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**Adolescent Romantic Relationships
and Young Adult Union Formation***

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Abstract

Life course sociologists and developmental psychologists assert that adolescent romantic relationships further the developmental goal of providing “practice” for romantic relationships in adulthood. Yet, we know little about how patterns of romantic involvement in adolescence translate into young adult relationships. This paper examines the role of adolescents’ romantic relationship experience on young adult unions. Using three waves of the National Longitudinal Study of Adolescent Health, we identify adolescent romantic relationship trajectories. First, we investigate how relationship trajectories differ by age to confirm that relationship experience suggests a developmental pattern. Next, we estimate the association between adolescent romantic relationship trajectory and young adult union formation as measured by cohabitation and marriage. These analyses suggest that adolescent relationship experience influences young adult union formation, with somewhat different patterns for males and females.

Introduction

The timing and ordering of key markers in the transition to adulthood have shifted dramatically over the past half century. In particular, family formation now occurs at a later age and in a more disorderly progression than in previous generations. The age at first marriage is older for most people, childbearing is delayed for many, but is also increasingly detached from marriage and the prevalence of cohabitation has increased (Raley 2000). Demographers have spent considerable effort measuring, describing and analyzing rates, order and timing of family formation. These changes have also captured the attention of the general public and policy-makers. Non-profit groups, states and the federal government have created a set of initiatives, sometimes characterized as the “marriage movement” (e.g., the Oklahoma Marriage Initiative), aimed at strengthening marriage and preventing divorce.

Thus, the past several decades have seen dramatic shifts in how young adults structure their interpersonal relationships and a keen interest among researchers in the quality of these relationships. Guided by normative and structural constraints, young adults are now making more diverse choices about how their relationships will be structured and when they will start and end. Though researchers have documented increasing diversity in the paths to family formation (Waite, Bachrach, Hindin, Thomson & Thornton 2000; Goldscheider & Goldscheider 1999), the determinants of these decisions remains unclear. While current social-structural and interpersonal conditions probably have a large influence on family formation decisions, past relationship experience likely influences when young adults form family relationships, and the types of unions they form (e.g. cohabitation or marriage). These earlier experiences can serve as templates for young adult relationships in the same way that secondary schooling experiences

can influence eventual educational attainment. Early experience in relationships may also set individuals on a trajectory toward a set of particular family formation decisions.

This paper examines the role of adolescent romantic relationship trajectories on young adult relationship formation including cohabitation and marriage. We examine stability and change over three years of relationship experience during adolescence and cohabitation and marriage (in combination and separately) in early adulthood. This paper offers a rare look at the developmental significance of adolescent romantic relationships in a nationally representative sample during the transition to adulthood.

Background

Several theories suggest that adolescent romantic relationships are important influences in young adult family formation. First, Dunphy's (1963) stages of group development in adolescence posit that as adolescents age from pre-teens to late teens, they progress through five stages of peer association. The first stage is the pre-crowd stage, where individuals belong to same-sex cliques. The second stage is the beginning of the crowd, when same-sex cliques begin to interact with one another. The third stage is the crowd in structural transition, when upper status members in same-sex cliques begin to form a heterosexual clique. In stage four, mixed-sex cliques interact with one another to form a crowd. Finally, in the fifth stage, the crowd begins to disintegrate into dyads, or romantic relationships. One purpose of mixed-sex crowd formation is to afford a market of eligible partners for young men and women. These partners then become potential marital partners. This theory probably better matched adolescent experiences in the 1960's, a time when late adolescent couples were more likely to form marital bonds than they are today. Even if the path to marriage is longer and less direct than in past decades, late teen and

young adult relationships are an important part of social relationship development during the transition to adulthood.

Attachment theory provides a second framework for understanding how romantic relationships may influence young adult unions. Attachment theory posits that earlier relationships provide representations of how social relationships work, and these “working models” help young people build relationship skills. While attachment theory has traditionally focused on the infant-parent attachment bond as forming the working model for how relationships should operate, other recent theoretical work indicates that attachment processes shape adolescent relationships as well (Allen and Land 1999). These extensions of attachment theory suggest that adolescent relationships are based on both an internal model of relationships formed from their own parent-child relationship *and* experience in current relationships with other attachment figures such as peers and romantic partners (Carlson et al 2004). This suggests that each relationship affects one’s next relationship, and all prior relationships affect one’s current relationship.

Existing literature suggests why parent (e.g. Conger, Cui, Bryant & Elder 2000) and peer (e.g. Giordano 2003) relationships might be important for adolescent social development, yet little research investigates a similar role for romantic relationships. Adolescent romantic relationships serve two main developmental purposes. First, adolescent romantic relationships are important because they advance the goal of separation from parents. After shifting some attachment from parents to peers, adolescents further redirect intense interpersonal energy to romantic partners. In addition, romantic relationships are a way that adolescents attempt to establish themselves as adults. This is especially true when adolescents find it difficult to establish adulthood in other ways – economically or residentially, for example (Gray and

Steinberg 1999). Some suggest that romantic partners surpass parents and peers as important attachment figures as adolescents transition to adulthood (Brown 1999; Furman and Wehner 1997; Furman and Buhrmester 1992).

Second, romantic relationships allow teens to gain experience in same-status interpersonal relationships (Furman, Brown and Feiring 1999; Collins 2003). It is in these relationships that adolescents learn intimacy and bonding with someone of the same maturational status as themselves – their equals. This is in contrast to parent-child relationships where parents are in a higher status role compared to their children. In sum, unlike adolescents' relationships with their parents, relationships with romantic partners are volitional and often characterized by status symmetry. Unlike peer relationships, adolescent romantic relationships include a new level of intimacy and sometimes sexual involvement. Thus, adolescent romantic relationships may serve as a uniquely relevant template for relationships with partners in adulthood.

Though adolescent romantic involvement is sometimes described as a healthy event for development, it is often implicated as a risk factor for harmful outcomes as well. Historically, the study of adolescent romantic relationships has assumed that romantic involvement forecasts maladaptation in teens rather than serving positive developmental purposes (see Collins 2003). Indeed, teens who maintain more than one romantic relationship concurrently are at a higher risk for STDs (Ford et al. 2002). Romantic involvement is also associated with increases in deviance (Haynie 2003), although some research indicates that it is really “heavy daters” – those with multiple casual partners – who are at an increased risk of deviant behavior (Davies and Windle 2000) and psychosocial functioning (Zimmer-Gembeck, Siebenbrenner and Collins 2001). This indicates that it is not dating per se, but one's *pattern* of dating experience that may negatively impact well-being. Furthermore, existing literature indicates that the negative effect of romantic

involvement may be contingent upon when it occurs – decreases in academic performance and increases in conduct problems are evident in early and middle adolescent daters, but not later adolescent daters (Neeman, Hubbard and Masten 1995). This indicates that the *timing* of romantic relationships condition their pro-social or problematic effects.

Work by both Connolly and Johnson (1996) and Collins (1997) suggest remarkable continuity in relationships across time and with different partners. These scholars suggest that, in general, if an individual has problematic relationships in one relationship domain (with parents, peers, or romantic partners), they are more likely to have problems with their relationships in other domains. If relationship experience *crosses domains*, it should certainly transfer between relationships in the *same domain*; thus, adolescent romantic experience should influence young adult romantic partnerships. Specifically, adolescent romantic relationships have the unique qualities of: 1) being close in time to young adulthood; 2) unfolding during a life stage in which individuals are particularly open to creating representations of how the world works; and 3) being in the same relationship domain (romantic) as young adult partnerships. This should make romantic relationships in this period especially influential. Finally, romantic relationships should have a direct influence on young adult partnerships because some adolescent romantic relationships actually transition into young adult relationships of cohabitation or marriage. Of course, the majority of adolescent romantic relationships do not become young adult unions, but they are likely to hold developmental significance nonetheless. Adolescent romantic relationships involvement may be good practice. How does this practice translate into adult union formation decisions?

A few empirical studies directly test the effect of romantic relationship involvement on young adult unions. Madsen (2001) tests the effects of dating behavior in adolescence (ages 15-

17 ½) on the quality of young adult romantic relationships (ages 20-21). Moderate or low dating behavior predicts higher quality young adult relationships whereas heavy dating predicts poorer quality young adult relationships. Furthermore, with regard to young adult relationship quality, it is important for adolescents to have had at least one dating relationship of more than two weeks duration by age 16. In Madsen's study, the influence of adolescent romantic relationships persists even after relationships with parents and peers are considered concurrently. This indicates that some dating is good for young adult relationships, but too much dating is maladaptive for later relationship quality.

In a second empirical investigation of the influence of adolescent romantic relationship, Roisman, Masten, Coatsworth and Tellegen (2004) test the predictive links between friendship, academic, conduct, work and romantic tasks at age 20 to adult adaptation at age 30. They find that when friendship, academic, and conduct tasks are controlled, there is no effect of romantic experience at age 20 on romantic experience at age 30. This contradicts the idea that adolescent romantic relationships are building blocks for adult relationships. However, perhaps with regard to relationships, the developmental learning curve is steeper in adolescence than in early adulthood. If this is the case, romantic experience prior to age 20 would be more influential than experiences at age 20 or later.

Both studies that examine the influence of earlier romantic experience on adult unions are interested in adult relationship quality, but neither investigates union formation measures. Ultimately, we know little about adolescent romantic relationships in general, and even less about their developmental significance for union formation. Yet, as union formation patterns are changing, there is heightened policy interest in marriage. We may be able to gain important insights by looking at early experiences in romantic relationships as a "training ground" of sorts

for later relationships. Our current understanding comes from small, select samples of adolescents from one school or one city (Furman, Brown and Feiring 1999). A primary disadvantage of such samples is their homogeneity compared to the experience of adolescents nationwide. Similar adolescents are often clustered in geographically limited units—such as schools or towns—which make it difficult to generalize findings.

Motivated by theory and empirical evidence, the present study investigates the influence of adolescent romantic experience on young adult relationship formation in the form of cohabitation and marriage. The study uses three waves of data from the National Longitudinal Study of Adolescent Health (Add Health) described below. These data afford the advantage of a large, nationally representative sample collected over the critical period during adolescence and the transition to adulthood. This allows for more generalizable and robust estimates of the effects of adolescent romantic experience on young adult union formation than prior studies on this topic.

Data and Methods

Data

Add Health is a nationally representative survey of U.S. adolescents who were in grades 7-12 in 1994-1995. During this school year, more than 90,000 adolescents in 80 schools completed a self-administered, in-school questionnaire and more than 20,000 students and one of their parents completed an intensive, in-home interview about health behaviors and social relationships including family, peers and romantic partners. Approximately 14,700 students completed a second in-home interview in 1996 and about 15,000 of the original respondents completed in-home interviews in 2001-02.

Part I of our analysis describes romantic relationship trajectories of adolescents and young adult union status across the full age range of the sample. The sample for these analyses includes adolescents who completed wave 1, 2, and 3 interviews, who were not married by wave 2, who do not have missing data on adolescent relationship trajectory or young adult union formation, and who had valid sample weights (N=9,511).¹ Building on the strong age-graded nature of adolescent relationship trajectories we discover in Part I, Part II of our analysis limits the sample to those who are 16-17 at wave 1 (N=3,779) to assess the multivariate association between adolescent relationship trajectories and young adult union formation. Multivariate models are run separately for males (N=1820) and females (N=1959). We limit our sample to those ages 16 and 17 at wave 1 because we realize that the relationship implications of a particular relationship trajectory (e.g. settling down) are likely to be very different at age 13 than at age 18, for example. By age 16, most adolescents have had some relationship experience. Furthermore, these adolescents are ages 22-25 at the wave 3 interview when we capture their union formation experience. While this is relatively young for marriage, we still observe a fair amount of this union formation type (about 21% among our sub-sample).² We estimate multivariate models separately by gender because existing literature suggests that adolescent dating (e.g. Zimmer-Gembeck et al 2001) and union formation experiences differ by gender in timing and other potentially important ways.

¹ There are several reasons for missing sample weights. First, if the case was not in the original sampling frame, but was added in the field, it does not have a weight. Second, if the case was selected as part of a pair (twins, half-siblings) and both were not interviewed, it does not have a weight. Finally, if the case did not have a sample flag, it does not have a weight (Joyce Tabor, Add Health Data Manager, personal communication, January 17, 2003).

² We considered using 18-year-olds at wave 1 as our sample because they would be 25 or 26 at wave 3 and thus would be more likely to have young adult union formation experience. However, those who were high school seniors at wave 1 were not followed-up at wave 2. This lack of wave 2 information on wave 1 18-year-olds limits our ability to define their adolescent relationship trajectory.

Adolescent romantic relationship trajectory is defined from wave 1 and 2 measures while union formation is measured at wave 3. Thus, all adolescent romantic relationship experience is measured prior to cohabitation or marriage. This makes causal inference regarding the effect of adolescent relationship experience on young adult relationships more plausible.

Measures

Adolescent Romantic Relationship Trajectory

Adolescent romantic experience is the key independent variable of interest in this study. Romantic experience is measured by categorizing the trajectory of the respondent's relationship experience from 18-month recall data on romantic relationships at waves 1 and 2. Specifically, we construct six different romantic relationship trajectories from relationship histories covering three years during adolescence.³ These trajectories include: 1) ***stay single*** – indicates no dating in the reporting window; 2) ***maintain one*** – indicates dating one person—the same person—across the two waves. Relationships maybe of short or long duration, but most are of a longer duration since they span the two waves; 3) ***up-take*** – indicates changing from no relationship to one or more relationships between waves; 4) ***break-up*** – indicates changing from one or more relationships to no relationships between waves; 5) ***gain experience*** – indicates an increase in dating behavior; or 6) ***settle down*** – indicates a move to fewer or non-overlapping relationships. A few of the relationship trajectories can be further explained. Those who experience an *up-take* in dating are those who did not have any relationship experience at wave 1, but report some

³ Eighteen month retrospective relationship histories were collected from respondents at waves 1 and 2. As noted, the first interview wave took part in 1995, with a small number of interviews at the end of 1994. Dating back 18 months from this first interview means that relationships that ended as far back as 1993 are recorded. The second interview was conducted in 1996, so approximately three years of romantic relationship history are captured in these two interviews.

experience with one partner or as a serial or concurrent dater at wave 2. Those in the *break-up* trajectory are those who had any relationship history at wave 1, and reported no relationships at wave 2. Those who *gained experience* are adolescents who moved from one partner at wave 1 to serial or concurrent relationships at time 2, those who reported serial relationships at waves 1 and 2, those who moved from serial to concurrent relationships, and those who reported concurrent relationships at waves 1 and 2. Finally, those in the *settle down* category are those who changed from being serial or concurrent daters to dating just one person as a long-term steady partner, and those who changed from being a concurrent to a serial dater at wave 2.

For confidentiality and compliance reasons, identifiers for romantic partners are not included in the Add Health data. Because the 18 month window prior to the second interview may overlap with the relationship period covered in the first interview, great caution was employed to correctly account for overlap in relationship reporting. For example, it is possible that a romantic relationship that is reported in wave 2 with a start date at or about the time of the wave 1 interview is the same relationship or a different relationship than one reported that was still ongoing at the time of the wave 1 interview. Where we could be sure of the pattern of a series of reported relationships based on start and stop dates, we categorized respondents into the six trajectories.

Other Adolescent Relationship Variables

In addition to adolescent relationship trajectory, we include more traditional measures of adolescent relationship experience – total number of partners and average relationship duration. Both of these measures are captured from waves 1 and 2 when respondents were adolescents. Inclusion of these measures allows us to see if our relationship trajectory measures tell us anything about the developmental nature of romantic relationships beyond what can be learned

from simple relationship accumulation measures like the total number or average duration of relationships.

Young Adult Union Formation

We explore three young adult union formation events. To define union formation, we use a categorical variable distinguishing those who have not formed any residential union by wave 3, those who have cohabited with a romantic partner but not married, those who have cohabited with a partner and married, and those who have married but not cohabited with a partner. This measure acknowledges that one can form a residential union by cohabitation, marriage, or both.

Socio-Demographic Characteristics

We include several other measures by which union formation rates are known to vary. First, we include family structure indicators for: intact family (biological or adoptive married parents), step-family, single-parent family and other family structure. Family structure is included because a large body of literature suggests that the structure of one's family of origin influences the probability and timing of union formation. Specifically, those from stepfamilies appear to have higher marriage rates while those from single parent families have equal or lower marriage rates than those from intact families (Aquilino 1994; Goldscheider and Goldscheider 1999). Given the relatively young age of our respondents at the time we measure union formation, it is particularly relevant to note that early marriage (before age 20), rather than marriage in general, is more common among children of divorce (Wolfinger 2003). Thus, we might expect those from non-intact families to have higher rates of union formation in our relatively young sample. Next, we include race/ethnicity indicators for: non-Hispanic white, non-Hispanic black, Hispanic, non-Hispanic Asian-American and other race. Marriage and

cohabitation rates differ by race/ethnicity. For example, whites are more likely to marry, but blacks are more likely to cohabit (Bumpass, Cherlin and Sweet 1991, Raley 1995).

Multivariate analyses also include controls for parents' education measured categorically as highest level attained from less than high school to undergraduate degree or more and family income coded as the log odds of annual household income.

Several variables have missing data: family income, father's education, total number of romantic relationships and average relationship duration. For the two continuous variables – family income and average relationship duration – the mean value is substituted and indicators for cases with missing values are included in the models. Data is missing for total number of relationships when a respondent reports relationships at wave 1 and 2, but because of missing data on start and/or stop dates of those relationships, we cannot be sure that a relationship reported at wave 1 is not the same relationship as one reported at wave 2. For these cases, we have assumed that these relationships are with different partners. This will overestimate total number of relationships by one relationship for some of these individuals. We have included an indicator for cases where the number of romantic relationships has been calculated in this way because of missing relationship start or stop dates. Finally, an indicator is included for missing father's education – we have not substituted values where there are missing cases.

Analytic Methods

In Part I of the analysis we present descriptive statistics on the bivariate associations between adolescent relationship trajectory and age, young adult union formation and age, and various characteristics of adolescent relationship trajectories (duration and number of partners). For these analyses we use the full age range of the Add Health sample, but we top code the oldest and youngest ages because there are few respondents under 13 or over 19 at wave 1.

In Part II of the analysis, we present descriptive statistics for our sub-sample of 16 to 17-year-olds. Then, we estimate multinomial logistic regression models of young adult union formation with adolescent relationship trajectories as our primary measures of interest. We estimate these models separately by gender. All multivariate analyses adjust for the complex sampling design of the Add Health study using STATA 7.0.

Results

Part I

Table 1 gives us a sketch of adolescent romantic relationship trajectories. Here we see that there is some variation in duration of relationship and total number of romantic partners by relationship trajectory. With regard to differences in relationship duration, we see that consistently single respondents necessarily have no relationship duration since they did not report any relationships. Those in the maintain one trajectory experienced their relationship for an average of 18 months. This is a considerable length for an adolescent relationship and thus truly denotes a “steady” partnership. Those on the up-take trajectory average relationships of about 7 months in duration, while those who dissolved relationships between the two waves averaged 10 months in their wave 1 relationships. Those who gain experience between waves 1 and 2 average relationships of 8 months while those who settle down in their dating behavior average relationships of about 9 months.

Next, turning to the average number of relationships, again those who remain single have no relationships. By definition, those in the maintain one trajectory have just one relationship. Those who started dating and those who stopped dating averaged just over one partner. Those in the gain experience trajectory averaged about 2.5 partners while those who are settling down have had an average of 3 partners.

<Table 1 about here>

Next, we turn to the age pattern of adolescent relationship trajectories. We expect that adolescents will be more likely to have some relationship experience as they age, probably with one or multiple partners. Those in the up-take trajectory should be younger than those in the steady, gain experience, or settle down trajectories. Figure 1 displays adolescent relationship trajectory by age at wave 2. The proportion of adolescents in the stay single trajectory decreases noticeably at each age as the proportion with some relationship experience increases. There are six times as many 19-year-olds on the maintain one trajectory as there are 13-year-olds on this same trajectory. The up-take trajectory – those who are just starting to date – is more prevalent among younger adolescents than older adolescents. Those who have ceased romantic relationships (break-up) don't differ that much across age groups – those in middle adolescence are slightly more likely to be represented in this trajectory than are younger and older adolescents. Gaining experience and settling down are increasingly common at each year of age. The bar representing those 19 or older at wave 2 shows a smaller proportion of those on the gain experience or settle down trajectory than we might expect given the age trend from 13 to 18. This is likely because of the unique nature of those 19 and older at wave 2 who are still in the sample. The Add Health data did not follow wave 1 respondents who had graduated from high school. Thus, those 19 and older at wave 2 are those who had not yet graduated from high school – they are likely to be different in many ways from their same age peers who graduated on-time.

<Figure 1 about here>

Figure 2 offers a descriptive look at young adult union formation by age at wave 3. Again, an age-graded pattern is remarkably evident. There is a near monotonic increase in the proportion with residential union experience with age from 18 to 25. Cohabitation increases

with age whether or not is followed by marriage. Marriage without any cohabitation experience also increases monotonically across all ages.

<Figure 2 about here>

Part II

This initial lens into adolescent relationship trajectories and young adult union formation confirms that there is an age-graded, perhaps developmental, pattern to relationship formation that may start in adolescence. Next, we examine whether relationship trajectory in adolescence portends particular union formation decisions among young adults. For the following analyses, we limit the sample to those who are 16- and 17-years-old at wave 1. These respondents range in age from 17 to 19 at wave 2 and 22 to 25 at wave 3. Table 2 shows the weighted distribution of variables of interest for the multivariate analyses.

<Table 2 about here>

This table shows that respondents are distributed across all trajectories, with the highest percentage of 16- and 17-year-olds at wave 1 gaining experience and the lowest percentage desisting their dating behavior (break-up). With regard to union formation at wave 3, most respondents (then ages 22-25) have experience in some residential union, but a substantial minority has no residential union experience (43 percent). Of those who have lived with a romantic partner, most have cohabitation only experience, while about equal proportions have experience with cohabitation and marriage or marriage only.

What do adolescent relationship trajectories mean for young adult union formation when considered in conjunction with other measures? Specifically, can we learn anything beyond what simple measures of number of partners and relationship duration in adolescence can tell us?

If so, what new information can we learn from modeling young adult union formation with adolescent relationship trajectories?

Tables 3 and 4 show the relative risks of various union formation types by adolescent relationship trajectory, average number of partners, average union duration, and socio-demographic factors for females and males, respectively. For each of the contrasts, having no residential union by wave 3 is the reference category since this is the most common category of union formation among respondents.

Females

In Table 3, the first contrast predicts the risk of having cohabited, but not married relative to not forming a union by wave 3. With regard to adolescent relationship trajectory, we see that adolescent females who were consistently single have a significantly decreased risk of having cohabitation experience relative to those in the up-take relationship trajectory (the reference category).⁴ Those who have experience in the maintain one, gain experience, and settle-down trajectories are at an increased risk of cohabitation relative to those who had just started dating in late adolescence. Those in the break-up trajectory are not significantly different from those on the up-take trajectory in their risk of cohabitation relative to no residential union by wave 3.

With regard to race and compared to whites, only blacks are at a significantly decreased risk of cohabiting only versus no residential union (Contrast 1). With regard to family structure, those from all non-intact family structures have a higher risk of cohabitation only versus no residential union. Finally, higher parental education appears protective against cohabitation for

⁴ Up-take is our reference category because it represents adolescents who have some, but not much relationship experience. This reference category affords nice comparisons with those who have no relationship experience (singles), and those who are on various trajectories of some relationship experience (maintaining, gaining experience, and settling down).

females. Those whose fathers are college graduates are at a decreased risk for cohabitation only versus no residential union.

Contrast 2 shows the risk of cohabiting followed by marriage relative to the risk of no residential union. This model shows that those who are on the maintain one, gain experience, and settle down trajectories in adolescence are much more likely to have cohabitated and married than those who started dating in late adolescence (up-take). With regard to race and compared to whites, both blacks and Hispanics are at a decreased risk of cohabitation followed by marriage compared to no residential union. Those from step- or other family structures are at an increased risk for cohabitation and marriage. Both mother's and father's education is protective against marriage and cohabitation compared to no residential union.

Contrast 3 shows the risk of marriage only relative to no residential union. Those who are single during adolescence are at a decreased risk for marriage by wave 3. Those who are on the gain experience or settle down trajectory are at an increased risk for marriage. Here, only blacks are less likely to marry versus not form a residential union relative to whites. There are no significant family structure differences in the risk of marrying (without cohabitation experience), but the risk of marriage only decreases as family income increases.

In all three contrasts, the significant effects of adolescent relationship trajectories are net of the simple adolescent relationship measures of number of partners and average relationship duration. Only in Contrast 3 does the measure for number of partners have a significant impact on the risk of marrying relative to not forming a residential union. As number of partners in adolescence increases, the risk of marriage decreases. Measures for total number of partners and average relationship duration were significant in models not controlling for relationship trajectories (not shown). The fact that number of partners and average relationship duration are

non-significant in all but one of the contrasts after trajectories have been included indicates that the pattern of relationship experience rather than a simple count of partners or measure of duration is associated with young adult union formation.

To sum up the findings for females, compared to those just starting to gain romantic experience in late adolescence (up-take trajectory), those without any relationship experience are at a lower risk of forming a cohabitation only or marriage only residential union than forming no residential union by wave 3. Those on the maintain one trajectory in adolescence are at an increased risk than those just starting to date of having cohabitation only or cohabitation and marriage experience relative to no residential union experience. Those on a gain experience or settle down trajectory in adolescence are at an increased risk compared to those just starting to date to form all types of residential unions rather than no residential union by wave 3. Net of these relationship trajectory effects, each additional relationship in adolescence makes one less likely to have transitioned to marriage without cohabitation experience by wave 3 than to have not formed any residential union.

<Table 3 about here>

Multinomial logistic regression models can be difficult to interpret because of the various contrasts they produce. Based on the model in Table 3, Figure 3 graphically demonstrates the predicted probabilities of assuming each union formation status by adolescent relationship trajectory for females holding all other measures constant. Here we see the large difference in the probability of not forming a residential union by wave 3 for those who have little (up-take) or no (stay single) adolescent relationship experience compared to those who maintained one steady relationship, gained experience, or settled down. Those who are on the break-up trajectory in adolescence are less likely than singles or up-takers but more likely than those on the maintain

one, gain experience, or settle down trajectories to have no residential union history at wave 3. The second set of bars, for cohabitation only, shows that those in the break-up trajectory have the largest probability of cohabitation only relative to all other union formation statuses. Those who just started romantic relationships (up-take), maintain one relationship, gain experience or settle down are not all that different in their probability of cohabitation only. By predicting probabilities of each outcome, we are able to see contrasts that we can not easily see in the multinomial logistic regression model that displays each union formation status in relation only to the “no union history” category. The statistically significant relative risk for maintain one (Table 3, Contrast 1), for example, can be seen in this figure by comparing the black bar for “no union history” to the black bar for “cohabitation only” in Figure 3.

The third set of bars represents the predicted probabilities of cohabitation and marriage for those of various adolescent relationship trajectories. Compared to those on different trajectories, those who were settling down in adolescence are more likely to have cohabited and married by wave 3. Those who were on the maintain one and gain experience trajectories are about equally likely to have cohabited and married. Those with no relationship experience in adolescence and those who just started dating are least likely to have experience with both cohabitation and marriage by wave 3. Finally, the last set of bars for marriage only shows that those who are on the gain experience and settle down trajectories in adolescence are more likely than others to have married without cohabitation experience before wave 3. Those who stopped dating between waves 1 and 2 (break-up) are least likely to have marriage only experience.

<Figure 3 about here>

More generally, it is interesting to note that among those who reported no adolescent dating experience or at waves 1 or 2 or had just started dating at wave 2 (age 17-19), the most

likely union formation status at age 22 to 25 is no residential union. However, among those with any dating experience by age 16 and 17 (wave 1), it is more likely than not that they have some residential union experience. They are most likely to have cohabitation only experience, but as they age beyond the current window of observation (25 at oldest), some of those cohabitations are likely to transition to marriages. This would shift some in the second set of bars to the third set of bars for cohabitation and marriage. However, a minority of those 22 to 25 with any residential union experience enter marriages without cohabitation experience. This is consistent with recent trends toward increasing rates of cohabitation before marriage.

Males

Table 4 displays the same models in Table 3, but for males. Unlike the findings for females, Contrast 1 shows no significantly different risks of cohabitation only versus no residential union among the different adolescent relationship trajectories. Compared to whites, Asian-Americans males are less likely to have cohabitation only experience. Compared to those from intact families, males from step- or single-parent families are more likely to have cohabitation only experience. The indicator for missing total number of romantic relationships is significant. The direction of this effect suggests that those who are missing data on total number of romantic partners in adolescence are less likely to form a cohabitation only relative to no residential union.

Contrast 2 shows that compared to no residential union experience, those on the settle down trajectory are more likely to have experienced cohabitation and marriage than those on the up-take trajectory. Other trajectories are not significantly different from the up-take trajectory. In this contrast, blacks are at a decreased risk for cohabitation and marriage experience compared to whites, while those from step-families are at an increased risk compared to those from intact

families. Having a father with a college degree makes one less likely to have cohabitation and marriage experience than no residential union experience.

Contrast 3 shows that only those who were single in adolescence are at a significantly different risk of marriage only – a decreased risk – relative to those on the uptake trajectory. Thus, males with any romantic experience are more likely than those with none to marry without cohabitation experience by wave 3. In addition, compared to those from intact families, those from single parent families are at a decreased risk of marriage only relative to no union formation. As income increases, males are at a decreased risk of marriage only relative to no union. Finally, those with missing data on father’s education are at a decreased risk to have formed a marital union without cohabitation relative to no residential union. In all contrasts, total number of partners and average relationship duration don’t significantly impact union formation for males.

In sum, the developmental significance of adolescent relationship trajectory is less convincing for boys than girls. Among boys, only those who are on the settle down trajectory are more likely to have one sort of union experience (cohabitation followed by marriage). However, settling down does not predict cohabitation only or marriage only among males. Being single during adolescence decreases the risk of marriage only, but it does not have a significant association with cohabitation experience. In contrast, females who are single throughout adolescence are less likely to cohabit only and marry only. Furthermore, females who maintain one relationship, gain experience, or settle down during adolescence are more likely than females who just started dating in late adolescence (up-take) to form any residential union.

<Table 4 about here>

Again, multinomial logistic models with multiple contrasts can be difficult to interpret. Figure 4 shows the relative risks of each young adult union formation status by adolescent relationship trajectory while holding all other measures constant. These probabilities are predicted from Table 4. The first set of bars shows the probability of forming no residential union by wave 3. Males on the stay single and up-take trajectories have higher probabilities than those on other adolescent relationship trajectories of not forming a residential union. The second set of bars shows that while differences are small, those with little or no adolescent relationship experience are also somewhat less likely to have cohabitation only experience compared to those with more substantial relationship experience in adolescence (maintain one, gain experience, settle down). Moving to the third set of bars for cohabitation and marriage, we see that those who are settling down in adolescence are most likely to have cohabitation and marriage experience by wave 3. They are followed by those on the maintain one, gain experience, and break-up trajectories, respectively. Those on the stay single and up-take trajectories have equal and the lowest probabilities of experiencing cohabitation and marriage. Finally, the last set of bars represents marriage only by wave 3. The predicted probabilities of marriage only for those on all adolescent relationship trajectories are similarly low – all under 0.10.

<Figure 4 about here>

Comparing Figures 3 and 4 reveals further interesting gender differences. The highest probability of union status for males of all trajectories is no residential union whereas it is cohabitation only for most females. However, the predicted probabilities of cohabitation only are not that different between males and females. Instead, it is the two marriage union formation statuses (with cohabitation and without) that are more prevalent for females than males. Again, because females continue to marry at younger ages than males, and because we capture

respondents closer to the mean age at marriage for females than males, it is perhaps not surprising that females have a heightened probability of marriage when compared to males who marry later and, on average, outside of our age range of observation.

Conclusion

This study set out to consider the degree to which adolescent relationship experience could be considered developmental for young adult union formation. We first assessed adolescent relationship trajectories and young adult union status by age. The findings from this descriptive analysis lend credibility to the idea that romantic relationships in adolescence are woven into the relationship life course. If we assume that period age effects approximate single-age cohort effects over the short period between waves 1 and 2, we could assert that adolescents gain more experience with romantic relationships by first starting to date, then moving into relationships with one other person, but eventually gaining experience with multiple romantic partners, or one long-term partner. Multivariate models estimated separately by gender reveal that adolescent romantic experience has more developmental currency for females than males, at least in the case of union formation. However, males typically enter into adult unions later than females (the average age at first marriage is two years later for males than females). Perhaps experience gained by males in adolescent relationships has not yet translated into young adult unions in our relatively young sample. A fourth wave of Add Health data would help us investigate adult union formation around the average age of marriage for men.

The role of romantic relationships has been relatively neglected by the research community in the past (Brown 1999; Furman 2002). While this study lays the groundwork for understanding the role of romantic relationship trajectories in young adult relationship formation, there is much more work to be done. As noted by Collins (2003), the content and quality of

romantic relationships are certain to prove as important as the existence of such relationships in their influence young adult development. Where data is available, future research should aim to test the relevance of both the existence and characteristics of adolescent romantic relationships over time.

Limitations

While this analysis moves us forward in our understanding of the role of romantic relationships – several caveats should be noted. First, the definition of being in a romantic relationship is a social one, and therefore the respondent has a good deal of authority in determining whether or not a relationship is simply a friendship or if it is a romantic relationship. The Add Health study attempts to put some boundaries on the definition of a romantic relationship. Respondents are asked: “In the past 18 months—since {MONTH, YEAR}—have you had a special romantic relationship with anyone?” If a respondent replies “yes” he/she is defined as having a romantic relationship. If a respondent replies “no” he/she is routed to a second series of questions that ask about three behaviors – holding hands, kissing and telling someone you liked/loved him/her. If the respondent replies “yes” to all three of these questions, and they have done these things with the same person, they are determined to have had a romantic relationship and they are asked questions on romantic relationship involvement. Still, as Risman and Swartz (2002) note, the actual romantic lives of adolescents are not as simple as the definitions employed in surveys might suggest.

A second caveat is with regard to sexual orientation. This analysis uses only adolescents with heterosexual romantic and sexual relationships. While the Add Health data has several questions that allow insight into same-sex romantic attraction, very few of the reported romantic

relationships were with a same sex partner (less than 1 percent). This is too small of a group for which to estimate separate effects.

The research community recognizes the importance of adolescent experiences in education and work on later achievements in these domains, yet adolescent experiences in romance have been neglected when examining family formation decisions. This study indicates that some romantic relationship trajectories are associated with young adult union formation, especially for females. The findings confirm that females with one long-term relationship in adolescence or those who are gaining experience or settling down are more likely to have formed some sort of residential union by wave 3. This study highlights the importance of understanding the role of adolescent relationship experience as an early template for adult union formation. While adolescent romantic experience should not be considered deterministic, it should be understood as an important influence on future relational well-being.

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**Table 1: Unweighted Means of Relationships Characteristics
by Adolescent Relationship Trajectory**

Relationship Trajectory	Number	Duration	Average # of Relationships
Stay Single	2,602	0	0
Maintain One	1,619	17.82	1
Up-Take	1,548	6.72	1.18
Break-Up	914	9.65	1.07
Gain Experience	1,949	7.65	2.56
Settle Down	879	8.77	2.98

N=9,511

Figure 1: Adolescent Relationship Trajectory

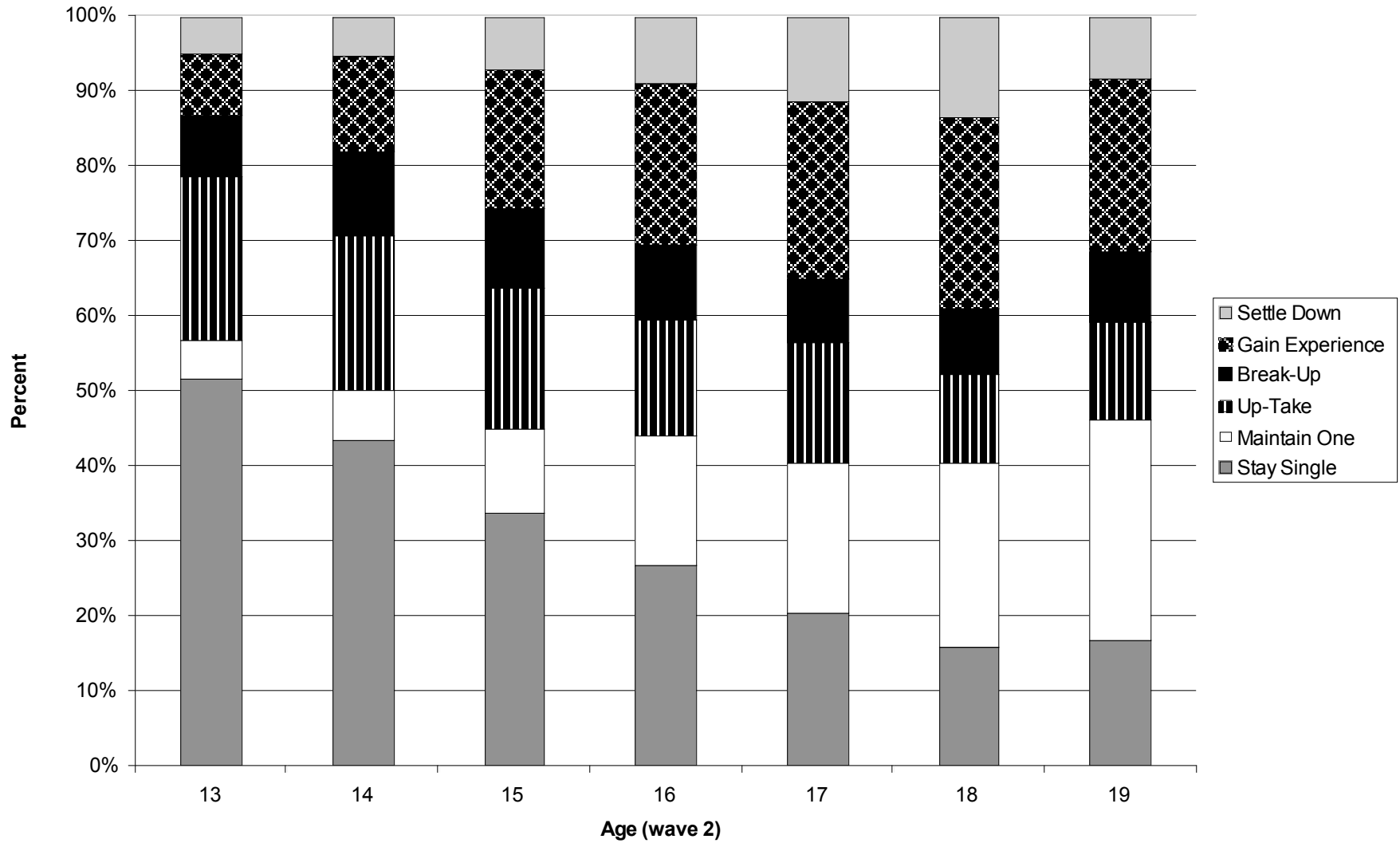


Figure 2: Adult Union Formation

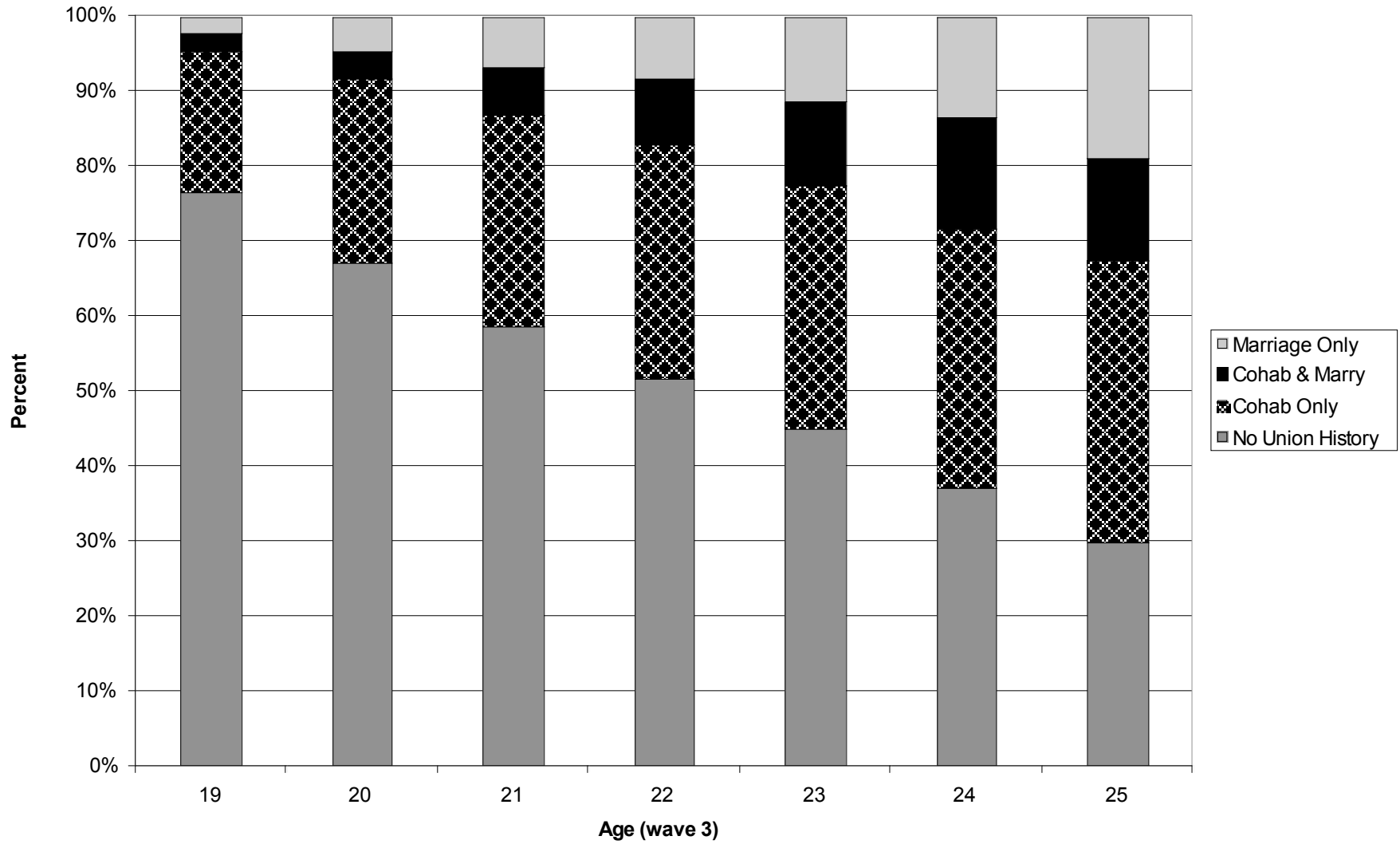


Table 2: Descriptive Statistics for Analysis Sample
16-17-year-olds at wave 1

	Unweighted N	Weighted %
Gender		
Male	1,820	49.97
Female	1,959	50.03
Race/Ethnicity		
White	1,932	65.75
Black	745	16.48
Hispanic	689	11.90
Asian	346	4.30
Other Race	67	1.57
Family Structure		
Intact	2,150	56.57
Step parent	487	12.06
Single Parent	918	25.25
Other	224	6.12
Adolescent Relationship Trajectory		
Stay Single	718	18.24
Maintain One	822	21.53
Up-Take	521	12.82
Break-Up	333	8.33
Gain Experience	919	25.78
Settle Down	466	13.29
Young Adult Union Formation		
No Union History	1,762	43.22
Cohabitate Only	1,214	34.83
Cohab & Marry	407	12.05
Marriage Only	396	9.89

N=3,779

Table 3: Females: Relative Risk Ratios of Union Formation^a

	Contrast 1 Cohab Only v. No Union	Contrast 2 Cohab & Marry v. No Union	Contrast 3 Marry Only v. No Union
<i>Ind. Vars:</i>	Risk Ratio	Risk Ratio	Risk Ratio
total # RR	0.99	0.84	0.68 *
ave duration	1.00	1.01	1.02
uptake (ref.)			
stay single	0.31 ***	0.49	0.42 *
maintain one	2.10 *	4.69 ***	1.80
break-up	1.61	2.06	0.35
gain experience	2.17 *	5.99 **	4.65 **
settle down	2.24 *	6.10 **	3.96 **
white (ref.)			
black	0.57 **	0.12 ***	0.33 **
hispanic	0.61	0.25 *	1.03
asian	0.62	0.61	0.99
othrace	1.85	0.96	0.76
intact (ref.)			
step family	2.37 **	2.25 **	1.39
single parent	1.54 *	1.82	0.61
other family	2.34 *	5.83 ***	1.42
mother hs (ref.)			
mom < hs	1.32	1.23	1.59
mom some coll	1.16	1.08	1.12
mom coll grad +	0.82	0.42 *	0.81
father hs (ref)			
dad < hs	0.96	0.76	1.24
dad some coll	0.88	0.78	0.86
dad coll grad +	0.56 **	0.46 *	0.69
dad missing ed	1.78	1.09	1.62
log family inc	0.80	0.75	0.65 **
missing inc	1.60	1.02	1.15
missing total RR	1.08	0.94	0.73
missing ave dur	1.01	1.20	0.88

N=1959

^aModels adjust for complex sampling design using STATA svy commands.

Figure 3: Females Predicted Probability of Union Formation by Adolescent Trajectory

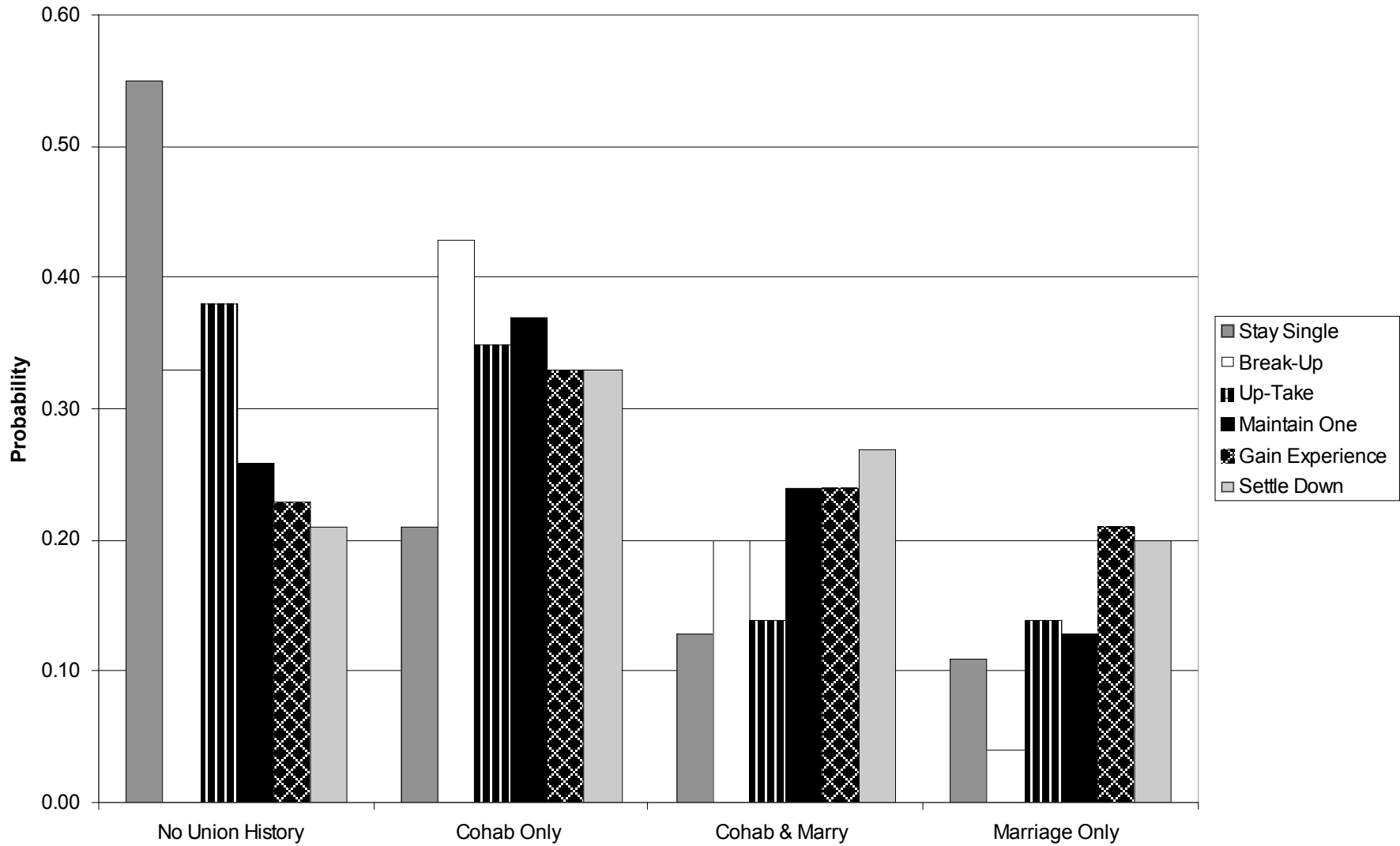


Table 4: Males: Relative Risk Ratios of Union Formation^a

	Contrast 1 Cohab Only v. No Union	Contrast 2 Cohab & Marry v. No Union	Contrast 3 Marry Only v. No Union
<i>Ind. Vars:</i>	Risk Ratio	Risk Ratio	Risk Ratio
total # RR	1.19	0.92	0.93
ave duration	1.01	1.01	1.01
uptake (ref.)			
stay single	0.87	0.43	0.29 *
maintain one	1.50	2.45	1.61
break-up	1.28	1.55	1.60
gain experience	1.57	2.15	1.95
settle down	1.55	3.09 *	1.43
white (ref.)			
black	0.93	0.39 *	0.58
hispanic	0.84	1.24	1.02
asian	0.46 *	0.54	0.57
othrace	0.94	1.00	0.41
intact (ref.)			
step family	2.20 ***	2.26 *	1.57
single parent	2.18 ***	0.84	0.45 *
other family	1.79	2.26	0.41
mother hs (ref.)			
mom < hs	1.18	0.73	0.78
mom some coll	0.93	1.44	0.96
mom coll grad +	0.71	0.62	0.64
father hs (ref.)			
dad < hs	1.15	0.92	2.11
dad some coll	0.92	0.70	1.42
dad coll grad +	0.74	0.37 *	0.60
dad missing ed	0.79	0.04	0.04 *
log family inc	0.93	0.82	0.60 ***
missing inc	0.72	0.00	1.36
missing total RR	0.54 *	0.33	0.83
missing ave dur	1.36	1.72	1.18

N=1820

^aModels adjust for complex sampling design using STATA svy commands.

Figure 4: Males Predicted Probability of Union Formation by Adolescent Trajectory

