Single and Multiple Cohabitors' Risks of Divorce

Scott T. Yabiku*
Mary H. Benin

Arizona State Univerisity

* Department of Sociology, Arizona State University, Tempe, AZ 85287-4802; 480-965-3943 (voice); 480-965-0064 (fax); email: scott.yabiku@asu.edu

Single and Multiple Cohabitors' Risks of Divorce

Abstract

We use the Intergenerational Study of Parents and Children and the National Survey of Families and Households to examine the roles of selection and experience of single and multiple cohabitation on the rate of divorce. Compared to prior research which has been primarily based on cross-sectional surveys with retrospective data, we use measures of attitudes toward cohabitation, marriage and divorce prior to any of those experiences. Further, we examine the impact of experience of cohabitation through (1) an analysis of the effect of single and multiple cohabitation on changes in attitudes toward divorce, and (2) the effect of single and multiple cohabitation on the rate of divorce in a model while including age 18 divorce attitudes. Preliminary analyses have found that controlling for attitudes toward marriage and divorce and religiosity at age 18 reduces the effect of cohabitation status. However, much of the effect of cohabitation is left unexplained.

Single and Multiple Cohabitors' Risks of Divorce

Cohabitation of unmarried heterosexual couples has become increasing popular in the United States. Approximately 4.9 million households in the U.S. were maintained by unmarried hetero-sexual partners in 2000, compared to only about one-half million in 1970. (U.S. Bureau of the Census, 1993, 2003). Current estimates are over one-half of all young adults now cohabit before marriage (Bumpass & Lu, 2000).

When cohabitation first became popular, researchers hypothesized that premarital cohabitation would decrease the chance of divorce, since unsatisfactory partnerships would be weeded out prior to marriage. (Ridley, Peterman, and Avery, 1978; Trost, 1975). However, contrary to the early hypotheses, research has consistently shown that those who cohabit prior to marriage have a greater chance of divorce than those who do not cohabit. (Bennett, Blanc, and Bloom, 1988; Bramlett and Mosher, 2002; Dush, Cohan and Amato, 2003; Lillard, Brien, and Waite, 1995). The explanations for this negative relationship between premarital cohabitation and marital stability fall into two basic categories: selection and experience (Smock, 2000).

The selection argument is that cohabitation disproportionately selects from persons who have values, traits, or characteristics that cause them to be at greater risk for divorce. Research has supported this perspective. Lillard et al. (1995) found that cohabitors were less likely than those who don't cohabit before marriage to come from an intact family, be Catholic, and be 25 or older at age of the start of the union. Bennett et al. (1988) find that cohabitors are younger, more likely to have had a premarital conception, and more likely to have had a premarital birth than non-cohabitors. Woods and Emery (2002) found that pre-marital cohabitation was positively correlated with delinquency and negatively correlated with religious service attendance. In terms

of attitudes, Axinn and Thornton (1992) find that support of the importance of marriage reduces the chances of cohabitation, while acceptance of divorce increases the chance of cohabitation.

Despite results showing that cohabitors differ significantly from non-cohabitors, most research on the risk of divorce have found that even controlling for the risk factors associated with cohabitation, that cohabitors have a greater chance of divorce than non-cohabitors. For example, Teachman and Polonko (1990) find that controlling for age at marriage, education, SES, and other factors that cohabitors have greater chances of divorce than those who did not cohabit before marriage. Dush et al. (2003) find that in two different cohorts that cohabitation was associated with divorce controlling for race, parental divorce, education, family income, welfare use, and in first marriage. Such research supports the idea that the cohabitation experience could partially explain the greater divorce rate of cohabitors. However, it is also possible that unmeasured selection factors could also account for the higher divorce risk. The strongest support for the experience perspective comes from the work of Axinn and his colleagues. Using longitudinal data, Axinn and Thornton (1992) find those young adults who cohabited between 1980 and 1985 showed greater acceptance of divorce than those who did not cohabit, controlling for their 1980 attitudes. Axinn and Barber (1997) find that cohabiting increases young people's acceptance of divorce, while other independent living situations do not.

Recent research on cohabitation has focused on the finding that not all cohabitations have the same associations with divorce. For example, the length of time spent in cohabitation has an impact on whether cohabitation increases the chance of divorce. Bennett et al. (1988) find that women who cohabit for more than three years have a 54 percent higher marital dissolution rate than those who cohabit for less time. Teachman and Polonko (1990) find that short term (6 months or less) cohabitants are less likely than long term cohabitants to experience marital

dissolution. A recent study, Teachman (2003), looked at the effect of cohabiting with more than one partner on the risk of marriage for women. He found that controlling for premarital sex, that there is only a significant effect of cohabitation on marital dissolution for those who cohabited with more than one partner. Teachman and Polonko (1990) and DeMaris and MacDonald (1993) also find that for both men and women that there is no effect of cohabiting on the risk of marital dissolution, if one has cohabited with future spouse only.

These results raise important questions: why would multiple cohabitors be at greater risk for divorce? As was the case for the comparison of cohabitors and non-cohabitors, the possible explanations fall into two categories: selection and experience. It certainly seems quite likely that people who cohabit with multiple partners are different in characteristics and values from those who only cohabit with their future spouse. However, it also seems possible that the experience of cohabiting with multiple partners could lead one to be at a greater risk for divorce. If one has had multiple partners, then by definition that person has successfully navigated the break-up process. That is, one has broken-up with a live-in partner and then found a new partner and was satisfied enough with the new partner to marry him or her. If one has only cohabited with, then married, one person, then he or she has not had experience with breaking up with a live-in partner. Further, someone who was cohabited only with her or his spouse has no experience of entering the marriage market after such a break-up. Thus, the multiple cohabitor may enter marriage with greater confidence about his or her options outside of marriage. In Thibaut and Kelley's terminology (1959), the multiple cohabitor may have a stronger comparison level of alternatives than the person who has no experience with options after a break-up with a live-in partner.

The research of Axinn and Barber (1997) indirectly supports this interpretation of the role of relationship dissolution in explaining the impact of multiple cohabiting experiences on the probability of divorce. They report that cohabitors who dissolved their relationship became more positive regarding divorce while young adults who never cohabited did not. They also found that cohabitors who married their partner or remained in a cohabiting relationship did not become more positive toward divorce over time.

In this paper we will differentiate single and multiple cohabitors' risk of marital dissolution using two data sets, the Intergenerational Study of Parents and Children (ISPC), and the National Survey of Parents and Households (NSFH). Both of these data sets are longitudinal and allow us to measure the attitudes toward marriage, and characteristics of the respondents prior to entering a cohabiting relationship. Thus, we are able to identify pre-relationship attitudes and characteristics of non-cohabitors, single cohabitors, and multiple cohabitors. Thus we can look at selection effects by examining the probability of becoming a single or multiple cohabitor based on characteristics and experiences. We can also determine net of these differences, whether multiple cohabitors have greater chances of marital dissolution than single cohabitors and non-cohabitors.

Our samples differ from those previously used to examine the effects of multiple cohabitation. Teachman and Polonko (1990) used the National Longitudinal Study of the High School Class of 1972 (NLS). This sample is limited to those who were attending the twelfth grade. As they point out, high school drop-outs have higher rates of cohabitation than non-dropouts, so their results are not representative of dropouts or of other cohorts. Neither the NSFH nor the ISPC samples are limited in the educational attainment of respondents. The other two major studies of multiple cohabitation use cross-sectional data. Teachman (2003) uses the

National Survey of Family Growth (NSFG) which only contains a cross-sectional survey of women and DeMaris and MacDonald (1993) use only the first wave of the NSFH. By using multiple waves of both the ISPC and the NSFH, we can measure attitudes toward marriage and divorce before the respondent was ever in a cohabiting relationship to examine selection effects. Existing studies that have examined single versus multiple cohabitors' risks of divorce used retrospective or cross sectional data (e.g., Teachman 2003) and thus were not able to examine the role of attitudes prior to cohabitation, which may be an important selection mechanism. Further, we can control for changes in attitudes toward marriage and divorce after (some) respondents have been in cohabitating relationships which helps assess the impact of experience on the risk of divorce.

Hypotheses

We have several related hypotheses, which are summarized below.

1. Multiple cohabitors will have higher risks of divorce than single or never cohabitors
2. Those with multiple cohabitation experiences will change their attitudes to regard divorce more positively than those with single or no cohabitation experience.
3. Controlling for pre-cohabitation behavioral and attitudinal selection factors will reduce these differences.
4. Controlling for current divorce attitudes will further reduce the differences between multiple cohabitors, versus single, and non-cohabitors.

Data and Methods

The Intergenerational Study of Parents and Children began in 1962 with an interview of married, white women in 3 counties of the Detroit metropolitan area. Using a systematic sample of birth records, the survey chose women who had given birth to a first, second, or fourth child in

1961. Mothers were interviewed at multiple times from 1962 through 1993. The data for our paper comes from interviews with the children. The children who were born in 1962 were interviewed in 1980, 1985, and 1993 when they were 18, 23, and 31 years old.

The NSFH is a nationally representative sample of households in the United States. First fielded in 1987 and 1988, a follow-up survey was completed in 1992 through 1994, and a third wave of interviews with a subset of original respondents was completed in 2001. The initial survey featured interviews with about 13,000 primary respondents (randomly selected household members) plus about 7,000 secondary respondents (spouses or cohabiting partners of the main respondents). Respondents answered a variety of demographic, family, employment, and attitudinal questions. The NSFH Wave 3 sample is restricted to those who either had a focal child or are 45 or older at Wave 3. While these restrictions will reduce our cases, we suspect they will not bias our results, since these restrictions are in fact right censoring with a known censoring mechanism: age and parental status. Event history allows right censoring, and we will be able to control for the effects of age and parental status, the variables involved in the censoring, and thus censoring will remain noninformative. The NSFH analysis has not been completed, and thus we do not describe it in detail here.

In the analysis of both datasets, the primary dependent variable is the transition to divorce. Respondents become at risk of divorce once they marry for the first time. Because the dependent outcome is a transition over time, event history models are appropriate (Allison 1995). Due to their ease of estimation using logistic regression, we employ discrete-time hazard models to estimate the effects of independent variables on the rate of divorce. Discrete-time models also allow time-varying covariates to be easily included. In our models, the time unit of risk is the person month. Note that using person-months, as opposed to person-years, does not artificially

deflate standard errors (Allison 1982), and in fact small time intervals help to reduce time-aggregation bias (Petersen 1991). To code respondents' life histories for analysis, respondents contribute one month of risk for every month they are married, and the divorce event indicator is coded 0. If respondents divorce, the divorce indicator is coded 1 in that month, and the respondent no longer contributes person-months. Respondents who do not divorce are censored at the last survey wave in 1993. To parameterize the baseline hazard, we use a series of dummy variables to indicate two-year intervals after marriage, e.g., years 0 through 1 (which is synonymous with months 0 through 24), years 2 through 3, years 4 through 5, etc. Because our substantive and theoretical focus is not the shape of the baseline hazard, we treat these coefficients as nuisance parameters and do not display them in the tables.

We create cohabitation variables that are dummies to represent three groups of cohabitors: respondents who never cohabited, respondents who cohabited only with the partner they eventually married (single cohabitors), and respondents who cohabited with more than one partner before marriage (multiple cohabitors). Note that in the ISPC dataset, there were no cohabiting respondents who cohabited with other partners but not their eventual spouse, which is why this possibility is not represented.

The innovative contribution of this analysis is to examine the mechanisms by which respondents enter into single versus multiple cohabitations, and fortunately the ISPC has many attitudinal dimensions measured early in the life course. These questions come from the 1980 survey when the children were 18 years old, and thus the time-ordering of these measures is causally prior to most of the respondents' experiences with cohabitation and marriage. We examine several sets of attitudinal domains: attitudes to marriage, attitudes to family, religiosity, and peer's sexual attitudes. Except for religiosity, each of these domains is measured with

multiple questions and is averaged to form a single scale. See Appendix 1 for a complete description of the items.

For the ISPC data, we will also use the 1985 attitudes toward marriage and family in a separate analysis for those who are still at risk for divorce. This will essentially treat marriage and family attitudes as time-varying covariates that can change in 1985. If the time-varying attitudes reduce the differences between cohabitors and non-cohabitors and single and multiple cohabitors better than the age 18 attitudes, then support is given for the experience perspective, since the more recent attitudes would reflect attitudes measured after cohabitation for many of the ever-cohabited respondents. If the age 18 attitudes are equally useful in predicting divorce, then the selection perspective may be supported.

We also include several standard controls that have been previously identified in the literature as being related to the selection of individuals into cohabitation: parental divorce, parental income, parental education, age at first sex, and religious identification (Teachman 2003). We also include as controls variables that have been identified as factors that raise the risk of divorce, such as premarital childbearing, and variables that reduce the risk of divorce, such as marital childbearing. We also control for age at marriage and number of siblings. Because the experiences are likely to differ by sex, we conduct analyses separately for men and women.

A final analysis will use multiple regression to examine the change in attitudes toward marriage and divorce, focusing on the differences between those with single cohabitation, multiple cohabitation and no cohabitation experience. Both the NSFH and the ISPC measure these attitudes in multiple waves and after many respondents have had cohabitation experiences. We will use the control variables identified above to control for selection effects.

Preliminary Results

Thus far some analyses have been conducted on the ISPC dataset, which contains the experiences of approximately 650 individuals who had married by the 1993 wave of the survey (age 31) and are thus experienced some risk of divorce. The strength of the ISPC dataset is its cohort design and extensive measurement of children early in the life course (age 18) before most cohabitation and marriages have begun. We plan to replicate as much of this analysis as possible with the NSFH, which has strengths where the ISPC is weaker: the NSFH has a larger sample size and is a nationally representative dataset. The results we discuss here come only from the ISPC analyses, but analysis of the NSFH may be able to provide corroborating evidence.

The results are presented as odds ratios, which are the exponentiated regression coefficients. A coefficient greater than one is a positive effect on the rate of divorce, while a coefficient less than one is a negative effect. A coefficient equal to one represents a null effect because these odds ratios have multiplicative effects on the rate of divorce. Note that in a discrete-time model, the odds ratio represents the effects of the predictor on the odds of marriage in year, given that the respondent has not married previously. When the number of events is small relative to the number of person-periods at risk, however, the rates are very close to the odds. Thus discrete-time methods approximate continuous-time methods as person-periods become shorter and shorter. Therefore, out of convenience we describe the effects of predictors as influencing the rate rather than the odds of marriage.

(Table 1 here)

In Table 1 we present the results of the women in the ISPC. Focusing on the cohabitation variables, model 1 confirms previous findings that both single cohabitors and multiple cohabitors

have higher risks of divorce compared to individuals who do not cohabit before marriage, and multiple cohabitation is a greater risk factor for divorce than single cohabitation (Teachman 2003). The odds ratio of 2.18 for single cohabitors means they divorce at rates 2.18 times that of non-cohabitors, or 118% higher. Multiple cohabitors divorce at even higher rates: 172% higher than non-cohabitors.

In models 2 through 5, we test if attitudinal measures from early adulthood explain the effects of single or multiple cohabitors' higher divorce rates. Because these attitudinal measures occur before cohabitation, we are examining the possible selection of young people into single and multiple cohabitations. In model 2, the effect of liberal marriage attitudes is examined. This variable is significant only at the p=.06 level, with the expected effect of increasing the risk of divorce. More importantly, the inclusion of this measure slightly reduces the magnitude of both cohabitation variables: the odds ratios for single and multiple cohabitations come closer to 1.00, which represents a diminishing of the effects. Single cohabitors now divorce at rates 104% higher than non-cohabitors, and multiple cohabitors divorce at rates 126% higher than non-cohabitors. While these effects are diminished, they are still significant.

In model 3, liberal family attitudes are included. This measure, however, is not significant, and the odds ratios for the cohabitation variables are not much changed in model 3 compared to model 1. In model 4, peers' attitudes to sex are estimated, but as in model 3, this variable fails to approach significance.

In model 5, religiosity, as measured by frequency of church attendance, is estimated. While significance is only at the .08 level, this measure slightly reduces the cohabitation effects. In this model, single cohabitors divorce at rates 102% higher than non-cohabitors, and multiple

cohabitors divorce at rates 134% higher. This reduction in the cohabitation effects is comparable to that observed in model 2.

In model 6, all attitudinal measures are estimated jointly. Model 6 reduces the cohabitation effects slightly further. In fact, multiple cohabitations now are not significantly different from non-cohabitors at the .05 level of significance. Nevertheless, the odds ratios for neither of the cohabitation variables are near 1.00, suggesting that much effects remain of cohabitation even when controlling for attitudinal measures in early adulthood that could represent selection mechanisms into single and multiple cohabitations.

(Table 2 here)

Tables 2 examines the relationship between cohabitation and divorce for men. The selection of variables in the models parallels the analysis of women. In model 1, the total effects of single and multiple cohabitation are examined. Men who are multiple cohabitors have a significantly higher rate of divorce compared to non-cohabitors, and this result mirrors the finding for women. Single cohabitors, however, do not have significantly higher rates of divorce. The coefficient is in the predicted direction, but it is not significant. This may be due to the smaller number of cases in the male sample.

In model 2, the effects of marriage attitudes are examined. Having more liberal attitudes toward marriage is significantly associated with a higher rate of divorce. In addition, the effects of cohabitation are slightly reduced from model 1 to model, suggesting some selection effects. The number of person-months, however, also decreases from model 1 to 2 due to missing data, and thus this may be part of the reason behind the diminished effects. Additional analyses will limit all models to a single, consistent sample size so that effects may be more easily interpreted.

In models 3 and 4, family attitudes and peers' sexual attitudes are examined, but neither have significant effects on the rate of divorce, nor do they diminish the cohabitation effects.

In model 5, religiosity is included in the models, and the effect is in the expected direction: men with higher church attendance at age 18 have significantly lower rates of divorce once they marry. Looking at the effects of cohabitation in this model, there is an attenuation. While multiple cohabitors divorced at rates 3.20 times that of non-cohabitors in model 1, this ratio is decreased to just 2.57 times that of non-cohabitors in model 5. This is limited evidence that less religious individuals are selected into multiple cohabitation. There is also a slight decrease in the effect of single cohabitors in model 5 as well. In model 6, all age 18 measures are estimated, and this model. The combined model, as expected, show a decrease in the effects of cohabitation, but this decrease is likely driven by religiosity.

Overall, the results suggest that little selection effects are captured by attitudinal measures in early adulthood (age 18). The data do show patterns, for both men and women, that single and multiple cohabitors have higher risks of divorce compared to non-cohabitors. But there was limited evidence that marriage attitudes (for women) and religiosity (for men) are selection mechanisms into single or multiple cohabitations. Further analyses of the ISPC data will examine more than the four attitudinal dimensions studied thus far.

Conclusions and Further Work

Thus far we have found that attitudes regarding marriage and religiosity at age 18 account for a small amount of the higher divorce rates of the young adults in the ISPC survey involved in single and multiple cohabitations versus those who have never cohabited. Thus, there is some support for selection effects into single and multiple cohabitation. However, most of the cohabitation effects remain unexplained. Our goal is to disentangle the selection and experiential

effects of single and multiple cohabitation on the probably of divorce. In further analyses: (1) We will explore other age 18 measures that could be associated with selection effects to refine our selection models. (2) We will examine the role of changes in attitudes (measured as time-varying covariates) after cohabitation on divorce. If the time-varying measures are more powerful than the age 18 measures at reducing the impact of single and multiple cohabitation, then experience as an explanation of the differences is at least partially supported. (3) We will use regression to examine the amount of change in attitudes regarding marriage and divorce for the single, multiple and non-cohabitors. This should add to our understanding of the effect of single and multiple cohabitation on acceptance of divorce. (4) We will use the NSFH data to replicate all our analyses where possible, including models representing early life course selection effects and models representing changes in attitudes that represent experience effects. We will also replicate the analyses for the prediction of changes in attitudes toward marriage and divorce by single, multiple, and non-cohabitors. Our goal is to add to the limited research on the roles of selection and experience in explaining the differences in divorce rates among multiple, single, and non-cohabitors.

References

Allison, Paul D. 1995. *Survival Analysis Using the SAS System: A Practical Guide*. Cary, NC: SAS Institute.

Allison, Paul D. 1982. Discrete-time methods for the analysis of event histories, *Sociological Methodology* 13: 61-98.

Axinn, W.G. & Barber, J.S. (1997). Living Arrangements and Family Formation Attitudes in Early Adulthood. *Journal of Marriage and the Family 59*, 595-611.

Axinn, W.G. & Thornton, A. (1992). The relationship between cohabitation and divorce: Selectivity or causal influence? *Demography, 29*, 357-374.

Bennett, N.G., Blanc, A.K., & Bloom, D.E. (1988). Commitment and the modern union: Assessing the link between premarital cohabitation and subsequent marital stability. *American Sociological Review, 53*, 127-138.

Booth, A. & Johnson, D. (1988). Premarital Cohabitation and Marital Success. *Journal of Family Issues, 9*,255-272.

Bramlett, M.D. & Mosher, W.D. (2002). *Cohabitation, Marriage, Divorce, and Remarriage in the United States.* National Center of Health Statistics. Vital Health Statistics 23 (22).

Bumpass, L.L and Lu, H.H. (2000). Trends in cohabitation and implications for children's family contexts in the United States. *Population Studies, 54*, 19-41.

DeMaris, A. & W. MacDonald (1993). Premarital Cohabitation and Marital Instability: A Test of the Unconventionality Hypothesis. *Journal of Marriage and the Family 55*, 399-407.

Dush, C.M.K., Cohan C.L., & Amato, P.R. (2003) The relationship between cohabitation and marital quality and stability: Change across cohorts? *Journal of Marriage and the Family 65*, 539-549.

Lillard, L.A., Brien, M.J., & Waite, L.J. (1995). Premarital cohabitation and subsequent marital dissolution: A matter of self-selection? *Demography, 32*, 437-457.

Petersen, Trond. 1991. "Time-Aggregation Bias in Continuous-Time Hazard-Rate Models." *Sociological Methodology* 21: 263-290.

Ridley, C., Peterman, D., & Avery, A. (1978). Cohabitation: Does it make for a better marriage? *Family Coordinator 27:* 130-144.

Smock, P.J. (2000). Cohabitation in the United States: An appraisal of research themes, findings, and implications. *Annual Review of Sociology 2000;26*, 1-20.

Teachman, J. D. (2003). Premarital sex, premarital cohabitation, and the risk of subsequent marital dissolution among women. *Journal of Marriage and the Family 65*, 444-455.

Teachman, J.D. & Polonko, K.A.,(1990). Cohabitation and marital stability in the United States. *Social Forces, 69*: 207-220.

Thibaut, J. W. and Kelley, H. H. (1959) *The Social Psychology of Groups*, New York: Wiley

Trost, J., (1975). Married and Unmarried Cohabitation: The case of Sweden, with some comparisons. *Journal of Marriage and the Family 37*, 677-682.

U.S. Bureau of the Census. (1993a). *Marital status and living arrangements: March 1992* (Current Population Reports No. P20-468). Washington, DC: Government Printing Office.

U.S. Bureau of the Census. (2003). *Married-couple and unmarried-partner households: 2000.* (Census 2000 Apwixl Ewpoera, XWNAE-5). Washington, DC: U.S. Government Printing Office.

Woods, L.N. & Emery, R.E. (2002). The cohabitation effect on divorce: causation or selection? *Journal of Divorce & Remarriage 37*: 101-122.

Appendix 1: Items that form attitudinal domains

When necessary some items are reverse-coded so all questions form a one-dimensional scale.

Marriage Attitudes: Respondents could reply strongly agree, agree, disagree, or strongly disagree

1. Married people are usually happier than those who go through life without getting married.
2. It's alright for a couple to live together without planning to get married.
3. Young people should not have sex before marriage.
4. Divorce is usually the best solution when a couple can't seem to work out their marriage problems.
5. A young couple should not live together unless they are married.
6. It's better for a person to get married than to go through life being single
7. Premarital sex is alright for a young couple planning to get married.
8. All in all, there are more advantages to being single than to being married.

Family Attitudes: Respondents could reply strongly agree, agree, disagree, or strongly disagree

1. Most of the important decisions in the life of the family should be made by the msn of the house.
2. When there are children in the family, parents should stay together even if they don't get along.
3. It's perfectly alright for women to be very active in clubs, politics, and other outside activities before the children are grown up.
4. There is some work that is men’s and some that is women's and they should not be doing each others.
5. A wife should not expect her husband to help around the house after he czs home from a hard day's work.
6. A working mother can establish as warm and secure a relationship with her children as a mother who does not work
7. It is much better for everyone if the man earns the main living and the woman takes care of the home and family.
8. Women are much happier if they stay at home and take care of their children.
9. It is more important for a wife to help her husband's career than to have one herself.
10. A pre-school child is likely to suffer if his mother works.

Peer Sex Attitudes: Respondents could reply “they disapprove strongly,” “they disapprove somewhat,” or “they don't disapprove at all.

1. How do most of your close female friends feel about young people having sex before marriage?
2. How do most of your close male friends feel about young people having sex before marriage?

Religiosity

1. How often do you usually attend religious services: several times a week, once a week, a few times, a month, once a month, or less than once a month?

Table 1: Relationship between Cohabitation and Rate of Divorce, Women

	1	2	3	4	5	6
Age 18 Marriage Attitudes		1.60				1.34
		(1.84)				(1.00)
Age 18 Family Attitudes			1.25			1.11
			(1.37)			(0.59)
Age 18 Peers' Sexual Attitudes				1.28		1.11
				(1.09)		(0.44)
Age 18 Religiosity					0.87	0.91
					(1.70)	(1.05)
Cohabitation						
Single Cohabitor †	2.18***	2.04**	2.17***	2.15***	2.02**	1.98**
	(3.43)	(3.09)	(3.40)	(3.37)	(3.02)	(2.91)
Multiple Cohabitor †	2.72**	2.26*	2.64*	2.51*	2.34*	2.09
	(2.61)	(2.06)	(2.53)	(2.36)	(2.16)	(1.83)
Individual Controls						
First sex age 13-14 ‡	0.99	0.82	0.92	0.89	0.88	0.77
	(0.03)	(0.43)	(0.19)	(0.25)	(0.28)	(0.58)
First sex age 15-17 ‡	0.88	0.81	0.85	0.84	0.80	0.77
	(0.57)	(0.93)	(0.70)	(0.76)	(0.97)	(1.15)
Age at marriage	0.81***	0.81***	0.8***	0.81***	0.81***	0.81***
	(4.41)	(4.34)	(4.44)	(4.20)	(4.28)	(4.15)
Premarital children	2.46*	2.19	2.34*	2.29*	2.17	1.97
	(2.16)	(1.85)	(2.02)	(1.96)	(1.83)	(1.58)
Marital children	0.67**	0.67**	0.67**	0.68**	0.67**	0.68**
	(2.71)	(2.7)	(2.64)	(2.63)	(2.71)	(2.64)
Catholic religion §	1.41	1.30	1.37	1.36	1.40	1.3
	(1.55)	(1.15)	(1.42)	(1.37)	(1.53)	(1.17)
Other Religion §	1.91	1.70	1.74	1.85	1.64	1.52
	(1.94)	(1.56)	(1.63)	(1.83)	(1.43)	(1.19)
Family Background						
Age 15 log Family Income	0.66*	0.66*	0.65*	0.65*	0.67*	0.66*
	(2.27)	(2.31)	(2.35)	(2.37)	(2.25)	(2.36)
Parents divorced by age 18	0.26	0.26	0.27	0.26	0.26	0.26
	(1.87)	(1.87)	(1.82)	(1.85)	(1.87)	(1.84)
Mother's Education	1.04	1.02	1.03	1.04	1.04	1.03
	(0.5)	(0.32)	(0.46)	(0.53)	(0.57)	(0.41)
Father's Education	1.01	1.00	1.00	1.00	1.01	1.00
	(0.12)	(0.06)	(0.10)	(0.02)	(0.2)	(0.01)
Number of Siblings	0.95	0.95	0.96	0.96	0.96	0.96
	(0.58)	(0.54)	(0.52)	(0.54)	(0.49)	(0.47)
Intercept	37.51	16.13	23.94	20.51	44.39	15.58
	(1.66)	(1.24)	(1.44)	(1.34)	(1.75)	(1.19)
Person Months	27834	27834	27835	27834	27764	27764

† Never cohabited is reference, ‡ First sex age 18 and older is reference, § Protestant is reference
*p<.05, **p<.01, ***p<.001
Note: Coefficients are odds ratios, with z-statistics in parentheses.
Parameters for the baseline hazard are estimated but not displayed

Table 2: Relationship between Cohabitation and Rate of Divorce, Men

	1	2	3	4	5	6
Age 18 Marriage Attitudes		2.12*				1.36
		(1.98)				(0.71)
Age 18 Family Attitudes			1.27			1.23
			(1.01)			(0.83)
Age 18 Peers' Sexual Attitudes				1.18		0.94
				(0.51)		(0.17)
Age 18 Religiosity					0.68**	0.70**
					(3.27)	(2.80)
Cohabitation						
Single Cohabitor †	1.67	1.50	1.73	1.58	1.41	1.41
	(1.72)	(1.35)	(1.83)	(1.51)	(1.13)	(1.11)
Multiple Cohabitor †	3.20*	3.09*	3.27*	3.10*	2.57	2.72*
	(2.41)	(2.33)	(2.46)	(2.34)	(1.95)	(2.05)
Individual Controls						
First sex age 13-14 ‡	2.79**	2.17	2.85**	2.61*	2.54*	2.44*
	(2.58)	(1.86)	(2.65)	(2.35)	(2.36)	(2.15)
First sex age 15-17 ‡	1.67	1.38	1.68	1.57	1.19	1.16
	(1.59)	(0.97)	(1.62)	(1.39)	(0.52)	(0.45)
Age at marriage	0.96	0.96	0.96	0.96	0.98	0.98
	(0.78)	(0.72)	(0.77)	(0.80)	(0.42)	(0.44)
Premarital children	1.29	1.07	1.23	1.27	1.03	0.94
	(0.55)	(0.14)	(0.44)	(0.51)	(0.06)	(0.12)
Marital children	0.69*	0.73	0.68*	0.71	0.72	0.72
	(2.05)	(1.73)	(2.09)	(1.91)	(1.9)	(1.79)
Catholic religion §	0.69	0.63	0.67	0.66	0.70	0.66
	(1.33)	(1.63)	(1.4)	(1.42)	(1.28)	(1.44)
Other Religion §	0.56	0.49	0.52	0.54	0.32*	0.31*
	(1.34)	(1.64)	(1.51)	(1.37)	(2.47)	(2.46)
Family Background						
Age 15 log Family Income	0.60*	0.56**	0.61*	0.59**	0.63*	0.61*
	(2.51)	(2.84)	(2.46)	(2.63)	(2.41)	(2.52)
Parents divorced by age 18	7.10***	7.32***	7.31***	6.91***	6.59***	6.97***
	(3.50)	(3.58)	(3.52)	(3.43)	(3.48)	(3.52)
Mother's Education	0.91	0.92	0.90	0.91	0.97	0.95
	(0.96)	(0.83)	(1.1)	(0.97)	(0.33)	(0.53)
Father's Education	1.05	1.06	1.05	1.05	1.06	1.06
	(0.85)	(0.96)	(0.82)	(0.83)	(0.88)	(0.89)
Number of Siblings	1.16	1.15	1.16	1.15	1.18	1.17
	(1.73)	(1.62)	(1.75)	(1.60)	(1.86)	(1.76)
Intercept	1.07	0.25	0.53	1.00	0.85	0.34
	(0.03)	(0.56)	(0.26)	(0.00)	(0.07)	(0.43)
Person Months	15464	15428	15464	15428	15347	15311

† Never cohabited is reference, ‡ First sex age 18 and older is reference, § Protestant is reference
*p<.05, **p<.01, ***p<.001
Note: Coefficients are odds ratios, with z-statistics in parentheses.
Parameters for the baseline hazard are estimated but not displayed