

## **The Labor of Love: Occupational Education and the Transition to First Marriage**

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*Most research on marriage markets conceptualizes them in geographic terms, often missing the social contexts in which adults meet and marry. We focus on work as a potential context and demonstrate that occupational education is an important marriage-market characteristic associated with marital timing and mate selection. We employ a discrete-time event history approach using the NLSY-97 and find that the proportion of college-educated workers in respondents' occupations is positively associated with the timing of first marriage and with marrying a college-educated partner. This association is only significant for women, although it does not vary by women's own educational backgrounds. We argue that this reflects work's role in shaping the availability of marriageable partners—a structural characteristic that can facilitate or impede the marital search process. In addition, we suggest that this has implications for our understanding of the recent shift towards higher marriage rates among college-educated women in the US.*

Family scholars have long found local marriage markets to be an important structural factor shaping marital behavior. The relative availability of potential spouses—typically measured as the age-race-specific sex ratio in a given labor market area (LMA)—appears to influence marital timing, mate selection, and the risk of divorce (Lichter et al. 1992; Lichter et al. 1995; South 1995). For instance, women in “tight” marriage markets—that is, where there are far fewer men than women—are more likely to put off marriage rather than settle for a less educated (i.e. lower “quality”) spouse (Lichter et al. 1995). For the most part, scholars conceptualize and define these marriage markets solely in geographic terms. Yet, as South et al (2001) point out, this geographic focus can miss the social contexts in which people actually meet and interact with one another, especially in a socioeconomically stratified society like the US. Turning attention to work as a potential marriage-market, South et al (2001) find that couples are more likely to divorce when wives' occupations are disproportionately male.

Drawing on these insights, this paper furthers our understanding of work-as-marriage-market in at least two ways. First, we look at the transition to marriage among young adults in their mid- to late-twenties. For many in this age group, work—and the network of social ties it supports—is likely an important context for long-term relationship formation, especially in an era when the average age-at-marriage is occurring well beyond the age when most have left school. In the 1992 National Health and Social Life Survey, work was the second most common place, next to school, where married couples reported first meeting (Laumann et al. 1994). Although the internet has displaced many traditional ways of meeting in recent decades, work remains an important social context for partnering (Rosenfeld & Thomas 2012). Second, we propose and test an alternative to the traditional sex-ratio-based conceptualization of marriage markets: the educational composition of occupations. While this job characteristic has been used in the past to measure occupational prestige (Hauser & Warren 1997; Warren et al 2008), we argue that it is also an indicator of the availability of *marriageable* partners—in this case, partners who are college-educated (Oppenheimer 1988).

We use Rounds 1-13 of the 1997 National Longitudinal Survey of Youth (NLSY-97)—a nationally representative annual survey of youth born between January 1980 and December 1984—to construct a person-month dataset ending with either the date of first marriage or the

most recent survey (i.e. “right-censored”). Respondents in the 2009 survey round (13) were just finishing their 20s. We obtained national averages of occupational education from the 2000 Census and merged this information onto the NLSY using the detailed occupational codes provided. Although this national average does not measure the educational composition of each respondent’s actual work environment, we agree with previous research that this more objective measure is an improvement over more subjective assessments of marriage market characteristics by respondents themselves (South et al. 2001). Finally, in order to include those person-months in which respondent were unemployed, we mean-center our measure of occupational education and code unemployed months as zero. Occupations with educational compositions that are greater than zero, then, are those with an *above-average* proportion of workers with college degrees. Table 1 provides a brief description of our main outcome and predictor variables.

First, we employ logistic regression to estimate discrete-time event history models of transition to first marriage. We focus our analysis on ages 24-29 because the majority of young adults have completed their formal education by this time, making it a period in the life course when marriage is more common and work is likely to be a relevant context in the marital search process (Laumann et al. 1994). We run our models separately for men and women. Table 2 shows that net of controls—in particular, education and income—working in an occupation with an above-average proportion of college-educated workers is associated with a greater likelihood of first marriage for women but not for men. Furthermore, as the interactive model for women shows, this effect does not vary by women’s own educational backgrounds. Next, in Table 3, we run multinomial logistic regressions and find that women in above-average college-educated occupations are more likely to marry a spouse who has a college education compared to a spouse who does not, net of controls.

Taken together, our results support the view that work plays a significant role in shaping the availability of not just opposite-sex partners (as South et al. find using sex-ratios) but also partners who are college-educated. Work appears to be functioning as a marriage market. Of course, these findings are necessarily correlational. We cannot account for unmeasured characteristics such as the propensity among some women to pursue certain types of occupations *because* they wish to get married. Still, our results are robust to a number of socioeconomic and demographic controls.

These findings have important implications for thinking about the role of women’s education in the changing US marriage market. Recent decades have witnessed an historic shift in the relationship between women’s education and the likelihood of marriage: whereas college-educated women in the 1940s were the least likely to ever marry, today they are the most likely to do so (Torr 2011; Goldstein & Kenney 2001). Critics of Becker’s so-called “independence effect” argue this trend supports the view that as women’s education and labor force participation have increased, education and income have become increasingly important markers of attractiveness for women on the marriage market (Oppenheimer 1988). However, our findings suggest that, in addition to being a marker of attractiveness, having a college education appears to expose women to different pools of available partners by gaining them access to different sorts of occupations. Although we find that all women’s chances of marriage improve in more-highly educated occupations, women with bachelor’s degrees far outnumber women without degrees in these jobs. Thus, the differential access that college-educated women have to college-educated men through their jobs—a dynamic that has become more prevalent as more women have attended college and entered the work force—may help explain the recent shift in college-educated women’s probability of marriage.

**Table 1. Descriptive statistics for main dependent and independent variables, for men and women ages 24-29.**

	Female	Male
<b>Number of first marriages</b> (unweighted)	533	559
<b>Total number of respondents</b> (unweighted)	2909	3386
<b>Occupational Education</b> , mean-centered		
Range (min, max)	-0.23, 0.77	-0.16, 0.84
Distribution (weighted %)		
-0.2 and below	2.3	-
>-0.2 and <=-0.1	24.7	32.5
>-0.1 and <0	20.6	12.6
0	20.3	21.4
>0 and <0.1	2.9	9.7
>=0.1 and <0.2	4.7	2.5
>=0.2 and <0.3	4.0	5.4
>=0.3 and <0.4	7.3	5.5
>=0.4 and <0.5	2.8	1.9
>=0.5 and <0.6	3.5	3.2
>=0.6 and <0.7	2.6	2.5
0.7 and above	4.3	2.9

**Table 2. Coefficients from logistic models of transition into first marriage for men and women, ages 24-29 (Weighted).**

	Women				Men	
	1		2		3	
	Coef.	SE	Coef.	SE	Coef.	SE
<b><i>Occupational Education (mean-centered)</i></b>						
Proportion of college-educated workers	0.888***	(0.20)	1.213**	(0.41)	0.228	(0.22)
<b><i>Annual earnings (logged)</i></b>						
Earnings	0.056**	(0.02)	0.056*	(0.02)	0.109***	(0.03)
<b><i>Educational Attainment (ref: High school)</i></b>						
Less than high school	-0.251	(0.24)	-0.181	(0.28)	-0.190	(0.19)
Some college	0.305	(0.19)	0.288	(0.20)	-0.006	(0.23)
College or more	0.131	(0.14)	0.164	(0.15)	0.122	(0.12)
<b><i>Ed Attainment*Occupational Ed</i></b>						
Less than high school*Occ. Ed			1.136	(3.03)		
Some college*Occ. Ed			-0.031	(0.94)		
College or more*Occ. Ed			-0.426	(0.47)		

+ p<0.1 \* p<0.05 \*\* p<0.01 \*\*\* p<0.001

*Note:* All models control for age, race/ethnicity, first birth status, parental education attainment, childhood family structures (at age 12), and regional and metropolitan residence. Occupational education is centered at the sample mean after multiple imputations. Interactions between educational attainment and occupational education for men (not shown) are not significant.

**Table 3. Coefficients from multinomial logistic regression models of spouse’s educational attainment for women ages 24-29 (Weighted).**

	Not married vs. spouse with no BA		Spouse with BA vs spouse with no BA	
	Coef.	SE	Coef.	SE
<b><i>Occupational Education (mean-centered)</i></b>				
Proportion of college-educated workers	0.649	(0.18)	2.829**	(1.13)

+ p<0.1 \* p<0.05 \*\* p<0.01 \*\*\* p<0.001

*Note:* All models control for age, race/ethnicity, first birth status, income, educational attainment, parental education attainment, childhood family structures (at age 12), and regional and metropolitan residence. Occupational education is centered at the sample mean after multiple imputations.

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