structure and dependency: early transition to female household headship.” *Demography* 25: 1-16.

McLanahan, Sara and Larry Bumpass. 1988. “Intergenerational consequences of family disruption.” *American Journal of Sociology* 94:130-52.

McLanahan, Sarah and Gary Sandefur. (1994). *Growing up with a single parent: What hurts, what helps*. Cambridge, MA: Harvard University Press.

Michael, Robert T. and Nancy B. Tuma 1985. “Entry into marriage and parenthood by young men and women: the influence of family background.” *Demography* 22: 515-44.

Moffit, Robert A., Robert Reville, and Anne E. Winkler. 1998. “Beyond single mothers: cohabitation and marriage in the AFDC program.” *Demography* 35: 259-78.

Nakamura, Masao, Alice Nakamura, and Dallas Cullen. 1979. "Job Opportunities, the Offered Wage, and the Labor Supply of Married Women," *American Economic Review* 69: 787-805

Oppenheimer, Valerie K. 1997. “Women's employment and the gain to marriage: The specialization and trading model.” *Annual Review of Sociology* 23: 431-53

Raley, R. Kelly. 2000. “Recent Trends and Differentials in Marriage and Cohabitation: The United States.” Pp. 19-39 in *The ties that bind: Perspectives on marriage and cohabitation*. edited by Linda J. Waite. New York: Aldine de Gruyter.

Rindfuss, Ronald R. and Audrey VandenHeuvel. 1990. “Cohabitation: a precursor to marriage or an alternative to being single?” *Population and development review* 16: 703-26.

Smock, Pamela J. 2000. “Cohabitation in the United States: An Appraisal of Research Themes, Findings, and Implications.” *Annual Review of Sociology* 26: 1-20.

Smock, Pamela J. and Wendy D. Manning. 1997. “Cohabiting partner’s economic circumstances and marriage.” *Demography* 34(3): 331-41.

Steensland, Brian, Jerry Z. Park, Mark D. Regnerus, Lynn D. Robinson, W. Bradford Wilcox, and Robert D. Woodberry. 2000. “The measure of American religion: toward improving the state of the art.” *Social Forces* 79: 291-318.

Teachman, Jay. 2003. “Childhood Living Arrangements and the Formation of Coresidential Unions.” *Journal of Marriage and Family* 65: 507-24.

Thomson, Elizabeth and Sara McLanahan, and Roberta Braun-Curtin. 1992. “Family structure, gender, and parental socialization.” *Journal of Marriage and the Family* 54: 368-78.

Thornton, Arland. 1989. “Cohabitation and marriage in the 80s.” *Demography* 25: 497-508.

-------. 1991. “Influence of the marital history of parents on the marital and cohabitation experiences of children.” *American Journal of Sociology* 96: 868-94.

Thornton, Arland, William G. Axinn, and Daniel. H. Hill. 1992. “Reciprocal effects of religiosity, cohabitation and marriage.” *American Journal of Sociology* 98: 628-51.

Udry, J. Richard and John O. G. Billy. 1987. Initiation of coitus in early adolescence. *American Sociological Review* 52: 841-55.

Wu, Laurence. 1996. “Effects of family instability, income, and income instability on the risk of premarital birth.” *American Sociological Review* 61: 386-86.

Wu, Laurence and Brian C. Martinson 1993. “Family structure and the risk of a premarital birth.” *American Sociological Review* 58: 210-32.

Wu, Lawrence and Elizabeth Thomson. 2001. “Race differences in family experience and early sexual initiation: Dynamic models of family structure and family change.” *The Journal of Marriage and Family* 63: 681-96.

Webster, Pamela S, Terri L. Orbuch, and James S. House. 1995. “Effects of childhood family background on adult marital quality and perceived stability.” *American Journal of Sociology* 101: 404-32.

Xie, Yu, James M. Raymo, Kimberly Goyette, and Arland Thornton. 2003. “Economic potential and entry into marriage and cohabitation.” *Demography* 40: 351-67