Gendered transitions to adulthood by college field of study in the United States

Siqi Han[1], **Dmitry Tumin**[2], and **Zhenchao Qian**[3]

[1]Ohio State University, USA

[2]Ohio State University, USA

[3]Brown University, USA

Abstract

BACKGROUND—Field of study may influence the timing of transitions to the labor market, marriage, and parenthood among college graduates. Research to date has yet to study how field of study is associated with the interweaving of these transitions in the USA.

OBJECTIVE—The current study examines gendered influences of college field of study on transitions to a series of adult roles, including full-time work, marriage, and parenthood.

METHODS—We use Cox proportional hazards models and multinomial logistic regression to examine gendered associations between field of study and the three transitions among college graduates of the NLSY97 (National Longitudinal Survey of Youth) cohort.

RESULTS—Men majoring in STEM achieve early transitions to full-time work, marriage, and parenthood; women majoring in STEM show no significant advantage in finding full-time work and delayed marriage and childbearing; women in business have earlier transitions to full-time work and marriage than women in other fields, demonstrating an advantage similar to that of men in STEM.

CONCLUSIONS—The contrast between men and women in STEM shows that transition to adulthood remains gendered; the contrast between women in STEM and women in business illustrates that a prestigious career may not necessarily delay family formation.

1. Introduction

Recent cohorts exhibit diverse pathways of transitions from adolescence to adulthood. As the normative ages when people settle into long-term adult roles have been postponed, the life course stage spanning approximately the ages of 18–24 has become a period of emerging adulthood (Arnett 2000). During this period people explore various possible

CONTRIBUTION

The paper shows how stratification by field of study creates gendered demographic outcomes for college graduates. It also demonstrates that women's decisions regarding marriage and parenthood do not uniformly respond to the economic prospect of their work.

relationships, careers, and identities. A key reason for postponing the transition to adulthood is an increase in the amount of time spent pursuing higher education: In recent decades the proportion of 25 to 29 year-olds who have completed a bachelor's degree or higher has risen to about one third (US Census Bureau 2012). College graduates are advantageously positioned to achieve other milestones of adulthood, including marriage, full-time employment, and independent living (Oesterle et al. 2010). Indeed, college enrollment is often the first step of entry into adulthood, followed by independent living, full-time employment, marriage, and childbearing.

College graduates' timing of completing the transition to adulthood may vary by field of study. A graduate's field of study reflects their preferences, abilities, and future career plans (Charles and Bradley 2002; Gerber and Cheung 2008). Specialized training and socialization processes in different fields of study lead to stratification among college graduates in earnings (Roksa 2005), occupational mobility (Roksa and Levey 2010), and pursuit of graduate education (Goyette and Mullen 2006). Particularly, graduates who hold degrees in science, technology, engineering, or mathematics (STEM)[4] and business fields are tracked into clearly defined occupations, and thus achieve earlier transitions to work; whereas graduates with liberal arts, social science, or humanities degrees have more uncertain career prospects (Davies and Guppy 1997; US Census Bureau 2012). Prior research has examined how field of study influences transitions to specific adult roles (e.g., first birth), but research on emerging adulthood demonstrates that relationship formation, fertility, employment, and other transitions cohere in ways that signify the extent to which transition to adulthood is achieved (Frech 2014; Janus 2009). From a life course perspective, educational attainment, job placement, marriage, and fertility are mutually dependent during the period of emerging adulthood, such that one life event has implications for other events (Elder 1998). Therefore, college field of study may affect the overall success of graduates in completing the transition to adulthood across all relevant domains.

In this paper we explore how college field of study, with a special focus on the fields of STEM, business, and education, shapes emerging adulthood by stratifying graduates economically as well as in the areas of relationship and family formation. Whereas graduates' college majors are clearly related to fertility (van Bavel 2010; Lappegård and Rønsen 2005; Michelmore and Musick 2014) and union formation patterns (Eika, Mogstad, and Zafar 2014; Oppermann 2014), the outcomes of full-time employment, marriage, and parenthood after college graduation may be interweaved in ways which signify the complementarity of these roles. Investigating a recent cohort reaching emerging adulthood on the threshold of the Great Recession, we test for gendered patterns of transition to adulthood conditional on college major among young adults. By studying multiple domains of emerging adulthood, this paper adds to the knowledge about origins of work–family conflict among college graduates facing stratified prospects in the labor and marriage markets. By comparing transitions to marriage and parenthood between women majoring in

[4]We include the following fields in our categorization of STEM fields: agriculture and natural resources, archaeology, architecture and environmental design, biological sciences, computer and information sciences, engineering, mathematics, physical sciences, pre-dentistry, pre-medicine, and pre-veterinary. We do not include social science in STEM, but treat them as a separate category. This is because social science is distinct from STEM majors in terms of college persistence rates (Xie and Killewald 2012) and in employment rates (Federal Reserve Bank of New York 2016), both of which are important factors in transition to work and family life.

STEM fields and women majoring in business fields, this paper also adds to the knowledge about the experience of transition to adulthood among women in STEM.

2. Field of study and transition to marriage

Field of study may be related to an individual's transition to marriage in three ways. First, young men and women may have priorities about work and family, which influences their field of study. This chosen field of study may reinforce pre-college values and preferences about whether they prioritize work or family. Second, it affects graduates' income, occupational trajectory, labor market opportunities, and economic stability. Currently, economically successful people are more likely to marry, although at later ages (Greenstone and Looney 2012). Third, field of study may lead to jobs in which men and women may have different expectations of work–family conflict. Male-dominated occupations, for example, tend to demand long and inflexible work hours, discriminating against employees with care responsibilities. As women remain responsible for the majority of care work in American families (Sayer et al. 2011), these fields may create more obstacles for women's transition to marriage than for men, despite offering high economic rewards.

2.1 Preferences

Men and women select different fields of study based on their pre-college values and preferences (Becker 1981; Frome and Eccles 1998; Hyde, Fennema, and Lamon 1990). Female students are socialized to prefer a field compatible with their anticipated family roles, and such fields are often linked to female-dominated occupations (Eccles 1987). These preferences are particularly consequential for the gender distribution in field of study when female students who are capable of studying male-typed subjects choose female-typed subjects instead (Eccles 1994). Because women perceive math and science careers to be less compatible with their future family roles, they may avoid math and science fields of study in college.

Whereas self-selection into fields of study assumes that students plan their education to reflect existing preferences about marriage and family (Gemici and Wiswall 2014), the specialized education and peer group in given fields of study may ultimately influence the timing of family formation. The basic pattern of gender segregation in fields of study is that men are concentrated in math-intensive, object-oriented fields and women are concentrated in human-oriented fields that involve greater use of language (England et al. 2007; Cech et al. 2011). Studying a female-typed field is itself a socialization process that contributes to a college graduate's preference for family over work. For example, men and women majoring in education, a female-dominated field (see Figure A-2), value family much more than money and power (Weisgram, Bigler, and Liben 2010), in comparison to those majoring in law or medicine. By contrast, students in STEM and business fields may have more competing priorities in life and view early marriage as incompatible with other life goals, such as obtaining a graduate degree or being promoted (Bratti and Tatsiramos 2012). In sum, field of study is related to preferences formed before and during the college years which influence the timing of transition to marriage and parenthood:

Hypothesis 1: Men and women in female-typed fields transition to marriage and parenthood earlier than their peers in other fields of study.

2.2 Economic stability

While STEM and business may not emphasize an orientation toward family life, graduates of these fields are more likely to attain economic stability, indicated by higher earnings, more structured career trajectories, and more abundant labor market opportunities. Economic stability is increasingly regarded as a prerequisite for marriage (McClendon, Kuo, and Raley 2014). Among men aged 30–50, 83% in the top 10% bracket of annual earnings are married, compared to 64% for men earning the median income, and about 50% for men in the bottom 25th percentile of earnings (Greenstone and Looney 2012). Patterns for women are similar, confirming the importance of economic resources in marriage. Therefore, men and women majoring in fields which offer higher incomes, structured career trajectories, and stable employment may transition to marriage sooner (Smock, Manning, and Porter 2005). Full-time workers with a science and engineering bachelor's degree earn a median yearly wage of $72,415, compared to $49,152 among education degree holders, and $52,691 among arts, humanities and other degree holders (Siebens and Ryan 2012). In addition to earnings, the tightness of the connection between a field of study and an occupation is also an important indicator of economic stability (Shauman 2009). Business and education have highly structured career paths which channel their graduates towards one or two major occupations, STEM fields have moderately structured career paths, and social science and humanities have loose career paths that channel graduates toward various occupations.[5]

The unemployment rate also differs significantly across fields of study during a recession. A recent analysis (Federal Reserve Bank of New York 2016) shows that recent graduates who majored in civil engineering had an unemployment rate of 2.8%, compared to 5.8% for liberal arts majors and 8% for anthropology, geography, and mass media majors. A loose connection to specific occupations as well as a high unemployment rate usually means a longer time to find a job and a longer time to re-enter the labor market once unemployed, both of which increase the risk of economic instability and prevent young adults from transitioning to marriage and parenthood. In this sense, economically stable fields such as STEM and business are likely to facilitate transition to marriage and parenthood. This leads us to a competing hypothesis:

Hypothesis 2: Men and women in STEM and business fields are likely to marry and have children earlier than their peers in other fields.

2.3 Gendered workplace dynamics

Decades after the gender revolution the 'family devotion' schema (Blair-Loy 2001), or the traditional gender norm for females, continues to assign primary responsibility for housework and child rearing to women and demands that their primary commitments remain with home, family, and children. At the individual level (England 2010), women's incentive

---

[5]Appendix Figure A-1 shows the census data of the connection between the broad fields of study that correspond to the categorization of this paper and their connections to occupations. From the data a similar conclusion to Shauman (2009) can be reached.

to challenge gender inequality in these 'personal arenas' is weaker than their incentive to move into higher-paying male-dominated fields, causing tension between work and family for working women more so than for working men. At the organizational level, traditional gender roles create conflict between work and family for women more so than men because modern organizations are built around an ideal worker inhabiting masculine social roles (Acker 2006). According to this ideal, the best worker is the 'committed' worker who demonstrates intense effort on the job through sacrificing all responsibilities apart from work. This is indicated by enduring long work hours, displaying masculine ways of communication and interaction in the workplace, and fitting into a male-dominated work culture. Although some workplaces offer accommodations to employees with family needs, such as paid parental leave, flexible schedules, or work from home, women are reluctant to use these benefits (Blau and Kahn 2013). Women requesting these accommodations often report that they are seen as less committed, receive less rewarding work, and face continued pressure to increase work hours (Stone 2007).

The gendered implications of work in a high-income, male-typed occupation are reinforced by biases and routines of interaction in the workplace. Employers tend to perceive male workers as more competent and committed, not only in male-dominated occupations and more prestigious jobs (Ridgeway 2011: 99), but also in seemingly gender-neutral workplaces (Williams, Muller, and Kilanski 2012). For example, male workers are less willing to train a female coworker on the job (Tomaskovic-Devey and Skaggs 2002), thus denying their access to the firm-specific, tacit knowledge. The elite networks at the higher end of the workplace hierarchy are made up of men, and consequently women with high competence need to find a high status male person to vouch for them and lend them legitimacy as someone who can be counted on (Williams, Muller, and Kilanski 2012; Kanter 1993).

All of this evidence suggests that female college graduates in STEM and business should expect a very different career from their male counterparts. Despite stable economic prospects, these fields do not necessarily provide the same marriage opportunities for men and women. Whereas male graduates in these fields can take advantage of their improved economic prospects to facilitate the transition to marriage, female graduates in these fields may anticipate difficulties balancing work and family responsibilities. They do not fit the 'ideal worker image' (Acker 2006) in these fields, experience difficulties conforming to the long work hours and masculine work culture in the workplace, and experience discrimination from male employers and coworkers. Female students in STEM and business may perceive these work–family conflicts as future obstacles to transition to marriage and family. Because occupational aspiration can be formed prior to college entrance and affect the choice of field of study (Xie and Goyette 2003), females choosing STEM may have realized the future work–family conflicts and have made up their minds in postponing or forgoing marriage and childbearing to facilitate their STEM education, work, and research in their prime age.

> *Hypothesis 3*: Compared to men in the same field of study, women in STEM and business fields will have slower transitions to family roles.

2.4 Women's family formation in STEM vs. business

In addition to testing for a gender difference in transition to adulthood, we examine the influence of specific fields on women's transition to family roles. As previously described, STEM and business are broadly similar in the economic advantages they confer on graduates specializing in these fields. In this section, we discuss differences between these fields of study as well as their different implications for transition to marriage among female scientists and female business professionals. Many scholars have noted a unique STEM-specific process that creates more obstacles to maintaining a work–family balance for women in STEM than for women in business (Gunter and Stambach 2005; Williams and Ceci 2012). Part of the reason why STEM employment is less conducive to family formation than employment in business is that male STEM workers are more gender conventional compared to men in other professions (Sassler, Addo, and Lichter 2012; Glass et al. 2013). Figure A-2 shows that women make up about 35% of the STEM workforce, but about half of the business workforce. Due to a lack of enough women at higher levels in the hierarchy to reshape the consensus on organizational practices ('critical mass' [Schelling 2006]), it is harder for women to advocate for family-friendly policies in STEM fields.[6]

The distinctive work–family conflict in STEM may also be related to female scientists' dissatisfaction with pay and promotion prospects (Hunt 2016). Increasingly, women who enter law, medicine, or business can expect to have comparable, if not higher, economic returns relative to their counterparts in STEM. While some STEM occupations have experienced income growth, the rate of this growth lags behind law, medicine, and business (Xie, Killewald, and Near 2016). The upward trend of earnings in law, medicine, and business improves the resources and economic prospects available to women in non-STEM undergraduate fields, especially business (Goldin 2006).

Another facet of the distinctive work–family conflict in STEM is that family formation disproportionately influences the decisions of women in STEM to leave the labor force compared to women in law, medicine, and business, while advanced training, increasing job tenure, job satisfaction, and aging do not deepen commitment to STEM fields as they would have in most other fields (Glass et al. 2013). Thus, role conflict appears to be less acute among women in law, medicine, and business than among women in STEM. Therefore, we can expect that female professionals will be more influenced by their economic advantage and less by anticipated work–family conflicts than women in STEM. As business is a popular undergraduate field that clearly channels its graduates to professional careers, we use it as a typical example of professional field to contrast with STEM fields:

> *Hypothesis 4*: Women in STEM are likely to delay transitions to marriage and parenthood compared to women in business.

---

[6]However, a smaller number of females versus a large number of males in STEM fields may create a structural abundance of males in the marriage market for female scientists. This question involves analysis of assortative mating patterns and is beyond the scope of this paper.

3. Data and methods

We use 1997–2011 data from the National Longitudinal Survey of Youth (NLSY) – 1997 Cohort, a nationally representative longitudinal survey of Americans aged 12–16. Respondent recruitment and follow-up in this survey have been previously described by Altonji, Bharadwaj, and Lange (2008). From this dataset, we identify 2,147 respondents who had ever completed a four-year college degree, and limit the sample to 2,119 respondents who had a known year of college completion and a known major in one of six categories: STEM (18%), humanities and arts (12%), social science (31%), education (9%), business (19%), or all others (11%).[7] We focus on transitions influenced by college completion by excluding 433 respondents who delayed college completion until after age 25. In analyses of full-time work, marriage, and first birth, we exclude 351, 243, and 104 respondents, respectively, who had achieved these transitions prior to completing their college degree. Following the common practices in studies examining the relationship between field of study and life course events (e.g., Oppermann 2014; Michelmore and Musick 2014), we include respondent's gender, race, institution type (private/public), age at college completion, and family background (measured by mother's highest degree completed, whether respondent lived with biological parents in 1997, and mother's age at first birth) as control variables in our models. Specifically, age at college completion ranged from 20 to 25 years old. Mother's highest grade completed was a continuous variable ranging from none to 20 years of education (8th year college or more). Full-time employment was defined as working at least 1,820 hours at one job in a given calendar year.

Kaplan–Meier curves were used to identify the fields of study with the highest and lowest chances of completing each transition after college graduation separately for men and women. Multiple imputation using chained equations was used to complete missing data on covariates (using logistic regression for dichotomous measures and OLS regression for continuous measures), creating 5 imputed data sets for analysis. Multivariable survival analysis using Cox proportional hazards models was performed for men and women separately, and for the combined sample with interactions between field of study and gender. The three outcomes of marriage, childbearing, and full-time employment were first examined in separate survival analyses, with the time metric being years since college graduation. Observations from respondents who achieved a particular transition before college completion were left-truncated as described above. Censoring occurred when respondents left the survey or reached the most recent interview in 2011.

Of the 1,686 respondents in the analytic sample, 545 (32%) had achieved at least one of these transitions by the year they graduated, whereas only 24 (1%) had achieved all three transitions at the time of graduation. Therefore, most respondents graduated college without completing any of the transitions to adult roles examined in this study, but completed one or

---

[7]Each category includes the following detailed fields of study: STEM (agriculture and natural resources, archaeology, architecture and environmental design, biological sciences, computer and information science, engineering, mathematics, physical sciences, pre-dental, pre-med, pre-vet), business (business management), education (education), social science (anthropology, area studies, communications, criminology, economics, ethnic studies, history, home economics, political science and government, psychology, sociology, and pre-law), arts and humanities (English, fine and applied arts, foreign languages, interdisciplinary studies, philosophy, theology, and religious studies), other fields (nursing, other health professions, 'other fields' coded by NLSY without specifications).

more of the transitions after graduation. As few respondents had children during the follow-up period, we analyzed the combination of marriage and full-time work in a cross-sectional multinomial logistic regression where the outcome variable was coded as follows: neither married nor worked full-time during the follow-up period; worked full-time but did not marry; married but did not work full-time; or married and worked full-time. To emphasize the difference between only full-time work and the combination of work and marriage, the former category was set as the base category in this analysis.

4. Results

4.1 Descriptive statistics

The sample included 1,686 respondents, of whom 42% had married within five years after college completion, 22% had children, and 72% had found full-time work. Table 1 classifies men and women by their work, marital status, and parental status five years after college completion or at the time they were censored, whichever was earliest. A plurality of respondents (36%) experienced a transition to full-time work without marrying or having children. By contrast, combinations of roles were relatively rare, with the most common combination being marriage and work (19%) and the next being marriage, work and having children (14%).

Transitions to adult roles after college completion are demonstrated by gender and field of study in Kaplan–Meier plots (Figures 1–3). Among both men and women, transitions to full-time work occurred earliest for graduates majoring in STEM or business (Figure 1), with log-rank tests indicating significant difference in transitions to work by college major among men (p<0.001) but not among women (p=0.068). This is further illustrated in Table 2, presenting multivariable Cox models of transition to full-time employment. For example, in Table 2, men majoring in STEM have a 31% greater hazard of transitioning to full-time work than men majoring in social science (HR=1.31). By contrast, variation in transitions to marriage was statistically significant among both men (p=0.010) and women (p<0.001), with education majors of both genders being most likely to marry after college completion. Among men, STEM majors were also highly likely to marry, whereas among women, STEM majors were one of the groups making the slowest transition to marriage (Figure 2). In the case of transitions to parenthood, log-rank tests identified significant variation by college major among both men (p=0.033) and women (p<0.001), with education majors again being most likely to complete this transition (Figure 3). As with marriage, men but not women majoring in STEM were relatively more likely to have children after college completion. In the next section, we test whether the patterns found in the Kaplan–Meier analysis of marriage and fertility hold in the multivariate models, and whether these patterns support the study's hypotheses.

4.2 Female-dominated fields

Education and arts and humanities are female-dominated fields according to our classification (see Figure A-2 for gender distribution by field of study from the Census Bureau corresponding to our field of study categorization). Hypothesis 1 predicts that men and women in these fields are likely to have earlier transitions to family roles than their

peers in other fields. Table 3 presents multivariable Cox models of transitions to marriage for men, women, and the pooled sample. According to this table, men and women majoring in education transition to marriage sooner than men and women in social science. Similarly, Table 4 presents multivariable Cox models of transitions to parenthood, showing that women in education transition to parenthood sooner than women in social science. Given that education is the most female-dominated field in our cohort, the results support Hypothesis 1 insofar as transitions to family roles occur earlier in this female-dominated field, regardless of the respondents' gender. However, education and humanities degrees are not associated with an accelerated transition to full-time work. In Table 2, transitions to full-time work among men and women in education and humanities occurred at the same time as for social science graduates. Based on this finding, the earlier transition to family roles in female-dominated fields does not appear to be explained by economic advantages to starting a career earlier in life.

4.3 STEM and business fields

Table 2 indicates that men and women in business, and men in STEM, transition to full-time work earlier than graduates majoring in social science (the reference group), net of race, age at college completion, family background, and public university attendance. However, women in STEM do not transition to full time work earlier than women majoring in social science. Examining transitions to marriage, Table 3 shows that men in STEM and women in business field marry earlier than their peers who majored in social science. Furthermore, Table 4 shows that men in STEM fields transition to parenthood earlier than men in social science. These findings partially support Hypothesis 2, which anticipated that men and women in STEM and business would have the fastest transitions to work and family roles. Refining this initial expectation, our results suggest that men in STEM and women in business are better positioned to combine multiple adult roles than are women in STEM. Men in STEM fields are an advantaged group when considering transitions to adulthood, as they have earlier transitions to work, marriage, and parenthood. Women majoring in business are similarly advantaged, as they transition quickly to work and marriage.

To address whether women in STEM and business are likely to have slower transitions to family than men in those fields in hypothesis 3, we used the statistically significant interaction terms from Model 3 of Tables 3 and 4 to calculate the hazard ratios of transitioning to marriage ($e^{\ln(1.48)+\ln(0.53)}=0.78$) and parenthood ($e^{\ln(1.83)+\ln(0.41)}=0.75$) for women in STEM relative to men in STEM. These hazard ratios show that women in STEM have delayed transitions to marriage and parenthood, supporting Hypothesis 3. Although sharing with women in STEM a slower transition to work compared to their male counterparts, women in business make up for the disadvantage by having faster transitions to marriage and parenthood. The calculated hazard ratios of transitioning to marriage (1.38) and transitioning to parenthood (1.27) indicate earlier transitions for women in business compared to men in business. This contrast indicates that, notwithstanding the economic stability associated with STEM careers, women majoring in STEM appear to be less likely than their male colleagues to combine full-time work with family life.

4.4 Combination of marriage and full-time work

To better describe the combination of marriage and full-time work, we analyze four combinations of work and marriage transitions, using full-time work without marriage as the reference category. Table 5 presents multinomial logistic models of transitions to work in combination with or separately from transitions to marriage. Unlike many European studies on the topic of field of study and fertility timing (Martín-García and Baizán 2006; Lappegård and Rønsen 2005; Hoem Neyer, and Andersson 2006), in which researchers find fertility timings to differ significantly across fields of study, our data suggests that early fertility after college completion (either before or after marriage) is very rare in the NLSY cohort, and generally involves women who marry at some point after graduation. As a result, we consider below only the interweaving of the transitions to work and to marriage.

The relative risk ratios (RRR) from multinomial logistic regression (Table 5) indicate that among men, the relative risk of both work and marriage (compared to working full-time without marriage) was 91% greater among men majoring in STEM, relative to men majoring in social science (RRR=1.91). By contrast, among women, business but not STEM (relative to social science) increased the chances of combining work and marriage. Therefore, among women, business but not STEM degrees were associated with successfully combining work and marriage, supporting Hypothesis 4. The hypothesis expected that women in STEM would have slower transitions to family roles than women in business. Successfully combining work and marriage among women in business implies that they are more successful in combining adult roles, in direct contrast to the pattern found in women in STEM.

5. Discussion

This paper examines heterogeneity in the transition to adulthood among college graduates, demonstrating differences by college field of study in transitions to full time work, marriage, and parenthood. Our results show that transitions to adulthood are most gender-unequal in STEM fields, where men's more rapid transition to work occurs in parallel with earlier transitions to marriage and parenthood, whereas women's earlier transition to work is not followed by the completion of the other two transitions examined. This raises the possibility that the fields of study providing the greatest access to career advancement may remain differentiated by gender. However, women in business experience role complementarity similar to that evinced by male graduates with STEM degrees. Therefore, a business career may not necessarily delay marriage or childbearing for women.

We have reviewed several mechanisms that may contribute to our findings, including different preferences for family and work, different levels of economic stability, different workplace dynamics, and different expectations of work–family conflict across fields of study. Intended as a descriptive study, the paper does not directly test the proposed mechanisms that may contribute to the patterns we found. However, our findings are largely consistent with these theoretical predictions. Men and women in female dominated fields are more likely to have faster transitions to family, as predicted by their preference for family over work. This pattern is in line with Van Bavel (2010), who studied European women ages 20–40 and confirmed that women in female-dominated fields of study were less likely to

postpone motherhood, independent of earnings and employment prospects. We found men in STEM and women in business have faster transitions both to full time work and to marriage, suggesting that there might be a connection between economic stability (income, structured career trajectory, labor market opportunities such as unemployment rate) and transition to marriage. Women in STEM have slower transitions to marriage and parenthood, which on the one hand challenges that economic stability necessarily facilitates transition to adulthood among all groups, but on the other hand confirms previous findings that women in science are facing more severe work–family conflicts in terms of work hours, work culture, employer and coworker discrimination than women in business. The delay in the transition to adulthood among females in STEM fields is also found in the European context. Koelet et al. (2015) examined a group of Belgian men and women and found that the odds of parenthood postponement were higher in male-dominated areas of study, but only for women in these fields, when other practical constraints were held constant. The heterogeneity among women in STEM and in business in their transition to marriage supports previous findings by Glass et al. (2013) that women in science and women in business fields may respond to rewards and constraints differently. This finding is notable because workloads in business fields and in STEM fields are similarly demanding, but some women are evidently able to balance work and family, meaning that demands of such jobs may not inherently cause work–family conflict. As discussed in section 2.4, this difference between women in STEM and women in business may be due to a lack of supportive work culture, a particularly large influence of role conflict on the decision to leave the labor force, and dissatisfaction with pay and promotion prospects among women in STEM (Hunt 2016).

Our findings make several contributions to the study of higher education, transitions to adulthood, and work–family conflict. First, the results enrich the study of women in science. Research to date has examined 'opting out' and a lower rate of labor market attachment of female scientists compared to their male counterparts (Stone 2007), time use among female and male scientists (Maines and Hardesty 1987), gendered career paths (Cech and Blair-Loy 2010), and gender differences in scientists' productivity (Xie and Shauman 2003). Despite knowledge of gendered preferences in college majors, with women tending to avoid most STEM majors, the timing of women scientists' attainment of other adult roles had not yet been explored. In fact, the underrepresentation of women in many STEM fields may mean they have relatively more choices in the field-assortative marriage market than do women in female-dominated fields. Nevertheless, women completing STEM degrees are less likely to get married, compared to women in other fields of study. This is likely due to lack of a critical mass of female STEM majors in these fields, their expectation of a more hostile work environment and unsatisfactory pay and promotion prospects, and a larger impact of the potential role conflicts on their choices about work and family than female business majors. All of these can thwart their willingness to get married and have children compared to their counterparts in business.

Second, we find evidence of successfully combining adult roles among women majoring in business, challenging the traditional image of professional women forgoing marriage for their careers (Coltrane 2004). Although many business jobs are as highly prestigious and demanding as STEM jobs, female business majors nevertheless have more rapid rates of transitioning to full time jobs and marriage. We provide a possible explanation for this

pattern: A more balanced gender distribution may reduce the token status of women in business, thus helping to reduce the masculine work culture and enhance income and promotion for women (Kanter 1977). Moreover, the expectation of high economic returns could reduce business women's concerns about having a work–family conflict in the future, thus facilitating their faster transitions to marriage, more so than that for women in STEM fields.

Third, this paper presents a life course perspective on work–family conflict (Moen and Chesley 2008). As a precursor to launch a career and build a dual-career family (Cinamon 2006), the college years can be an early stage in the life course when tradeoffs among career and family formation have to be made conditional on the field of study. By forgoing one or two of the roles we consider, some young adults may avoid the work–family conflict, or they may simply delay the work–family conflict until later in the life course, at which point they attempt to complete transitions to these other roles. Our study adds further detail to the timing of taking on work and family roles among college graduates, and it demonstrates a complex picture of transitions to adulthood among young adults at the top of the US educational hierarchy.

Our conclusions are limited in some respects by the data and analytic approach. Because the NLSY97 cohort is still relatively young, many respondents are still in the process of completing higher education or have only just begun searching for work or a marriage partner after college. Furthermore, although we analyze the timing of role transitions following graduation, we cannot identify which transitions were already decided (e.g., by job interview, for transitions to work; or by engagement, for transition to marriage) while the respondents were still in school. With the majority of the analytic sample transitioning to work alone, work with marriage, or none of the three roles considered (Table 1), we have not jointly analyzed predictors of all possible combinations of work, marriage, and parenthood in this time span following college graduation. An additional complication of examining the role combination is that one adult role may change after attaining another adult role. For example, some women may stop working after getting married or having children. Unfortunately, our data precludes a more granular analysis of employment trajectories after marriage or vice versa because: 1) the timing of full-time employment is retrospectively determined after a respondent has worked full-time for one year, while the actual date this full-time job was accepted is unknown; 2) the timing of engagement among couples who would later marry is unknown; 3) the limited number of years available for follow-up restricts us from tracking long-term employment trajectories; and 4) the combination of these limitations means that we cannot reliably establish temporal ordering of contemporaneous marriage and employment transitions among respondents who experienced both events. Imprecise data on when graduates accepted an offer of full-time employment and made the decision to marry also mean that we cannot reliably determine the time-ordering of these transitions relative to one another.

The present findings suggest fruitful directions for future research. First, the relative availability of potential partners in each field of study should be considered as a constraint on decisions to marry. Eika, Mogstad, and Zafar (2014) showed that patterns on assortative mating vary by field of study, such that law, medicine, and social science are strong sorting

fields, while engineering, nursing, and education are low in within-field assortative mating. How the degree of sorting within field affects the transition to marriage is a timely question for research on work–family conflict among female STEM workers. Second, more detailed analyses are needed to understand the uniqueness of STEM women's experience compared to women in other fields that lead to prestigious yet demanding careers. For example, is this pattern of distinction among women in STEM due to their unique definition of what it means to complete the transition to adulthood? With different data sources, future research could address this question more directly. Third, our analysis focuses on a sample of college graduates, without further distinguishing whether they attained post-secondary education. But it is plausible that the transition to marriage and parenthood will be different for those who go through prolonged training compared to those who graduate from college and directly enter the labor market. People who continue with graduate training are likely to be exposed to a more homogenous marriage market compared to those who enter the labor market directly, and their economic status may become decoupled from attaining further education. Consequently, differences in the pursuit and duration of graduate training can contribute to the variation in transition to adulthood across fields of study. Future studies may delve deeper into post-secondary educational careers and consider field of study as a changing variable that could potentially differ between college and graduate school (Han 2016).

To sum up, the timing of transition to adulthood differs not only across groups defined by educational attainment, but also within these groups – in this case, within the college-educated group by field of study. Field of study is related to their gender, economic stability, and expectations for future work–family conflicts, which in turn affect when they decide to get married and become a parent. As we have found differences in the probability of timely transitions to work and family formation between men and women, we conclude that gender segregation in the labor market and gender inequality in American families are rooted in trade-offs faced by college graduates while they are still single, childless, and yet to embark on their careers.

References

Acker J. Inequality regimes: Gender, class, and race in organizations. Gender & Society. 2006; 20(4):441–464. DOI: 10.1177/0891243206289499

Altonji, JG., Bharadwaj, P., Lange, F. Changes in the characteristics of American youth: Implications for adult outcomes. Cambridge: National Bureau of Economic Research (No. w13883); 2008.

Arnett JJ. Emerging adulthood: A theory of development from the late teens through the twenties. American Psychologist. 2000; 55(5):469–480. DOI: 10.1037/0003-066X.55.5.469 [PubMed: 10842426]

Becker JR. Differential treatment of females and males in mathematics classes. Journal for Research in Mathematics Education. 1981; 12(1):40–53. DOI: 10.2307/748657

Blair-Loy M. Cultural constructions of family schemas: The case of women finance executives. Gender & Society. 2001; 15(5):687–709. DOI: 10.1177/089124301015005004

Blau FD, Kahn LM. Female labor supply: Why is the United States falling behind? The American Economic Review. 2013; 103(3):251–256. DOI: 10.1257/aer.103.3.251

Bratti M, Tatsiramos K. The effect of delaying motherhood on the second childbirth in Europe. Journal of Population Economics. 2012; 25(1):291–321. DOI: 10.1007/s00148-010-0341-9

Cech EA, Blair-Loy M. Perceiving glass ceilings? Meritocratic versus structural explanations of gender inequality among women in science and technology. Social Problems. 2010; 57(3):371–397. DOI: 10.1525/sp.2010.57.3.371

Cech EA, Rubineau B, Silbey S, Seron C. Professional role confidence and gendered persistence in engineering. American Sociological Review. 2011; 76(5):641–666. DOI: 10.1177/0003122411420815

Charles M, Bradley K. Equal but separate? A cross-national study of sex segregation in higher education. American Sociological Review. 2002; 67(4):573–599. DOI: 10.2307/3088946

Cinamon RG. Anticipated work-family conflict: Effects of gender, self-efficacy, and family background. The Career Development Quarterly. 2006; 54(3):202–215. DOI: 10.1002/j. 2161-0045.2006.tb00152.x

Coltrane S. Elite careers and family commitment: It's (still) about gender. The Annals of the American Academy of Political and Social Science. 2004; 596(1):214–220. DOI: 10.1177/0002716204268776

Davies S, Guppy N. Fields of study, college selectivity, and student inequalities in higher education. Social Forces. 1997; 75(4):1417–1438. DOI: 10.1093/sf/75.4.1417

Eccles JS. Understanding women's educational and occupational choices. Psychology of Women Quarterly. 1994; 18(4):585–609. DOI: 10.1111/j.1471-6402.1994.tb01049.x

Eccles JS. Gender roles and women's achievement-related decisions. Psychology of Women Quarterly. 1987; 11(2):135–172. DOI: 10.1111/j.1471-6402.1987.tb00781.x

Eika, L., Mogstad, M., Zafar, B. Educational assortative mating and household income inequality. Cambridge: National Bureau of Economic Research (No. w20271); 2014.

Elder GH. The life course as developmental theory. Child Development. 1998; 69(1):1–12. DOI: 10.1111/j.1467-8624.1998.tb06128.x [PubMed: 9499552]

England P. The gender revolution: Uneven and stalled. Gender & Society. 2010; 24(2):149–166. DOI: 10.1177/0891243210361475

England P, Allison P, Li S, Mark N, Thompson J, Budig MJ, Sun H. Why are some academic fields tipping toward female? The sex composition of US fields of doctoral degree receipt, 1971–2002. Sociology of Education. 2007; 80(1):23–42. DOI: 10.1177/003804070708000102

Federal Reserve Bank of New York. The labor market for recent college graduates. New York: Federal Reserve Bank of New York; 2016. www.newyorkfed.org/research/college-labor-market/index.html [Accessed May 5, 2016]

Frech A. Pathways to adulthood and changes in health-promoting behaviors. Advances in Life Course Research. 2014; 19:40–49. DOI: 10.1016/j.alcr.2013.12.002 [PubMed: 24796877]

Frome P, Eccles JS. Parental effects on adolescents' academic self-perceptions and interests. Journal of Personality and Social Psychology. 1998; 74(2):435–452. DOI: 10.1037/0022-3514.74.2.435 [PubMed: 9491586]

Gemici A, Wiswall M. Evolution of gender differences in post-secondary human capital investments: College majors. International Economic Review. 2014; 55(1):23–56. DOI: 10.1111/iere.12040

Gerber TP, Cheung S. Horizontal stratification in postsecondary education: Forms, explanations, and implications. Annual Review of Sociology. 2008; 34(1):299–318. DOI: 10.1146/annurev.soc. 34.040507.134604

Glass JL, Sassler S, Levitte Y, Michelmore KM. What's so special about STEM? A comparison of women's retention in STEM and professional occupations. Social Forces. 2013; 92(2):723–756. DOI: 10.1093/sf/sot092

Goldin, C. The quiet revolution that transformed women's employment, education, and family. Cambridge: National Bureau of Economic Research (No. w11953); 2006.

Goyette KA, Mullen AL. Who studies the arts and sciences? Social background and the choice and consequences of undergraduate field of study. Journal of Higher Education. 2006; 77(3):497–538. DOI: 10.1353/jhe.2006.0020

Greenstone, M., Looney, A. The marriage gap: The impact of economic and technological change on marriage rates. Washington, D.C: The Brookings Institution; 2012. http://www.hamiltonproject.org/files/downloads_and_links/020312_jobs_greenstone_looney.pdf [Accessed May 27, 2016]

Gunter R, Stambach A. Differences in men and women scientists' perceptions of workplace climate. Journal of Women and Minorities in Science and Engineering. 2005; 11(1):97–116. DOI: 10.1615/JWomenMinorScienEng.v11.i1.60

Han S. Staying in STEM or changing course: Do natives and immigrants pursue the path of least resistance? Social Science Research. 2016; 58:165–183. DOI: 10.1016/j.ssresearch.2015.12.003 [PubMed: 27194658]

Hoem JM, Neyer G, Andersson G. Education and childlessness: The relationship between educational field, educational level, and childlessness among Swedish women born in 1955–59. Demographic Research. 2006; 14(15):331–380. DOI: 10.4054/DemRes.2006.14.15

Hunt J. Why do women leave science and engineering? ILR Review. 2016; 69(1):199–226. DOI: 10.1177/0019793915594597

Hyde JS, Fennema E, Lamon SJ. Gender differences in mathematics performance: A meta-analysis. Psychological Bulletin. 1990; 107(2):139–155. DOI: 10.1037/0033-2909.107.2.139 [PubMed: 2138794]

Janus AL. Disability and the transition to adulthood. Social Forces. 2009; 88(1):99–120. DOI: 10.1353/sof.0.0248

Kanter, RM. Men and women of the corporation. New York: Basic Books; 1993.

Kanter RM. Some effects of proportions on group life: Skewed sex ratios and responses to token women. American Journal of Sociology. 1977; 82(5):965–990. DOI: 10.1086/226425

Koelet S, de Valk H, Glorieux I, Laurijssen I, Willaert D. The timing of family commitments in the early work career: Work–family trajectories of young adults in Flanders. Demographic Research. 2015; 32(22):657–690. DOI: 10.4054/DemRes.2015.32.22

Lappegård T, Rønsen M. The multifaceted impact of education on entry into motherhood. European Journal of Population/Revue Européenne de Démographie. 2005; 21(1):31–49. DOI: 10.1007/s10680-004-6756-9

Maines DR, Hardesty MJ. Temporality and gender: Young adults' career and family plans. Social Forces. 1987; 66(1):102–120. DOI: 10.1093/sf/66.1.102

Martín-García T, Baizán P. The impact of the type of education and of educational enrolment on first births. European Sociological Review. 2006; 22(3):259–275. DOI: 10.1093/esr/jci056

McClendon D, Kuo JCL, Raley RK. Opportunities to meet: Occupational education and marriage formation in young adulthood. Demography. 2014; 51(4):1319–1344. DOI: 10.1007/s13524-014-0313-x [PubMed: 24980386]

Michelmore K, Musick K. Fertility patterns of college graduates by field of study, US women born 1960–79. Population Studies. 2014; 68(3):359–374. DOI: 10.1080/00324728.2013.847971 [PubMed: 24266547]

Moen, P., Chesley, N. Toxic job ecologies, time convoys, and work–family conflict: Can families (re)gain control and life-course "fit"?. In: Korabik, K.Lero, DS., Whitehead, DL., editors. Handbook of work–family integration: Research, theory, and best practices. London: Academic Press; 2008. p. 95-122.

Oesterle S, Hawkins JD, Hill KG, Bailey JA. Men's and women's pathways to adulthood and their adolescent precursors. Journal of Marriage and Family. 2010; 72(5):1436–1453. DOI: 10.1111/j.1741-3737.2010.00775.x [PubMed: 21113316]

Oppermann A. Exploring the relationship between educational field and transition to parenthood – An analysis of women and men in western Germany. European Sociological Review. 2014; 30(6):728–749. DOI: 10.1093/esr/jcu070

Ridgeway, CL. Framed by gender: How gender inequality persists in the modern world. New York: Oxford University Press; 2011.

Roksa J. Double disadvantage or blessing in disguise? Understanding the relationship between college major and employment sector. Sociology of Education. 2005; 78(3):207–232. DOI: 10.1177/003804070507800302

Roksa J, Levey T. What can you do with that degree? College major and occupational status of college graduates over time. Social Forces. 2010; 89(2):389–415. DOI: 10.1353/sof.2010.0085

Sassler S, Addo FR, Lichter DT. The tempo of sexual activity and later relationship quality. Journal of Marriage and Family. 2012; 74(4):708–725. DOI: 10.1111/j.1741-3737.2012.00996.x

Sayer LC, England P, Allison P, Kangas N. She left, he left: How employment and satisfaction affect men's and women's decisions to leave marriages. American Journal of Sociology. 2011; 116(6): 1982–2018. DOI: 10.1086/658173

Schelling, TC. Micromotives and macrobehavior. New York: WW Norton & Company; 2006.

Shauman KA. Are there sex differences in the utilization of educational capital among college-educated workers? Social Science Research. 2009; 38(3):535–571. DOI: 10.1016/j.ssresearch. 2009.02.004

Siebens, J., Ryan, CL. Field of bachelor's degree in the United States: 2009. Washington, D.C: US Census Bureau; 2012. American Community Survey Reports (ACS 18)

Smock PJ, Manning WD, Porter M. 'Everything's there except money': How money shapes decisions to marry among cohabitors. Journal of Marriage and Family. 2005; 67(3):680–696. DOI: 10.1111/j.1741-3737.2005.00162.x

Stone, P. Opting out? Why women really quit careers and head home. Berkeley and Los Angeles: University of California Press; 2007.

Tomaskovic-Devey D, Skaggs S. Sex segregation, labor process organization, and gender earnings inequality. American Journal of Sociology. 2002; 108(1):102–128. DOI: 10.1086/344214

US Census Bureau. Field of degree and earnings by selected employment characteristics: 2011 [electronic resource]. Washington, D.C: Census Bureau; 2012. http://www.census.gov/prod/2012pubs/acsbr11-10.pdf

Van Bavel J. Choice of study discipline and the postponement of motherhood in Europe: The impact of expected earnings, gender composition, and family attitudes. Demography. 2010; 47(2):439–458. DOI: 10.1353/dem.0.0108 [PubMed: 20608105]

Weisgram ES, Bigler RS, Liben LS. Gender, values, and occupational interests among children, adolescents, and adults. Child Development. 2010; 81(3):778–796. DOI: 10.1111/j. 1467-8624.2010.01433.x [PubMed: 20573104]

Williams WM, Ceci SJ. When scientists choose motherhood. American Scientist. 2012; 100(2):138–145. [PubMed: 24596430]

Williams CL, Muller C, Kilanski K. Gendered organizations in the new economy. Gender & Society. 2012; 26(4):549–573. DOI: 10.1177/0891243212445466 [PubMed: 25419048]

Xie, Y., Killewald, A. Is American science in decline?. Cambridge: Harvard University Press; 2012.

Xie Y, Killewald A, Near C. Between-and within-occupation inequality: The case of high-status professions. The Annals of the American Academy of Political and Social Science. 2016; 663(1): 53–79. DOI: 10.1177/0002716215596958 [PubMed: 26977113]

Xie, Y., Shauman, KA. Women in science: Career processes and outcomes. Cambridge: Harvard University Press; 2003.

Xie Y, Goyette KA. Social mobility and the educational choices of Asian Americans. Social Science Research. 2003; 32(3):467–498. DOI: 10.1016/S0049-089X(03)00018-8

Appendix
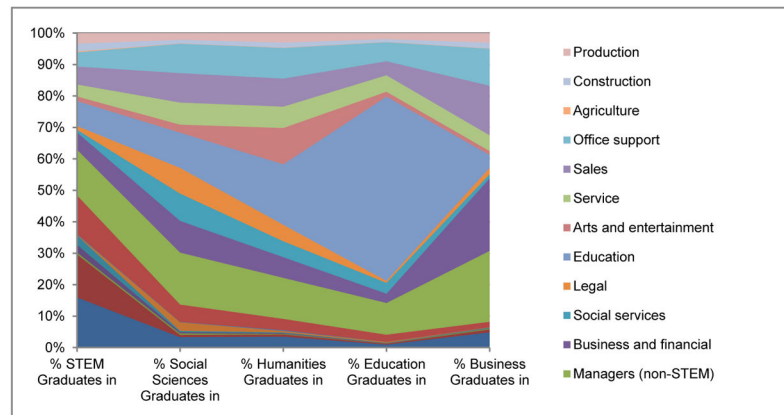
Figure A-1. Field of study–occupation connection
Source: US Census Bureau, *Where Do College Graduates Work?* (http://www.census.gov/dataviz/visualizations/stem/stem-html/).
Note: We excluded science- and engineering-related fields from the STEM category.

Figure A-2. Gender distribution by field of study
Source: US Census Bureau, *Field of Bachelor's Degree in the United States: 2009*, Table 2 (https://www.census.gov/prod/2012pubs/acs-18.pdf).
Note: We calculated the statistics by averaging the percentage female in each detailed major that makes up the five broad fields of study. For example, the percentage female in STEM is the average of the percentages in computer sciences, biology, physical science, and engineering.

Table A-1

Characteristics of college graduates in analytic sample, by field of study

Variable	STEM[a] (n=307)	Humanities[b] (n=197)	Social Science[c] (n=523)	Education (n=155)	Business (n=326)	Other[d] (n=178)
	N (%) or mean (SD)	N (%) or mean (SD)	N (%) or mean (SD)	N (%) or mean (SD)	N (%) or mean (SD)	N (%) or mean (SD)
Age at first interview (years)	15 (1)	15 (1)	15 (1)	15 (1)	15 (1)	15 (1)
Age at college completion	23 (1)	23 (1)	23 (1)	23 (1)	23 (1)	23 (1)
Age at last interview	29 (2)	29 (2)	29 (2)	29 (2)	29 (2)	29 (2)
Worked full-time	228 (74%)	125 (63%)	359 (69%)	110 (71%)	268 (82%)	124 (70%)
Married	129 (42%)	77 (39%)	178 (34%)	92 (59%)	143 (44%)	81 (46%)
Had children	57 (19%)	31 (16%)	105 (20%)	60 (39%)	75 (23%)	47 (26%)
Female	118 (38%)	120 (61%)	328 (63%)	133 (86%)	165 (51%)	129 (72%)
Race/ethnicity						
Non-Hispanic White	252 (82%)	155 (79%)	354 (68%)	110 (71%)	246 (75%)	126 (71%)
Non-Hispanic Black	29 (9%)	23 (12%)	98 (19%)	24 (15%)	47 (14%)	31 (17%)
Hispanic	26 (8%)	19 (10%)	71 (14%)	21 (14%)	33 (10%)	21 (12%)
Lived with biological parents in 1997	245 (80%)	151 (77%)	341 (65%)	111 (72%)	232 (71%)	123 (69%)
Mother's highest grade completed (grades of schooling)	14 (3)	15 (3)	14 (13)	14 (3)	14 (2)	14 (2)
Mother's age at first birth (years)	26 (5)	26 (4)	25 (5)	24 (4)	25 (4)	25 (5)
Attended public university	236 (77%)	139 (71%)	402 (77%)	126 (81%)	257 (79%)	148 (83%)

[a]STEM include agriculture and natural resources, archaeology, architecture and environmental design, biological sciences, computer and information science, engineering, mathematics, physical sciences, pre-dental, pre-med, and pre-vet.

[b]Humanities include English, fine and applied arts, foreign languages, interdisciplinary studies, philosophy, theology, and religious studies.

[c]Social Science include anthropology, area studies, communications, criminology, economics, ethnic studies, history, home economics, political science and government, psychology, sociology, and pre-law.

[d]Other fields include nursing, other health professions, and "other fields" coded by NLSY without specifications.
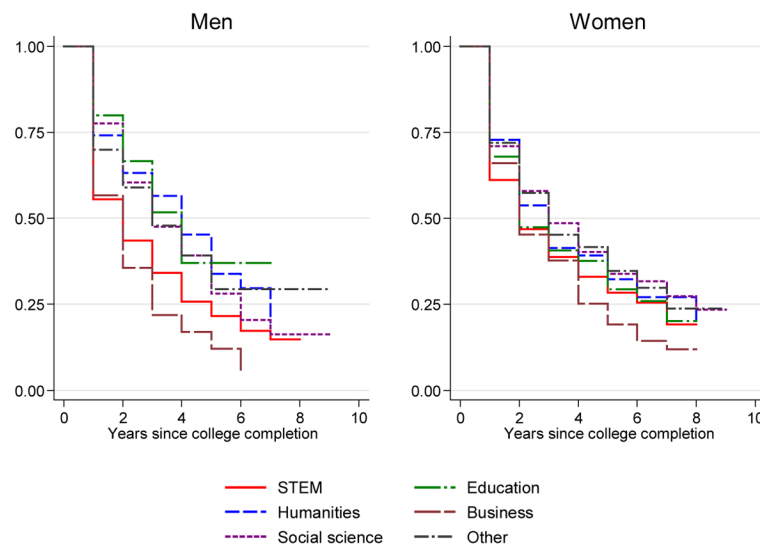
Figure 1.
Kaplan–Meier curves of transitions to full-time work, by gender and college major
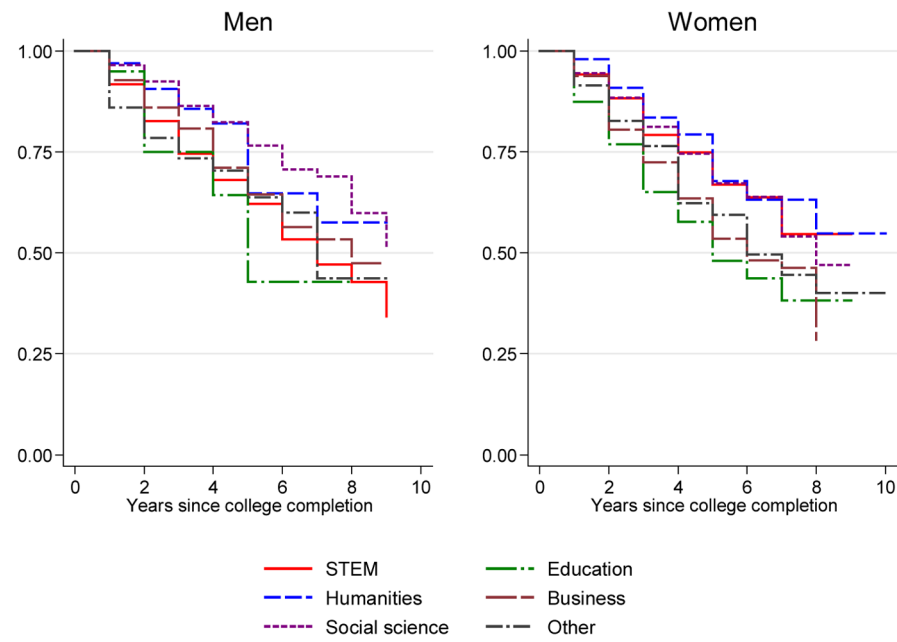
Figure 2.
Kaplan–Meier curves of transitions to first marriage, by gender and college major
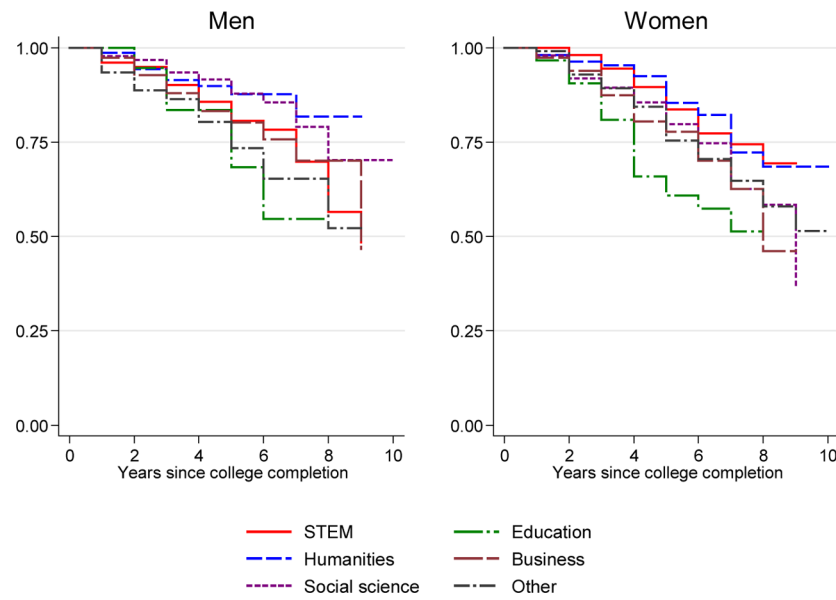
Figure 3.
Kaplan–Meier curves of transitions to first birth, by gender and college major

Table 1

Combinations of transitions to adult roles up to five years after college graduation, by gender

| | Entered full time work | | | | | | Did not enter full-time work | | | | | | Total |
| | Married | | Did not marry | | | | Married | | Did not marry | | | |
	Had children	No children	Had children	No children			Had children	No children	Had children	No children		
Men	89 (13%)	130 (19%)	14 (2%)	283 (41%)			19 (3%)	26 (4%)	3 (0.4%)	129 (19%)		693 (100%)
Women	141 (14%)	189 (19%)	40 (4%)	328 (33%)			53 (5%)	53 (5%)	16 (2%)	173 (17%)		993 (100%)
Total	230 (14%)	319 (19%)	54 (3%)	611 (36%)			72 (4%)	79 (5%)	19 (1%)	302 (18%)		1,686 (100%)

Table 2

Hazard ratios from Cox proportional hazards models of full-time employment

Variable	Model 1 Men (N = 526) HR	Model 2 Women (N = 809) HR	Model 3 All (N = 1,335) HR
College major			
STEM	1.31 *a	1.25	1.30 *
Humanities	0.90	1.12	0.90
Social science	ref.	ref.	ref.
Education	0.87	1.17	0.85
Business	1.64 ***a	1.42 **	1.59 **
Other	0.85	1.07	0.87
Female			0.88
Female x major			
STEM			0.95
Humanities			1.24
Social science			ref.
Education			1.37
Business			0.89
Other			1.21
Race/ethnicity			
Non-Hispanic White	ref.	ref.	ref.
Non-Hispanic Black	1.05	1.14	1.12
Hispanic	1.03	0.97	0.99
Age at college completion	0.92	0.94	0.93 *
Lived with biological parents in 1997	1.16	1.03	1.08
Mother's highest grade completed	0.99	0.95 **	0.96 **
Mother's age at first birth	0.99	1.01	1.01
Attended public university	1.24	1.15	1.19 *

*
$p < .05$;

**
$p < .01$;

***
$p < .001$

[a]Statistically significant difference from humanities ($p < 0.05$)

Table 3

Hazard ratios from Cox proportional hazards models of marriage

Variable	Model 1 Men (N = 600) HR	Model 2 Women (N = 843) HR	Model 3 All (N = 1,443) HR
College major			
STEM	1.81[**]	0.90	1.74[**]
Humanities	1.22	0.82	1.18
Social science	ref.	ref.	ref.
Education	2.12[*]	1.68[**a,b]	2.21[*]
Business	1.48	1.39[*a,b]	1.50[*]
Other	1.81[*]	1.29	1.84[*]
Female			1.48[*]
Female x major			
STEM			0.53[*]
Humanities			0.70
Social science			ref.
Education			0.74
Business			0.93
Other			0.70
Race/ethnicity			
Non-Hispanic White	ref.	ref.	ref.
Non-Hispanic Black	0.96	0.41[***]	0.57[***]
Hispanic	0.65	0.73	0.73[*]
Age at college completion	1.10	0.90	0.99
Lived with biological parents in 1997	1.26	1.02	1.09
Mother's highest grade completed	0.95	1.00	0.99
Mother's age at first birth	0.98	0.98	0.98[*]
Attended public university	1.04	1.22	1.15

[*]
$p < .05$;

[**]
$p < .01$;

[***]
$p < .001$

[a]Statistically significant difference from STEM ($p < 0.05$)

[b]Statistically significant difference from humanities ($p < 0.05$)

Table 4

Hazard ratios from Cox proportional hazards models of first birth

Variable	Model 1 Men (N = 664) HR	Model 2 Women (N = 918) HR	Model 3 All (N = 1,582) HR
College major			
STEM	1.74[*]	0.71	1.73[*]
Humanities	0.90	0.67	0.91
Social science	ref.	ref.	ref.
Education	2.24	1.64[**a,b]	2.36
Business	1.58	1.12	1.61
Other	2.17[*]	0.99	2.16[*]
Female			1.83[**]
Female x major			
STEM			0.41[**]
Humanities			0.74
Social science			ref.
Education			0.69
Business			0.70
Other			0.46[*]
Race/ethnicity			
Non-Hispanic White	ref.	ref.	ref.
Non-Hispanic Black	1.26	1.00	1.08
Hispanic	1.05	1.08	1.08
Age at college completion	1.15	1.09	1.11
Lived with biological parents in 1997	1.19	0.93	0.99
Mother's highest grade completed	0.94	0.99	0.98
Mother's age at first birth	0.95[*]	0.95[**]	0.95[***]
Attended public university	0.94	1.12	1.05

[*]$p < .05$;

[**]$p < .01$;

[***]$p < .001$

[a]Statistically significant difference from STEM ($p < 0.05$)

[b]Statistically significant difference from humanities ($p < 0.05$)

Table 5

Relative risk ratios from multinomial logistic model of work or marriage after college completion

	Men (N = 693)			Women (N = 993)		
Variable	Neither work nor marriage[a]	Marriage only[a]	Work and marriage[a]	Neither work nor marriage[a]	Marriage only[a]	Work and marriage[a]
	RRR	RRR	RRR	RRR	RRR	RRR
College major						
STEM	0.85	1.94	1.91**	0.67	0.84	0.78
Humanities	1.72	3.62*	1.10	0.98	0.77	1.15
Social science	ref.	ref.	ref.	ref.	ref.	ref.
Education	1.63	6.13*	1.63	0.51	1.95*	2.00**
Business	0.35**	0.68	1.30	0.73	0.39	1.67*
Other	1.20	2.55	1.91	0.68	1.20	1.39
Race/ethnicity						
Non-Hispanic White	ref.	ref.	ref.	ref.	ref.	ref.
Non-Hispanic Black	0.92	0.50	0.83	0.54	0.25***	0.30***
Hispanic	0.99	0.82	0.78	1.26	1.00	0.80
Age at college completion	1.16	1.34	0.97	1.22	1.02	0.87
Lived with biological parents in 1997	0.75	0.65	1.25	1.04	0.86	1.13
Mother's highest grade completed	1.10	1.03	0.98	1.08*	1.11*	0.99
Mother's age at first birth	1.04	1.00	0.96	0.95*	0.96	0.95**
Attended public university	0.82	0.75	1.00	0.73	0.76	1.42

*
$p < .05$;

**
$p < .01$;

***
$p < .001$

[a]Reference category is full-time work but not marriage after college completion