Occupational Sex Segregation and Marriage: The Romantic Cost of Gender-Deviant Jobs

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ABSTRACT: In this paper I consider the possible mechanisms by which occupation sex segregation might be associated with the odds of marriage. I use data from the National Longitudinal Survey of Youth 1979 (NLSY79) to estimate the odds of marriage over a period of fourteen years as a function of occupational and personal characteristics. I find that both women and men benefit from making gender-typical occupational choices. Additionally, men are penalized from working in female-dominated occupations. In a supplementary analysis I use data from the National Longitudinal Study of Adolescent Health 1994-2008 (Add Health) to investigate whether these findings might be attributed to stereotypic differences in sexual orientation or in personal attractiveness.

INTRODUCTION:

Since the 1960s women have made enormous advances toward equality with men in education and employment. In fact, women's labor force participation is only slightly lower than that of men (Cotter, Hermsen, and Vanneman 2004) and women now earn more college degrees than men (Diprete and Buchman 2006). Yet an 80% gender gap in earnings remains that cannot be accounted for by differences in work patterns or human capital (United States General Accounting Office 2003). A major contributing factor driving this wage gap is occupational sex segregation (Petersen and Morgan 1995): Women are concentrated in occupations that are underpaid relative to male-dominated jobs with similar requirements. Insofar as differential earnings are themselves a source of general gender inequality (e.g., by ensuring women's weaker economic position in marriage), reducing occupation gender segregation would thus be an important means of improving women's relative social position.

Traditional supply-side explanations for the persistence of occupational sex segregation generally emphasize gendered socialization or women's economically rational preference for mother-friendly careers (England 2005). In this article, I consider an additional supply-side contributor to occupational sex segregation: Women and men may incur substantial social costs for making gender-atypical occupational choices, particularly in marriage markets (Badgett and Folbre 2003). If women and men in gender-typical occupations are preferred as spouses, then individuals have a romantic incentive to make gender-typical occupational choices. Also, given that marriage may increase one's economic resources, individuals also have a financial incentive to make gender-typical occupational choices.

If there is a romantic cost to occupational gender deviance, it is likely to be larger for men than for women. The devaluation of activities and attributes traditionally defined as

feminine makes it easier for women to cross gender boundaries than it is for men (England 2010). Women may in some instances gain respect for taking on "male" activities (such as higher-status, more rewarding occupations): Their gender deviance may be forgiven because the "male" position they pursue is perceived as valid and desirable. In contrast, men lose respect for taking on "female" activities and unlike women men cannot justify gender deviance as the pursuit of a socially valued role (because traditionally female roles are devalued). In other words, men may pay a larger social penalty in terms of lost respect for occupational gender deviance than women, and it is plausible that they also pay a larger romantic penalty.

However, occupation sex composition might also be related to marital outcomes in the absence of a preference for spousal occupation gender-typicality per se. Selecting a gender-atypical occupation is associated with various factors that might influence the attractiveness of potential spouses. All else equal, traditionally female occupations pay less (England, Allison, and Wu 2007) and lower earnings reduce marital opportunities, especially for men (Carlson, McLanahan, and England 2004; Xie, Raymo, Goyette, and Thornton 2003). Also, women in traditionally male fields are stereotyped as less feminine and less physically attractive than women in traditionally female fields (Lobel and Shavit 1997; Seymour and Hewitt 1997) while men in traditionally female occupations are stereotyped as effeminate and asexual or homosexual: This may affect their chance of marriage, even if the stereotypes are not founded in reality. Additionally, women and men in gender-atypical occupations may hold less traditional attitudes toward gender and family (Van Bavel 2010) or they may be less desirous of marriage.

The factors mentioned above suggest that women and men in gender-atypical occupations would be less likely to marry, whether as a direct result of their occupation or because they differ in other relevant traits. But working in a gender-atypical environment may

increase exposure to potential other-sex partners: In this sense occupation gender deviance might increase marital chances and this "opportunity" effect would be even stronger for industry gender deviance (for many workers the gender composition of their work environment is more closely related to their industry than their occupation). In this paper I consider the possible mechanisms by which occupation and industry sex segregation might be associated with the chance of marriage, whether directly or indirectly. I use data from the National Longitudinal Survey of Youth 1979 (NLSY79) to estimate the chance of marriage over a period of fourteen years as a function of occupational and personal characteristics. In a supplementary analysis I also use data from the National Longitudinal Study of Adolescent Health 1994-2008 (Add Health) to replicate these results and to test whether the relationship between occupation sex composition and the chance of marriage can be accounted for by differences in physical attractiveness or in sexual orientation (information on these traits is not available in the NLSY79).

BACKGROUND:

Does occupational gender nonconformity directly reduce marriage prospects?

Badgett and Folbre (2003) argue that occupational gender nonconformity directly reduces women's and men's attractiveness to potential spouses. They presented fictional personal advertisements to a large group of undergraduate students and asked the students to estimate the number of responses each advertisement would receive. The advertisements included information on physical appearance, personality, activities, favorite music and food, and on

occupation. The students predicted that women and men in gender-atypical occupations would receive fewer responses than similar individuals in gender-typical occupations.

However, this is not definitive evidence that women and men are penalized for gender-atypical occupational choices per se: The students may use occupational gender composition as a proxy for other relevant characteristics. As discussed below, female-typed occupations pay less, all else equal, and income is an important factor in marital prospects, especially for men.[1] This suggests that the lower income signaled by a female-typed occupation would reduce predicted responses to ads posted by men in female-typed occupations, even if men are not directly penalized for the gender-deviance their occupation. Similarly, given the stereotypes surrounding women in gender-atypical careers as unfeminine and physically unattractive (Seymour and Hewitt 1997), students might discount the physical self-descriptions in the advertisements as intentionally misleading: If women's beauty is an important factor in attracting potential partners then women thought to be unattractive would be predicted to receive fewer responses.

Stereotypes of Occupational Gender-Nonconformists:

Women's talent in math, science, and engineering fields is perceived as inherently unfeminine and these disciplines are thought by men to either attract or create women deficient in physical attractiveness (Seymour and Hewitt 1997) and in femininity (Lobel and Shavit 1997). In fact, some traditionally male occupations might cause women to de-feminize their appearance. For example, policewomen report that their personal appearance while working is influenced by

[1] The authors contrast "high-status/high-femininity" occupations with "high-status/high-masculinity" occupations and "low-status/high-femininity" occupations with "low-status/high-masculinity" occupations but this does not truly control for status or income. For example, "pediatrician" is one of the "high-status/high-femininity" occupations but it pays much less and is a lower-status medical profession than the comparison "high-status/high-masculinity" occupation which is "orthopedic surgeon".

a desire to de-emphasize their sex (Rabe-Hemp 2008). But it is unclear whether police women maintain this less feminine appearance in their personal life, nor is it known whether the stereotype that women in male-typed occupations are less feminine and less physically attractive is founded in actual differences. Still, regardless of whether there is any validity to this stereotype, men's belief that women in traditionally masculine occupations are less feminine and less physically attractive might damage these women's chances to meet partners. In addition, some men may avoid women in gender-atypical occupations because they perceive these occupations to be less compatible with the homemaking and mothering duties that they desire from their wife (i.e., in a traditional sex-specialized model of marriage: Sanchez, Manning, and Smock 1998).

Popular stereotypes label men in female-typed occupations as gay, asexual, passive, wimpy, and feminine (Williams 2008), qualities that women are unlikely to desire in potential partners. However, the one study that specifically addresses the romantic experiences of men in female-typical occupations (Simpson 2004) does not indicate that women evaluate men in traditionally female occupations as romantically undesirable. In fact, men in female-typed occupations find that although other men disparage their occupational choice (Simpson 2004), women are supportive. Some male primary school teachers even believe their occupation to be an asset in meeting potential female partners because the women are impressed by the men's evident capacity for nurturing (Simpson 2004). This suggests that if men in gender-atypical occupations are disadvantaged in the marriage market, it is not due to the gender-deviance of their occupational choice but instead results from other characteristics of that occupation, such as lower earnings, or from the men's personal characteristics. However, this study only examines four professions and relies on a non-random sample of forty men living in and near London: It is

difficult to generalize from these findings to the romantic success of all men in gender-atypical occupations.

"Female" Occupations Pay Less:

Occupational prestige is not closely related to occupational sex composition, but earnings are lower in typically female occupations, net of differences in human capital and occupational skill requirements (England 2005; England, Allison, and Wu 2007). Although men may increasingly value their wives' earnings (Buss, Shackelford, Kirkpatrick, and Larsen 2001; Schwartz; Sweeney and Cancian 2004), women are generally found to attach relatively more importance than men to potential partners' earnings (Buss and Barnes 1986; Furnham 2009; Howard, Blumstein, and Schwartz 1987; Li, Bailey, Kenrick, and Linsenmeier 2002). Thus, men's earnings may be more important than women's earnings in the transition to marriage (Carlson, McLanahan, and England 2004; Xie, Raymo, Goyette, and Thornton 2003). Insofar as earnings are related to occupational sex composition, women and men in female-typical occupations would have worse marital prospects, and this effect would be stronger for men (because women attach greater importance than men to potential spouses' earnings). Thus, it is important to control for income when considering whether women and men in gender-atypical occupations are penalized in the marriage market as a direct result of the gender-deviance of their occupational choice.

Personality and Personal Characteristics:

Women and men in gender-atypical occupations might make less attractive marital partners if they differ in other characteristics desired by potential spouses, such as femininity or masculinity of personality and physical appearance. In fact, women in traditionally male occupations have significantly different Bem Sex Role Inventory profiles compared to women in traditionally female occupations (Lavallee and Pelletire). Women and men in female-dominated occupations may also be higher in the "female" personality trait of expressivity, compared to women and men in male-dominated occupations (Evans and Steptoe 2002). It has even been alleged that higher prenatal and adult testosterone levels predispose both women and men towards occupations dominated by men (Manning, Reimers, Baron-Cohen, Wheelwright, and Fink 2010). If most women and men prefer spouses with gender-typical personalities[2], individuals in gender deviant occupations might face limited romantic opportunities because of their less traditional personality profiles (not because of their occupation gender deviance per se). Similarly, women in traditionally masculine fields are stereotyped as less physically attractive than gender-conforming women: If this stereotype is founded on real difference women in male-dominated occupations might have reduced marital chances not as a result of their profession but rather because they are less physically attractive by conventional standards.

Additionally, entering a gender-atypical field implies less commitment to established gender norms, and this might influence the chance of marriage. Indeed, male engineers hold more traditional gender attitudes than male elementary school counselors (Dodson and Borders 2006). Similarly, England and Okamoto (1999) found that women with more liberal beliefs about gender are more likely to enter traditionally male occupations, but they did not find a significant difference for men (Okamoto and England 1999). Although holding liberal gender

[2] This is a questionable assumption—for example, women might arguable prefer expressive husbands.

attitudes may not make individuals unattractive to potential spouses who share their views, liberal gender attitudes might be associated with less commitment to marriage as an institution.

Differential rates of (heterosexual) marriage among women and men in gender-atypical occupations might be due in part to differences in sexual orientation. Gay men are less likely than straight men to enter strongly male (over 80% male) occupations and lesbian women are less likely than straight women to enter strongly female occupations and are also more likely than straight women to enter strongly male occupations (Antecol, Jong, and Steinberger 2008). Additionally, lesbians and gay men are disproportionately likely to be in executive, management, and professional occupations, compared to their heterosexual counterparts (Carpenter 2005; Daneshvary, Waddoups, and Wimmer 2008). This association between sexual orientation and occupation gender sex composition might generate a spurious relationship between occupation and heterosexual marriage that is driven not by a romantic penalty (or reward) for occupation gender deviance (or conformity) but rather by different rates of heterosexuality.

Differing opportunities to meet potential partners:

The factors discussed above suggest that women and men in gender-deviant occupations would be less likely to marry, whether as a direct result of occupation gender deviance or because occupation gender deviance is associated with another characteristic that is relevant to romantic outcomes (such as income, physical attractiveness, attitudes, and sexuality). But these factors do not consider the effect of social interactions with co-workers. Specifically, women and men that interact with more other-sex individuals in their workplace have more opportunities to meet potential spouses – both among their co-workers and through their co-workers' social

networks. Working in a gender-atypical occupation might increase such interaction, but the gender composition of the industry might be even more important than that of the occupation. For example, a male receptionist working in an engineering firm might meet relatively few women at work whereas a male receptionist in an elementary school would likely meet many women. To my knowledge, there has been no research on the effect of the gender composition of the workplace on the chance of marriage, but one paper found that individuals with more other-sex co-workers are at greater risk of divorce, presumably because they are more likely to meet a new partner at work (McKinnish 2007). Similarly, I argue that women and men in gender-atypical work environments will have a greater likelihood of marriage, all else equal.

Hypotheses:

Existing research linking occupation sex composition to romantic desirability (Badgett and Folbre 2003) has not controlled for several potentially compounding factors, including income, occupational status, attitudes, physical attractiveness, and heterosexuality. For example, female-typed occupations pay less, holding skill requirements constant, and income is an important determinant of men's marital opportunities: This might generate a spurious relationship between men's occupation gender conformity/deviance and their chance of marriage that would be eliminated by controlling for income. Similarly, if there is any truth to the stereotype that women in male-typical occupations are less physically attractive, and if physical attractiveness is important for women's romantic opportunities, this might generate a spurious relationship between women's occupation gender conformity/deviance and their chance of marriage. This leads to my first hypothesis: *Some part of the association between occupation*

sex composition and the chance of marriage will be accounted for by average differences in income, occupational status, attitudes, physical attractiveness, and heterosexuality that distinguish women and men in gender-typical and gender-atypical occupations (Hypothesis 1).

However, it is not implausible that occupation gender deviance and conformity might be penalized or rewarded by potential romantic partners, net of income, occupational status, physical attractiveness and heterosexuality. Especially for men, individuals may pay substantial social costs in terms of lost respect and reduced romantic desirability for entering gender deviant roles. If women and men are romantically penalized for occupational gender deviance and rewarded for gender conformity this should be reflected in differential marriage rates for women in men in gender-typical and gender-atypical occupations. Thus, net of potentially confounding factors such as differences in earnings and occupational status, in gender attitudes, and in the desire to marry, this perspective predicts that: *For a man, the chance of marriage is inversely related to the percent of women in his occupation while for a woman, the chance of marriage is positively related to the percent of women in her occupation* (Hypothesis 2a). If these same rewards and penalties are also applied to women and men working in gender-typical and gender-atypical industries then this perspective also predicts that: *For a man, the chance of marriage is inversely related to the percent of women in his industry while for a woman, the chance of marriage is positively related to the percent of women in her industry* (Hypothesis 2b).

But women and men working in gender-atypical workplaces may benefit romantically by being exposed to a greater number of potential other-sex partners. Insofar as industry sex composition is a reasonable approximation of workplace sex composition, this theory predicts that: *For a man, the chance of marriage is positively related to the percent of women in his industry while for a woman, the chance of marriage is inversely related to the percent of women*

in her industry (Hypothesis 3). Hypothesis 2b and Hypothesis 3 are by no means mutually exclusive: It is possible for an individual to be romantically penalized for the gender deviance for working in a gender atypical workplace while at the same time some part of this penalty is offset by the increased opportunity to meet potential partners.

DATA & METHODS:

Datasets:

National Longitudinal Survey of Youth 1979 (NLSY79): The NLSY79 a nationally representative sample of 12,686 young men and women who were 14-22 years old when they were first surveyed in 1979 (Bureau of Labor Statistics 1979-2002 (rounds 1-20) [computer file]). Annual interviews from 1979 to 1994 (when annual interviews became biennial) provide detailed information on occupational status and on marital transitions. Not all respondents are interviewed in all years and my analysis includes only non-married respondents in the labor force, yielding a sample size of 64,753 person-years. After dropping cases missing data (6% of cases are missing data on one or more variable), 60,729 person-years remain for analysis.

National Longitudinal Study of Adolescent Health (Add Health): Add Health is a nationally representative longitudinal survey of 20,745 adolescents in grades seven to twelve at the initial interview in 1994-95 (Bearman, Jones, and Udry 2004; Chantala 2006). I use occupational status in Wave III (collected in 2001-2), when respondents average about 22 years old, to predict marital status in Wave IV, when respondents average about 29 years old (2008).

Although 14,779 respondents were interviewed in Wave IV, longitudinal sample weights are only available for 9,405 respondents. Excluding married individuals[3] (10% of respondents) and individuals not in the labor force (due to the young age of the sample about 25% of respondents are not in the labor force at Wave III) and dropping cases with missing data (about 10% of remaining cases are missing data) 5,629 observations remain for analysis.

The young age of the Add Health sample at Wave III is a disadvantage of the data: It would be better to have an older sample in which more respondents had completed their education and embarked on careers. It is also a disadvantage that eight years separate Wave III and Wave IV. For these reasons the NLSY79 is better suited for predicting changes in marital status (because it is collected annually and covers a wider age range). But Add Health provides information on the respondents' physical attractiveness and sexual orientation, information that is not available in the NLSY79. Thus, using the Add Health data to conduct a parallel analysis allows me to check whether the differential marital patterns observed in the NLSY79 for occupationally gender-deviant and gender-conforming individuals are spurious, driven by differences in physical attractiveness and sexual orientation.

U.S. Decennial Census (Census): I use data from the 1970, 1980, and 2000 U.S. Census data from the Integrated Public Use Microdata Series (Langlois, Kalakanis, Rubenstein, Larson, Hallam, and Smoot 2000; Ruggles, Alexander, Genadek, Goeken, Schroeder, and Sobek 2010) to calculate occupation and industry sex composition.

Measures:

[3] Married individuals are included if they divorce between Wave III and Wave IV (and are divorced or remarried at Wave IV). They are excluded if they remain married to the original spouse.

Unless otherwise stated, each measure is equivalent in my analysis of the NLSY79 and in my analysis of Add Health.

Percent occupation female: Percent occupation female is calculated from U.S. decennial census data. From 1979-81 the NLSY79 provides only the 1970 census 3-digit (3-D) codes: For these years I use percent female calculated from the 1970 census. In 1982 the 1980 census 3-D codes become available, so for the remaining years (1982-93) I use percent female calculated from the 1980 census (as it is closer in time than 1970). For the Wave IV Add Health data (collected in 2008), I use percent female calculated from the 2000 Census. I classify occupations as predominately female if women comprise at least 75% of the workforce and as predominately male if women comprise no more than 25% of the workforce.

Percent industry female: I use percent industry female to approximate the gender composition of the workplace. Percent industry female is calculated from U.S. decennial census data. From 1979-81 the NLSY79 provides only the 1970 census 3-D codes: For these years I use percent female calculated from the 1970 census. In 1982 the 1980 census 3-D codes become available, so for the remaining years (1982-93) I use percent female calculated from the 1980 census. I classify industries as predominately female if women comprise at least 75% of the workforce and as predominately male if women comprise no more than 25% of the workforce. Unfortunately, information on industry is not available in the Add Health data.

Educational Attainment: I control for whether the respondent has less than a high school education (reference), is a high school graduate and/or has completed some college, or is a four-year college graduate (or higher). Education is updated at each survey. In the Add Health data many respondents are still completing their education at Wave III so I adjust for current full-time enrollment by forecasting degree completion. For example, an individual is classified as a

college graduate if she has completed a four-year college degree program or is currently enrolled in a four-year college. Using completed education rather than forecasted education does not change the results of interest.

Income: Personal earned income, logged to reduce positive skew. Recoding income into a categorical variable (rather than using the logged measure) yields equivalent results. In the Add Health data, this is on the only independent variable with substantial missing information. To avoid dropping these cases in the regression models I included a dummy variable indicating that income is missing and replace the missing information on income with the mean. This approach will not alter the estimated effect of income and the average difference in the odds of marriage among those missing information will be captured by the dummy variable.

Occupational prestige: I control for occupational prestige, as measured by the Nakao-Treas Prestige Score (Ruggles). Because the effect of occupational prestige is plausibly non-linear, I recode it into indicator variables for high prestige (at or above the 75th percentile), mid-prestige, and low prestige (at or below the 25th percentile).

Gender traditionality: In the NLSY79 this is an index created by averaging scores on seven variables measuring gender and family attitudes, measured in the initial 1979 interview,[i] and standardizing the resulting index. Cronbach's alpha exceeds 0.7 for both women and for men. Only one question addressing gender attitudes is asked in Add Health, and it is only asked of a sub-sample, so it is not possible to include this measure without drastically reducing the sample size.

Teen marital expectation: In the initial NLSY79 1979 survey, when respondents are 14 to 22 years old they are asked at what age they would like to marry, if ever. I recode this into a binary variable indicating that the respondent would like to be married sometime (vs. never). A

similar measure is available in Add Health but including it would substantially reduce the sample size.

Physical Attractiveness: In the Add Health data the interviewer rates the respondent's physical attractiveness on a 5-point scale from (1) very unattractive to (5) very attractive. It would be better to have the average of several observers' ratings, but prior studies indicate that evaluations of attractiveness are consistent between raters (Chantala 2006; Murstein 1972). It is also reassuring that in the Add Health data interviewers' ratings are positively and significantly correlated across waves (results not shown). An equivalent measure is not available in the NLSY79 data.

Heterosexuality: In the Add Health data respondents are asked to characterize their sexual orientation on a 5-point scale from (1) 100% heterosexual to (5) 100% homosexual (or as asexual). I recode this into an indicator variable for 100% heterosexual. An equivalent measure is not available in the NLSY79 data.

Marital status: At each survey, individuals are classified as single, cohabiting, or married.

Female: Female (1) or male (0).

Race: I group respondents as White (reference), Black, Hispanic, and other race.

Age: Age is age in years. I limit my analysis to those aged 18 and older.

Children: Indicator for whether the respondent lives with any of her or his children.

Analysis:

NLSY79: My sample consists of all single individuals in a given year. Discrete time hazard models predict the risk of transition to marriage in the subsequent year (relative to remaining single) and are estimated using robust standard errors and clustering by individual. Individuals in cohabiting unions are included and I control for cohabitation. Respondents currently out of the labor force are excluded. In results not shown I also estimated equivalent individual fixed-effects models and results were similar: This suggests that findings are not driven by individual differences in unmeasured variables (including physical attractiveness and sexual orientation).

Add Health: I use occupation sex composition and personal characteristics measured in Wave III (average age about 22) to predict marital status in Wave IV (average age about 29). It is somewhat problematic to measure socioeconomic characteristics (income, occupation, and education) at Wave III because respondents are still very young and may be completing their education or working temporarily in an occupation that they do not intend to pursue. Additionally, individuals may change occupations over the eight years elapsing from Wave III to Wave IV. However, measuring socioeconomic characteristics at Wave IV would be even more problematic because income, occupation, and education are at least partly endogenous to marriage: If socioeconomic characteristics were measured contemporaneously with marital status it would not be possible to infer the direction of causality.

Although the measures of socioeconomic characteristics are not ideal in the Add Health data, these data have the advantage of measuring interviewer-rated physical attractiveness and sexual orientation, two factors that might confound the relationship between occupation sex composition and union status (and that are not available in the NLSY79). Therefore, I use Add Health data to check whether the results from the NLSY79 analysis might be driven by physical

attractiveness and sexual orientation. As in the analysis of the NLSY79 data, individuals in cohabiting unions are included and I control for cohabitation. Respondents married at Wave III are excluded for the analysis if they are still married to the same partner at Wave IV but they are included if they have been divorced by Wave IV (and are either single, cohabiting, or remarried at Wave IV). This is a small group (less than 4%) and their tendency to enter a second (or higher order) marriage does not differ significantly from the tendency of never-married individuals to enter a first marriage (results not shown). Respondents currently out of the labor force are excluded. Add Health data are weighted and models adjust for survey design (Chantala 2006; Chantala and Tabor 1999).

Analytic Approach: I begin by considering summary statistics on the variables of interest and their relationships to occupation sex composition. This allows me to determine whether bivariate associations provide evidence of a romantic penalty for gender deviance or a positive "opportunity" effect for working in a gender-atypical workplace. I also consider whether there is any truth in popular stereotypes of women and men in gender-atypical occupations: This is important because if these stereotypes are founded, differences in physical attractiveness and heterosexuality might drive differences in marital outcomes that would appear to result from a penalty for occupational gender deviance. After elucidating these relationships among the concepts of interest I move to multivariate regression models. These allow me to estimate the effect of occupation and industry gender deviance and conformity on the odds of marriage, net of the potentially confounding factors identified in the bivariate analysis.

RESULTS:

Summary Statistics:

Table 1 displays means and standard deviations of variables used in analyzing the NLSY79 data and the Add Health data. Descriptive statistics for the NLSY79 are in person-years (because the analysis of the NLSY79 data spans 15 yearly interviews) while those for Add Health are person-level (because the analysis of the Add Health data relies on only two interviews). A much larger proportion of women and men in the Add Health data (about 2/3) marry between interviews than in the NLSY79 data (about 1/10): This can be attributed to the longer time span (eight years) between Add Health interviews than between the annual NLSY79 interviews rather than to a meaningful difference between the two samples. It is interesting that in both datasets women work in occupations that are on average 65% female whereas the average percent of women in men's occupations is higher in Add Health (39% vs. 27% in NLSY79), perhaps because women have made greater advances in the workforce in the more recent data. Other differences (such as the higher average level of education in the Add Health sample) may also be due to cohort differences.

Traits Associated with Occupational Sex Composition:

Table 2 examines the relationships between occupation sex composition, industry sex composition, and occupational prestige, education, and income. In neither dataset does occupational sex composition differ for women that do and do not marry in the subsequent year, but in both datasets men that marry work in occupations with fewer women. Similarly, in the NLSY79 data men that marry work in industries with fewer women. These differences suggests that men may suffer romantically as a result of occupational gender deviance, but because occupational sex composition is related to other socioeconomic characteristics that also predict

marriage (see Table 3), this effect may be spurious. For both genders and in both datasets income, education, and occupational prestige are higher among those individuals that marry by the next survey. Not surprisingly, heterosexual respondents are more likely to marry (the non-heterosexual respondents that enter heterosexual marriages are primarily individuals attracted to both sexes). Contrary to popular stereotypes that beauty matters more for women's romantic opportunities, physical attractiveness is as important for men as for women in predicting the transition to marriage (for both genders, individuals that marry are rated 0.1 units more attractive on the 5-level attractiveness scale, on average).

Table 3 demonstrates that occupation and industry gender composition are closely related to each other and are also related to many of the other concepts of interest. For both genders, occupation and industry sex composition are strongly positively correlated in the NLSY79 data and the proportion of women in an individual's occupation is negatively correlated with occupational prestige, income, and education. In the Add Health data occupations with a greater proportion of women are associated with lower income for both genders, lower prestige for women and higher prestige for men, and higher education for men: It is interesting that for men female-typical occupations are associated with higher prestige and education. Additionally, in the NLSY79 data gender conservatism is associated with selecting an occupation with a greater proportion of one's own gender but individuals but the expectation of marriage is associated with more female occupations for both genders (i.e., with gender-conformity for women and gender-deviance for men): It is not obvious why men desirous of marriage would select female-dominated occupations, especially if doing so reduces their marital opportunities.

Table 3 also shows that in the Add Health data women's physical attractiveness is positively correlated with the percentage of women in their occupation but it is not associated

with occupation gender composition for men. Conversely, heterosexuality is negatively correlated with the percentage of women in men's occupations but it is not associated with occupation gender composition for women. These findings provide some evidence in support of the stereotypes that women in male-typed occupations are less physically attractive by conventional standards of beauty while men in female-typed occupations more often deviate from heterosexuality (by being bisexual, homosexual, or asexual).

In results not shown I further investigated these stereotypes by regressing physical attractiveness and heterosexuality on occupation gender composition, controlling for education and demographic characteristics. All else equal, regression results predict that a very physically unattractive woman works in an occupation that is 62% female whereas a very physically attractive woman works in an occupation that is 68% female. The model predicts that a very physically unattractive man works in an occupation that is 42% female whereas a very physically attractive man works in an occupation that is 34% female. For women, heterosexualty is unrelated to occupation gender composition (predictions are 66% female for heterosexual women and 65% for other women) but the model predicts that heterosexual men work in occupations that are 37% female while non-heterosexual men work in occupations that are 44% female, all else equal. These findings indicate that popular stereotypes of women and men in gender-deviant occupations may be founded in some degree of real difference. If this is true, models that use occupation gender composition to predict marriage may yield false positive results if they do not control for physical attractiveness and heterosexuality (because it is plausible that both physical attractiveness and heterosexuality influence the chance of marriage) or use individual fixed effects to eliminate the effects of unmeasured differences in these traits.

The Romantic Cost of Occupational Gender Deviance:

NLSY79: Table 4 contains odds ratios from a discrete-time hazard model predicting the transition to marriage in the subsequent interview. Model 1 (Table 4) contains only demographic and background measures. Being in a cohabiting union, being female, expecting to marry as a teen, and holding more conservative attitudes toward gender increase the odds of marriage. Older age, having children, and being Black, Hispanic, or other race (compared to being White) decrease the odds of marriage. In Model 2 I add occupation and industry sex composition, in Model 3 I add interactions of occupation gender composition and gender, in Model 4 I add the remaining socioeconomic measures (education, occupational prestige, and income), and in Model 5 (the final model) I add additional gender interactions.

Model 3 through Model 5 (Table 4) indicate that occupation gender composition influences marital opportunities: This effect remains after controlling for income, occupational prestige, education, and industry sex composition, and their interactions with gender (interactions that are not included are not significant; results not shown). Specifically, the odds of marriage are lower for men in female-typed occupations, compared to men in mixed occupations, and are higher for men in male-typed occupations. Being in a female-dominated occupation reduces men's odds of marriage substantially, by a factor of 0.7, although being in a male-dominated occupation increases men's odds of marriage only slightly, by a factor of about 1.1. For women, Model 4 (Table 2) indicates that net of income, occupational prestige, education, and industry sex composition, the odds of marriage are only very weakly related to occupational sex composition. Working in a female-dominated occupation increases women's change of marriage only slightly, by a factor of 1.05 and working in a male-dominated occupation has no effect.

Contrary to expectations, the effect of industry sex composition does not vary by gender. Working in a male industry initially has a positive effect on the odds of marriage (Model 2 through Model 5) for both genders. This contradicts the opportunity model which posited that women and men in gender-typical workplaces would have more opportunities to meet partners and therefore higher odds of marriage: One its own, the hypothesis predicts that the effect of industry sex composition would vary by gender. A possible explanation is that individuals do benefit from the increased opportunity to meet partners that is afforded by working in a gender-deviant industry but that for men this effect is offset by the cost of gender deviance. If men are penalized for working in gender-deviant industries (as they are for working in gender-deviant occupations), the increased opportunity of working in a female-typed industry might be canceled out. Similarly, if men are rewarded for working in gender-typical industries (as they are for working in gender-typical occupations) men in male-typed industries would enjoy a romantic advantage.

For both genders, working in a low-prestige occupation reduces the odds of marriage, compared to working in a mid-prestige occupation, whereas working in a high-prestige occupation increases the odds of marriage (interactions of gender with occupation prestige are not significant; results not shown). Similarly, being at least a high school graduate and being at least a four-year college graduate both increase the odds of marriage, relative to having less than a high school education (interactions of gender with education are not significant; results not shown). Higher income also predicts marriage and the effect of income is larger for men.

As discussed earlier, models that use occupation gender composition to predict marriage may yield false positive results if they do not control for physical attractiveness and heterosexuality or use individual fixed effects to eliminate unmeasured differences in these traits.

In the NLSY79 data information on physical attractiveness and heterosexuality is not available (this is the main reason for reproducing this analysis using the Add Health data). However, I did estimate individual fixed-effects models (results not shown): Conclusions from these models are consistent with those presented above, particularly the substantial romantic penalty that men suffer in female-typed occupations.

Add Health: Table 4 contains odds ratios from a logistic regression model predicting the transition to marriage in the subsequent interview (about eight years later). Model 1 (Table 4) contains only demographic and background measures. Cohabiting, female sex, and older age increase the odds of marriage. Being Black decreases the odds of marriage. In Model 2 I add occupation sex composition, in Model 3 I add interactions of occupation gender composition and gender, in Model 4 I add the remaining socioeconomic measures (education, occupational prestige, and income), and in Model 5 (the final model) I add physical attractiveness, heterosexuality, and the interaction of physical attractiveness and gender.

Model 3 through Model 5 (Table 5) indicate that occupation gender composition influences marital opportunities: This effect remains after controlling for income, occupational prestige, education, and industry sex composition, physical attractiveness, heterosexuality, and their interactions with gender (interactions that are not included are not significant; results not shown). Specifically, the odds of marriage are lower for men in female-typed occupations, compared to men in mixed occupations, but are not significantly are higher for men in male-typed occupations. Being in a female-dominated occupation reduces men's odds of marriage substantially, by a factor of 0.7. For women, Model 4 (Table 2) indicates that net of income, occupational prestige, education, and industry sex composition, the odds of marriage are moderately related to occupational sex composition. Working in a female-dominated occupation

increases women's change of marriage by a factor of 1.15 and working in a male-dominated occupation has no effect. Although the effect of working in a male-typed occupation for men is not quite statistically significant in the Add Health data, overall these results closely parallel the results from the NLSY79 data.

Controlling for physical attractiveness and heterosexuality (in Model 5) does not alter the effect of occupation gender composition. For both genders, being 100% heterosexual increases the chance of entering a (heterosexual) marriage by a factor of 2.3 (the size of this effect does not vary by gender). Being more physically attractive also increases the chance of marriage and this effect is stronger for men. A one-unit increase in physical attractiveness (a 5-level scale) increases the odds of marriage by a factor of 1.3 for men and 1.05 for women. For men this is not a trivial effect: A very physically unattractive man is half as likely as a very physically attractive man to marry in the eight years between interviews.[4] As mentioned earlier, models that do not control for physical attractiveness and heterosexuality are unable to determine whether the effect of occupation gender composition on marriage is a spurious effect driven by unmeasured differences in physical attractiveness and heterosexuality that are correlated with occupation gender composition. The Add Health data provides an opportunity to test this concern because it includes information on physical attractiveness and heterosexuality (measures that are unavailable in many datasets, including the NLSY79). Results (in Model 5, Table 5) indicate that the effect of occupation gender composition is not spurious: It cannot be eliminated by controlling for physical attractiveness and heterosexuality.

For both genders, working in a high-prestige occupation increases the odds of marriage, compared to working in a mid-prestige occupation, but working in a low-prestige occupation

[4] All else equal, the model predicts that 15% of very physically unattractive marry as opposed to 32% of very physically attractive men. For women the equivalent fitted values are 24% and 33%.

does not have a significant effect (interactions of gender with occupation prestige are not significant; results not shown). None of the other socioeconomic indicators (or their interactions with gender; results not shown) remain significant in the final model.

CONCLUSION:

This analysis indicates that occupation gender composition may impact marital opportunities. Most notably, men suffer a romantic penalty for entering a gender-deviant occupation: All else equal, regression models from both datasets estimate that working in a female-typed occupation decreases men's odds of marriage by a factor of 0.7. In both datasets women may be slightly benefited by occupation gender-conformity but the estimates of this effect are moderate in size (in the NLSY79 data gender-conformity is estimated to increase women's odds of marriage are by a factor of 1.05; for Add Health the equivalent odds ratio is 1.15). In the NLSY79 data (but not the Add Health data) men are also benefited for occupation gender-conformity but this effect is also moderate (in the NLSY79 data gender-conformity is estimated to increase men's odds of marriage by a factor of 1.1).

Prior researchers have proposed that occupation gender deviance might result in a romantic penalty and investigative experimental research provided preliminary support (Badgett and Folbre 2003). But this prior research was unable to test whether the romantic penalty is present an actual sample nor was it able to test whether the apparent bias against occupationally gender-deviant individuals might be attributed to associated differences in romantically-relevant characteristics. Thus, this paper advances prior work by demonstrating that occupation gender composition influences marital outcomes in two large, nationally representative samples and by

demonstrating that the romantic ramifications of occupation gender composition are not due to differences in occupational status, income, and attitudes, physical attractiveness, or heterosexuality

These findings have important implications for the future of occupation gender segregation. Whether because female-typed occupations pay less as a direct result of employing women, or women are pushed into lower paying occupations because men are preferentially hired for more desirable jobs, or as a result of historical inertia (England, Allison, and Wu 2007; Levanon, England, and Allison 2009), female-typed occupations pay less In fact, occupational sex segregation accounts for about 40% of the gender wage gap (Petersen and Morgan 1995). Reducing occupation gender segregation would thus be an important means of reducing gender inequality in earnings and thus of reducing gender inequality generally.

But rapid desegregation is unlikely, at least insofar as it is dependent on men's choice of occupation. Men face a double disincentive for entering female-typed occupations: Not only do these jobs pay less, all else equal, men may be also penalized romantically for working in a female-dominated occupation. Given men's disincentives to enter traditionally female fields, it is not surprising that increases in gender segregation have been driven by women's entry into traditionally male fields (England 2010). Women are attracted to traditionally male occupations by higher earnings and status (England 2010) but the current analysis indicates women are rewarded in marriage markets for occupational gender conformity (albeit to a lesser extent than men are penalized for gender deviance). Because marriage generally grants women access to men's earnings, the economically rational women might pursue a lower-paying female-dominated occupation expecting that her slightly higher odds of marriage would offset her reduced earnings. Other women may simply value the increased opportunities for marriage

provided by gender-typical occupations more than the higher wages they would earn in a gender-atypical occupation. In either case, women's romantic reward for occupation gender-conformity may slow desegregation.

This paper also advances prior work by examining whether popular stereotypes of women and men in gender-atypical occupations are founded in real differences. The analysis of the Add Health data indicates that stereotyped differences in physical attractiveness and sexual orientation among individuals in gender-atypical occupations may reflect actual differences. However, although they are statistically significant these differences are not large: It is not fair to assume that all or even most women working in male-typed occupations are deficient in physical attractiveness nor that all or even most men working in female-typed occupations are either homosexual or asexual. Moreover, this analysis indicates that these differences in physical attractiveness and sexual orientation cannot account for the effect of occupation gender composition on the likelihood of marriage. In particular, men working in female-typed occupations pay a romantic cost (reflected in reduced odds of marriage) that cannot be accounted for by their slightly higher average rate of non-heterosexuality.

Although there are doubtless many other potentially confounding factors (aside from demographic and socioeconomic characteristics, gender conservatism and marital aspirations, and physical attractiveness and sexual orientation) that I am unable to control for in this analysis, this paper provides preliminary evidence that occupation gender composition has a direct, independent effect on men's odds of marriage. As mentioned earlier, individual fixed effects models using the NLSY79 data produced similar results to the analysis presented in this paper. This suggests that results are not driven by unmeasured individual differences.

However, there was only mixed evidence that working among many other-sex individuals increases marital opportunities. Instead, men as well as women are benefited by working in male industries. It may be that industry sex composition is a poor proxy for the gender composition of the co-workers with whom individuals interact in their workplaces. It is also possible that men are rewarded for industry gender conformity and penalized for industry gender deviance just as they are rewarded and penalized for occupation gender conformity and deviance. If this is the case, men might be romantically benefited by working in a gender-typical industry for the same reason that they are benefited by working in a gender-typical occupation: There seems to be a direct reward for men's gender conformity in the marriage market. Similarly, the potential benefit from increased opportunity that might be provided by working in a gender-atypical work environment might be offset by the penalty men suffer for industry gender deviance. In contrast, for women there was no evidence of a penalty for gender deviance in either occupation or industry. Because they are not penalized for gender deviance, women may benefit from increased opportunity to meet men by working in a gender-atypical industry.

It is interesting that the romantic penalty for gender deviance is itself gendered: Men but not women are penalized for gender deviance while women are rewarded for gender conformity (but they are not rewarded as strongly as men are punished). One explanation is that activities and characteristics traditionally identified as "male" are valued whereas "female" that activities and characteristics are devalued. Thus, when men enter female fields they are choosing a culturally devalued role and may be punished for this deviant and (by normative cultural standards) unaccountable choice: Individuals of the dominant, "superior" group are not easily excused for aspiring to join the group perceived as inferior. In contrast, women are forgiven for entering "male" occupations because these occupations are seen as more desirable than

traditionally female counterparts: Women's desire to pursue "male" occupations is deviant but it is understandable and culturally accountable.

But women benefit romantically for selecting traditionally female occupations. Perhaps men have a preference for more "traditional" wives and women in female-typical occupations are expected to adhere to a more traditional sex-specialized marital model. Norms proscribing occupational and earnings hypergamy may also explain women's romantic reward for occupational gender conformity and men's romantic penalty for occupational gender deviance. The strength of spousal matching on education and the expectation that the man should be the "primary" breadwinner and out-earn his wife are only compatible if men and women of the same education level are segregated into different occupations (or different levels within occupations) and if women's occupations receive lower pay and less social prestige. In other words, if men subscribe to the belief that they should have higher-paying, higher-status occupations than their wives, but also desire wives of their own educational level, men will prefer women in traditionally female occupations (traditionally female occupations provide low pay and status relative to educational requirements so the men will most easily exceed these women's pay and status). Conversely, if women avoid becoming the primary breadwinner (seeking instead earnings equality or higher-earning men) they will avoid men in traditionally female occupations.

It would be discouraging for gender equality if desire for earnings hypergamy is driving some part of the romantic costs of gender deviance and the romantic rewards of gender conformity because inequalities in income reinforce inequalities in marriage and public life. Thus, not only would occupational sex segregation be reinforcing power differences between spouses (and between men and women more generally), but the expectation of this very power

difference would be a contributing factor to occupational sex segregation. This analysis is not able to test between these various explanations for the romantic costs of gender deviance and the romantic rewards of gender conformity. But by demonstrating the existence of these rewards and costs it provides yet another mechanism that may reinforce occupational sex segregation. Given the connection between occupational sex segregation and income inequality, this is an important topic for future research.

Bibliography

Antecol, Heather, Anneke Jong, and Michael Steinberger. 2008. "The Sexual Orientation Wage Gap: The Role of Occupational Sorting and Human Capital." *Industrial and Labor Relations Review* 61:518-543.

Badgett, M. V. Lee and Nancy Folbre. 2003. "Job Gendering: Occupational Choice and the Marriage Market." *Industrial Relations* 42:270-298.

Bearman, Peter, Jo Jones, and J. Richard Udry. 2004. "The National Longitudinal Study of Adolescent Health: Research Design." vol. 2008. Chapel Hill, NC: Caroline Population Center.

Bureau of Labor Statistics, U.S. Department of Labor. 1979-2002 (rounds 1-20) [computer file]. "Produced and distributed by the Center for Human Resource Research, The Ohio State University. Columbus, OH: 2002."

Buss, David M. and Michael Barnes. 1986. "Preferences in Human Mate Selection." *Journal of Personality and Social Psychology* 50:559-570.

Buss, David M., Todd K. Shackelford, Lee A. Kirkpatrick, and Randy J. Larsen. 2001. "A Half Century of Mate Preferences: The Cultural Evolution of Values." *Journal of Marriage and Family* 63:491-503.

Carlson, Marcia, Sara McLanahan, and Paula England. 2004. "Union Formation in Fragile Families." *Demography* 41:237-261.

Carpenter, Christopher S. 2005. "Self-Reported Sexual Orientation and Earnings: Evidence from California." *Industrial and Labor Relations Review* 58:258-273.

Chantala, Kim. 2006. "Guidelines for Analyzing Add Health Data." vol. 2008. Chapell Hill, NC: Carolina Population Center.

Chantala, Kim and Joyce Tabor. 1999. "National Longitudinal Study of Adolescent Health: Strategies to Perform a Design-Based Analysis Using the Add Health Data." Chapell Hill, NC: Carolina Population Center University of North Carolina at Chapel Hill.

Cotter, David A., Joan M. Hermsen, and Reeve Vanneman. 2004. *Gender Inequality at Work.* New York,NY: Russell Sage Foundation and Population Reference Bureau.

Daneshvary, Nasser, C. Jeffrey Waddoups, and Bradley S. Wimmer. 2008. "Educational Attainment and the Lesbian Wage Premium." *Journal of Labor Research* 29:365-379.

Diprete, Thomas A. and Claudia Buchman. 2006. "Gender-Specific Trends in the Value of Education and the Emerging Gender Gap in College Completion." *Demography* 43:1-24.
Dodson, Thomas A. and L. DiAnne Borders. 2006. "Men in Traditional and Nontraditional Careers: Gender Role Attitudes, Gender Role Conflict and Job Satisfaction." *The Career Development Quarterly* 54:283-296.
England, Paula. 2005. "Gender Inequality in Labor Markets: The Role of Motherhood and Segregation " *Social Politics: International Studies in Gender, State and Society* 12:264-288.
—. 2010. "The Gender Revolution Uneven and Stalled." *Gender and Society* 24:149-166.
England, Paula, Paul D. Allison, and Yuxiao Wu. 2007. "Does bad pay cause occupations to feminize, Does feminization reduce pay, and How can we tell with longitudinal data?" *Social Science Research* 36:1237-1256.
Evans, Olga and Andrew Steptoe. 2002. "The Contribution of Gender-Role Orientation, Work Factors and Home Stressors to Psychological Well-Being and Sickness Absence in Male- and Female-Dominated Occupational Groups." *Social Science and Medicine* 54:481-492.
Furnham, Adrian. 2009. "Sex Differences in Mate Selection Preferences." *Personality and Individual Differences* 47:262-267.
Howard, Judith A., Philip Blumstein, and Pepper Schwartz. 1987. "Social or Evolutionay Theories? Some Observations on Preferences in Human Mate Selection." *Journal of Personality and Social Psychology* 53:194-200.
Langlois, Judith H., Lisa Kalakanis, Adam J. Rubenstein, Andrea Larson, Monica Hallam, and Monica Smoot. 2000. "Maxims or Myths of Beauty? A Meta-Analytic and Theoretical Review." *Psychological Bulleton* 126:390-423.
Lavallee, M. and R. Pelletire. "Ecological Value of Bem Gender Schema Theory Explored Through Females Traditional and Nontraditional Occupational Contexts." *Psychological Reports* 70:79-82.
Li, Norman P., J. Michael Bailey, Douglas T. Kenrick, and Joan A. W. Linsenmeier. 2002. "The Necessities and Luxuries of Mate Preferences: Testing the Tradeoffs." *Journal of Personality and Social Psychology* 82:947-955.
Lobel, Thalma E. and Tamar Shavit. 1997. "Targets' and Perceivers' Occupation and Gender as Determinants of Social Judgments." *Social Behavior and Personality* 25:339-344.
Manning, John T., Stian Reimers, Simon Baron-Cohen, Sally Wheelwright, and Bernhard Fink. 2010. "Sexually Dimorphic Traits (Digit Ratio, Body Height, Systemizing-Empathizing Scores) and Gender Segregation Between Occupations: Evidence from the BBC Internet Study." *Personality and Individual Differences* 49:511-515.
McKinnish, Terra G. 2007. "Sexually Integrated Workplaces and Divorce: Another Form of On-the-Job Search." *The Journal of Human Resources* 42:331-352.
Murstein, Bernard I. 1972. "Physical Attractiveness and Marital Choice." *Journal of Personality and Social Psychology* 22:8-12.
Okamoto, Dina G. and Paula England. 1999. "Is There a Supply Side to Occupational Sex Segregation? ." *Sociological Perspectives* 42:557-582.
Petersen, Trond and Laurie A. Morgan. 1995. "Separate and Unequal: Occupation-Establishment Sex Segregation and the Gender Wage Gap." *The American Journal of Sociology* 101:329-365.
Rabe-Hemp, Cara E. 2008. "POLICEwomen or PoliceWOMEN?: Doing Gender and Police Work." *Feminist Criminology* 4:114.

Ruggles, Steven, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. 2010. "Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]." Minneapolis: University of Minnesota.

Sanchez, Laura Ann, Wendy D. Manning, and Pamela J. Smock. 1998. "Sex-Specialized or Collaborative Mate Selection? Union Transitions among Cohabitors." *Social Science Research* 27:280-304.

Schwartz, Christine R. "Earnings Inequality and the Changing Association between Spouses' Earnings." *American Journal of Sociology* 115:1524-57.

Seymour, Elaine and Nancy M. Hewitt. 1997. *Talking About LEaving: Why Undergraduates Leave the Sciences*. New York: Westview Press.

Simpson, Ruth. 2004. "Masculinity at Work: The Experiences of Men in Female Dominated Occupations." *Work Employment, and Society* 18:349-368.

Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2010.

Sweeney, Megan M. and Maria Cancian. 2004. "The Changing Importance of White Women's Economic Prospects for Assortative Mating." *Journal of Marriage and Family* 66:1015-1028.

United States General Accounting Office, Report to Congressional Requesters. 2003. "Women's Earnings: Work Patterns Partially Explain Difference between Men's and Women's Earnings."

Van Bavel, Jan. 2010. "Choice of Study Discupline and the Postponement of Motherhood in Europe: The Impact of Expected Earnings. Gender Composition, and Family Attitudes." *Demography* 47:439-458.

Williams, Christine L. 2008. "The Glass Escalator: Hidden Advantages for Men in the "Female" Professions." in *The Gendered Society Reader: Third Edition*, edited by M. Kimmel and A. Aronson. New York: Oxford University Press.

Xie, Yu, James M. Raymo, Kimberly Goyette, and Arland Thornton. 2003. "Economic Potential and Entry into Marriage." *Demography* 40:351-367.

[i] These are: (1) "A woman's place is in the home, not in the office or shop," (2) "A wife who carries out her full family responsibilities doesn't have time for outside employment," (3) "A working wife feels more useful than one who doesn't hold a job," (4) "The employment of wives leads to more juvenile delinquency," (5) "It is much better for everyone concerned if the man is the achiever outside the home and the woman takes care of the home and family," (6) "men should share the work around the house with women, such as doing dishes, cleaning, and so forth," and (7) "Women are much happier if they stay at home and take care of their children."

Table 1. Means and standard deviations (in parentheses). National Longitudinal Survey of Youth 1979-1994 (NLSY79) and National Longitudinal Study of Adolescent Health, Waves III and IV, 2001-2008 (Add Health).

	NLSY79		Add Health	
	Women	Men	Women	Men
Married (at t+1)	.11***b	.09	.61**b	.65
% Occupation Female				
Average proportion female	.65***a (.28)	.27 (.26)	.65***a (.22)	.39 (.27)
0-25% female	.12***b	.59	.04***b	.35
26-74% female (reference)	.40***b	.33	.57	.54
75-100% female	.48***b	.08	.39***b	.11
% Industry Female				
Average proportion female	.59***a (.20)	.39 (.23)	NA	NA
0-25% female	.07***b	.37	NA	NA
26-74% female (reference)	.72***b	.57	NA	NA
75-100% female	.21***b	.06	NA	NA
Occupational prestige				
Average prestige score (0-100)	39.7***a (12.6)	36.4 (11.9)	41.7***a (11.7)	39.4 (12.6)
Low (0^{th}-25^{th} percentile)	.20***b	.28	.26***b	.34
26^{th}-74^{th} percentile (reference)	.47***b	.52	.49***b	.45
High (75^{th}-100^{th} percentile)	.33***b	.20	.25**b	.21
Socioeconomic Status				
Earned income ($10,000s)[c]	9.5***a (9.2)	11.3 (10.9)	12.5***a (11.5)	16.4 (16.8)
Income is missing	NA	NA	.20***b	.16
Years of completed education	13.0***a (2.1)	12.3 (2.3)	13.6***a (1.8)	13.1 (1.9)
Less than high school (ref)	.15***b	.28	.05***b	.08
High school, some college	.69***b	.60	.56***b	.63
College graduate or more	.16***b	.12	.39***b	.29
Personal Characteristics				
Marital expectation	.97***b	.96	NA	NA
Gender conservatism index	-.34***a (.99)	.23 (.98)	NA	NA
Cohabiting	.11	.11	.20*b	.17
Age[d]	24.1 (4.1)	24.1 (4.0)	21.5***a (1.6)	21.9 (1.6)
White (reference)	.54	.53	.56	.59
Black	.30**b	.29	.20***b	.15
Hispanic	.15***b	.17	.15	.16
Other	.01**b	.01	.09	.10
Any children	.25***b	.06	.18***b	.09

Physical Attractiveness	NA	NA	3.6***b (0.9)	3.4 (0.8)
Heterosexual	NA	NA	.86***b	.93
N	26,792	33,937	2,953	2,699

* p < 0.05. ** p < 0.01. *** p < 0.001. P-values indicate significant gender differences.
a ttest
b chi2
c different years for $s for AH and NLSY
d AH Rs are 8 years older when marriage is measured

Table 2. Means and standard deviations. National Longitudinal Survey of Youth 1979-1994 (NLSY79; N = 64,714 person-years) and National Longitudinal Study of Youth 2001-2008 (Add Health; N = 5,034 respondents).

	NLSY79				Add Health			
	Men		Women		Men		Women	
	Remain unmarried	Married	Remain unmarried	Married	Remain unmarried	Married	Remain unmarried	Married
% Occupation Female	.27***a (.26)	.24 (.24)	.65 (.29)	.65 (.28)	.41***a (.27)	.37 (.26)	.65 (.21)	.66 (.22)
% Industry Female	.39***a (.23)	.36 (.22)	.58 (.20)	.58 (.20)	NA	NA	NA	NA
Occupational prestige	36.2***a (11.9)	38.4 (12.3)	39.5***a (12.6)	40.8 (12.8)	38.7***a (12.2)	40.4 (13.2)	40.7***a (11.2)	42.9 (12.0)
Earned income ($1000s)	10.9***a (10.8)	14.1 (11.4)	9.4***a (9.3)	10.1 (8.9)	16.1 (18.2)	17.1 (13.6)	12.2 (11.6)	12.9 (11.4)
Education (years)	12.3***a (2.3)	12.5 (2.5)	13.0**a (2.1)	13.1 (2.1)	13.0**a (1.9)	13.3 (1.9)	13.4***a (1.8)	13.7 (1.9)
Gender conservatism index	-.34*a (1.0)	-.29 (0.99)	.23**a (0.98)	.27 (0.99)	NA	NA	NA	NA
Marital expectation	.96**b	.97	.97***b	.98	NA	NA	NA	NA
Physical Attractiveness	NA	NA	NA	NA	3.4***a (0.8)	3.5 (0.7)	3.6***a (0.9)	3.7 (0.9)
Heterosexual	NA	NA	NA	NA	.91***b	.97	.84***b	.90

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. P-values indicate significant differences (within gender) between respondents that marry and respondents that remain single.

[a] P-values from a t-test of within-gender difference between respondents that marry and those that remain unmarried.

[b] P-values from a Pearson Chi2 of within-gender difference between respondents that marry and those that remain unmarried.

Table 3. Correlations of occupation sex composition, industry sex composition, and selected socioeconomic and personal characteristics. National Longitudinal Survey of Youth 1979-1994 (NLSY79; N = 64,714 person-years) and National Longitudinal Study of Youth 2001-2008 (Add Health; N = 5,034 respondents).

	NLSY79				Add Health	
	% Occupation Female		% Industry Female		% Occupation Female	
	Women	Men	Women	Men	Women	Men
% Occupation Female	1.00	1.00			1.00	1.00
% Industry Female	.34***a	.53***a	1.00	1.00	NA	NA
Occupational prestige	-.08***a	-.04***a	.04***a	.01	-.04*a	.04*a
Earned income	-.07***a	-.02**a	-.10***a	-.03***a	-.08***a	-.16***a
Education (years)	-.05***a	.20***a	.02*a	.20***a	.03	.24***a
Physical Attractiveness	NA	NA	NA	NA	.09***b	-.00
Heterosexual	NA	NA	NA	NA	.02	-.12***a
Gender conservatism index	.04***a	-.09***a	.04***a	-.09***a	NA	NA
Marital expectation	.03***a	.04***a	.01	.04***a	NA	NA

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

[a] P-value from Pearson correlation (for each gender separately).

[b] P-value from Spearman's Rho, a measure of rank correlation for ordinal variables (for each gender separately).

Table 4. Odds ratios from logistic regression predicting marriage. National Longitudinal Survey of Youth 1979-1994. N = 64,714 person-years.[a]

	Model 1	Model 2	Model 3	Model 4	Model 5
% Occupation Female					
0-25% female		1.00	.98	1.07	1.09*
26-74% female (reference)					
75-100% female		.96	.63***	.69***	.70***
Female*Occ 0-25% female			.98	.96	.93
Female*Occ 75-100% female			1.66***	1.61***	1.53***
% Industry Female					
0-25% female		1.10*	1.08*	1.09*	1.09*
26-74% female (reference)					
75-100% female		.99	.99	1.02	1.02
Occupational prestige					
Low (0^{th}-25^{th} percentile)				.83***	.84***
26^{th}-74^{th} percentile (reference)					
High (75^{th}-100^{th} percentile)				1.07	1.08*
Socioeconomic Status					
Earned income (log)				1.28***	1.40***
Female*income					.86**
Less than high school (ref)					
High school, some college				1.19***	1.18***
College graduate, grad school				1.52***	1.53***
Personal Characteristics					
Marital expectation	1.42***	1.43***	1.43***	1.35**	1.34**
Gender conservatism	1.05**	1.05**	1.05**	1.08***	1.08***
Cohabiting	2.92***	2.90***	2.89***	2.97***	3.00***
Female	1.26***	1.31***	1.21***	1.21***	1.22***
Age	.96*	.96**	.96*	.84***	.91***
Female*age					.85***
White (reference)					
Black	.51***	.52***	.52***	.56***	.56***
Hispanic	.84***	.84***	.84***	.88**	.88**
Other	.75	.76	.76	.76	.76
Any children	.87**	.87**	.87**	.98	.84*
Female*children					1.31**
Wald Chi2	1215***	1223***	1241***	1435***	1490***

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

[a] Models are estimated clustering by individual.

Table 5. Odds ratios from logistic regression predicting marriage. National Longitudinal Study of Adolescent Health, Waves III and IV, 2001-2008. N = 5639.[a]

	Model 1	Model 2	Model 3	Model 4	Model 5
% Occupation Female					
0-25% female		1.12	1.10	1.19	1.15
26-74% female (reference)					
75-100% female		1.01	.68*	.68*	.69*
Female*Occ 0-25% female			.85	.80	.89
Female*Occ 75-100% female			1.68*	1.70*	1.67*
Occupational prestige					
Low (0^{th}-25^{th} percentile)				.88	.89
26^{th}-74^{th} percentile (reference)					
High (75^{th}-100^{th} percentile)				1.29**	1.28**
Socioeconomic Status					
Earned income (log)				1.05	1.04
Income is missing				.93	.93
Less than high school (ref)					
High school, some college				1.18	1.15
College graduate, grad school				1.49*	1.41
Personal Characteristics					
Personal attractiveness					1.27**
Female* Personal attractiveness					.82*
Heterosexual					2.30***
Cohabiting	1.81***	1.81***	1.81***	1.89***	1.91***
Female	1.30**	1.34***	1.30**	1.20	2.56**
Age	1.23***	1.22***	1.23***	1.18**	1.20***
White (reference)					
Black	.45***	.45***	.45***	.47***	.45***
Hispanic	.85	.85	.85	.87	.86
Other	.83	.84	.83	.84	.85
Any children	.87	.86	.87	.95	.91
F-Statistic	16***	15***	12***	9***	9***

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

[a] Estimates account for survey design.