Attrition from male-dominated occupations: Variation among occupations and women

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*Women in male-dominated occupations remain at a considerable risk of attrition. This study examines both the consequences of being an occupational minority, and the effect of occupational attributes, on women's exit from male-dominated occupations. Drawing on prior theories and empirical studies, I argue that women in high-status occupations are better prepared than women in low-status occupations to overcome obstacles derived from their minority status. Using the Current Population Survey (CPS) dataset and the Occupation Information Network (O*Net) database, this study reveals that a greater proportion of males in an occupation increases the probability of exit from low-status occupations, once we account for relevant individual and occupational attributes. Conversely, women employed in high-status occupations are less likely to leave strongly male-dominated occupations. These findings underscore that women's attrition from male-dominated occupations cannot be adequately explained without considering differences among women at the moment of hiring.*

Keywords: segregation; women's diversity; male-dominated occupations; occupational attributes; occupational minority

Introduction

Occupational gender segregation continues to be one of the most conspicuous sources of inequality in the US labor market (Cohen et al. 2009; Cotter et al. 2011, 2004; Mandel 2012, 2013; Ridgeway and England 2007). Despite women's increasing ability to "unlock the door" to male occupations (Cotter et al. 2004; England 2010; Jacobs 1992), the substantial movement of women out of male-dominated occupations has tended to reproduce the overall level of sex segregation (Jacobs 1989; Sheridan 1997; Torre 2014). While most exiting research has focused on the entry of women into male-dominated occupations (Mandel 2012; Cotter et al. 2004; England 2010), understanding why women continue to leave traditional male occupations remains a crucial task for occupational segregation research. From a theoretical perspective, such research will help to explain the persistence of these patterns of inequality in the face of remarkable improvements in other realms of social stratification and provide insight into the deceleration of occupational desegregation in recent decades (Cotter et al. 2011; England 2010; Hegewish et al. 2010). From an applied perspective, reducing the number of women moving out of male-dominated occupations would be a significant step toward lowering current levels of segregation.

In addition, prior research has tended to neglect the importance of intersectionality between gender and class when studying women's exit from male-dominated occupations. A considerable body of research attributes women's exit to their minority status and to the problems of acceptance that they experience in male-dominated occupations (Kanter 1977; Jacobs 1989; Moore 1988). Other studies suggest that women leave occupations that are problematic for them in certain ways, such as the long hours,

inflexibility and physically taxing work associated with certain positions (Altman 2001; Filer 1989). The latter two bodies of literature are important, but they fall far short of providing a full assessment of how diversity among women when entering male-dominated occupations can subsequently affect attrition. The paths that women must take to enter a high-status male-dominated occupation, however, differ greatly from the steps required to enter low-status male-dominated occupations (Bergmann 2011; Devine 1994; Evertsson et al. 2009; From et al. 2006). Consequently, applying an intersectional framework will lessen the tendency to universalize middle-class women's experiences (Choo and Ferree 2010).

This study draws on previous research to argue that differences in attrition rates persist because women in managerial and professional occupations are better equipped than women in low-status occupations to overcome the workplace challenges they face. Therefore, I *hypothesize the following*: Compared with women in lower-status occupations, women in high-status positions will experience lower levels of attrition from male-dominated occupations (after controlling for other relevant explanations for their departures). Specifically, I contend that women's experience in male-dominated, higher education classrooms, together with the elimination of barriers to their professional training, offer women opportunities to learn to manage workplace gender issues *before* embarking upon professional careers in male-dominated occupations. Or, conversely, these experiences could dissuade highly trained women from entering those male-dominated occupations in the first place. However, entry into low-status occupations does not require the same type of credentialing process, and hence does not provide those women with the opportunities to navigate gendered issues prior to entering the

occupation (Bergmann 2011, Roos and Reskin 1993, O'Farrel and Harlan 1993). As a result, they face acute and unfamiliar challenges in the male-dominated occupation, which partly explains their higher attrition rate

Here, I extend the existing research in several ways. First, I investigate two types of segregation effects. I examine the effects of being a member of an occupational minority on the probability of exit from male-dominated occupations and explore how these effects vary according to women's occupational positions. This study also uses an expanded set of occupational characteristics to facilitate an extensive analysis of working conditions and attributes. Specifically, this work assesses how women's exit from male-dominated occupations varies according to their job specialization (Becker 1965; Polachek 1981; Tam 1997), power (Bergmannn 2011), work commitment (Meyer and Alen 1991; Mowday et al. 1982) and resources to balance work and family obligations (Jacobs and Gerson 2004; Pettit and Hook 2009). Second, whereas most prior research on women's exit from male-dominated occupations has focused on the differences between men and women or among occupations, I address differences among women themselves. Specifically, I identify a new source of inequality—not between men and women but between female professionals and managers and women in less advantageous occupations.

To empirically test these issues, I use data on individual characteristics from the 2013 Current Population Survey (CPS) March Supplement and occupation characteristics from the Occupational Information Network (O*Net) database. Following Allison's suggestion (1999), I use heterogeneous binary choice models that allow me to control for sources of heterogeneity. The findings reveal that the effect of the sex composition of the occupation

varies according to women's occupational position. A greater percentage of men in an occupation systematically increases the probability that low-status women workers will transition to a female-dominated occupation, when relevant individual and occupation-related attributes are controlled for. The reverse holds for female managers and professionals, who are less likely to leave strongly male-dominated occupations. Overall, this study underscores the relevance of considering differences between women in understanding segregation processes, and the results emphasize the need for action to promote gender integration in low-status jobs to allow women to match the progress they have made in professional work.

Explanations for women's exit from male-dominated occupations

The significant volume of women's exits from male-dominated occupations has paradoxically tended to reproduce overall levels of segregation in occupations, regardless of accelerated entry into male jobs (Jacobs 1989; Sheridan 1997; Torre 2014). Identifying why women continue to leave traditional male occupations is therefore critical to understanding the process of occupational segregation.

The literature on demand-side processes focuses on the obstacles to female acceptance encountered by women entering male-dominated occupations. Male incumbents refuse to teach their female coworkers the skills necessary for job success (Deaux 1984), favor those who share the majority background (Author 2014; Maume 1999; McPherson et al. 2001; Walby 1986), sexually harass female coworkers (Gruber and Bjorn 1982; Walshok, 1981) and avoid building trusting relations with women (Kanter 1977; Moore 1988). All of these exclusion dynamics result in greater stress, discomfort and isolation on the job,

prompting some women to leave the occupation (Correll 2001; Kanter 1977; Taylor 1981). Recently, Taylor (2010) coined the term *occupational minority* and claimed that occupational sex segregation may drive workplace interactions even if the workplace is more balanced in gender than the occupation as a whole. Indeed, being a minority in one's occupation has been shown to be advantageous for men but disadvantageous for women in terms of wages (Budig 2002; Williams 1989), promotions (Maume 1999; Williams 1989) and perceived levels of support (Taylor 2010; Williams 1989).

Supply-side explanations address this phenomenon from a different perspective. In the most predominant approach, human capital scholars contend that women voluntarily move to occupations that offer more flexibility and ease of work at the cost of promotion opportunities, salaries and prestige (Altman 2001; Becker 1965; Filer 1989; Polachek 1981; Sousa-Poza and Henneberger 2002). One major claim hinges on the level of specialization required in an occupation. Workers expecting intermittent careers—primarily women with the typical allotment of childcare and domestic responsibilities—will be reluctant to invest in firm-specific specialization. Consequently, women will be rationally willing to work in occupations with relatively low barriers to entry and exit and low returns on experience (Polachek 1981). In this view, segregation at work is thus determined by women's preference for certain occupational skill requisites and working conditions rather than by the gender composition of occupations (Filer 1989; Tam 1997).

Socio-culturalists are generally skeptical of supply-side explanations that place responsibility for gender differences in human capital investment (Ridgeway 1991). They argue that men and women are sorted into different job queues not because of women's preferences for soft work but because of cultural stereotypes of gender-appropriate skills

and occupations (Resking and Roos 1990), as well as gendered views of family and work (Hough 1987). Furthermore, entry into male-dominated occupations does not prevent subsequent job exits, as constraints and social control forces often encourage women to abandon their initial preferences and settle for any work that they can obtain (Konrad et al. 2005; Jacobs 1989). For example, increasingly longer working hours in male-dominated occupations make it more difficult for female workers to find work-life balance and, thus, to remain in such positions (Cha 2010; Jacobs and Gerson 2004; Percheski 2008). Likewise, Moore et al. (2013) found that practical difficulties in balancing work and family, together with cultural understandings of motherhood, drive women to exit the labor force or abandon work in scientific professions when obtaining reemployment after an involuntary job loss.

However, certain features of male-dominated occupations can facilitate the retention of women despite training and time constraints. For example, the higher pay and better benefits associated with male-dominated jobs are generally more attractive to women who have families to support, as such benefits allow women to take unpaid leave from work or pay for private childcare (Padavic 1992; Pettit and Hook 2009). Moreover, although part-time work is frequently concentrated in female-dominated occupations, other characteristics that are intended to facilitate child rearing, such as flexible working hours, are actually more common in typically male-dominated or sex-neutral jobs than in female-dominated occupations (Glauber 2011; Glass 1990).

Women's diversity

The human capital and socio-cultural explanations are not inconsistent with one another or with the demand-side view that managers, employers and male coworkers can hinder women's access to male-dominated occupations. In fact, the literature has tended to move beyond a dichotomous view (Crompton et al. 1990; Devine 1994; Okamoto and England 1999). To the extent that work settings, jobs and occupations are structured with particular characteristics for which individual preferences might vary and that those characteristics are maintained through the behavior of gate-keepers and occupational incumbents, the two "sides" of the explanation for segregation interact and are mutually reinforced.

However, explanations for the perpetuation of segregation draw upon the existing differences between men and women and fall short of accounting for differences among women themselves. Recent research has begun to show that upward occupational mobility among women is largely due to the relative success of women in managerial and professional occupations compared with women in blue-collar occupations (Bergmann 2011; England 2010, 2011; Mandel 2012). Here, I examine how the experience of women in male-dominated occupations varies according to women's position in the labor market.

Specifically, I argue that the impressive achievements of managerial and professional women compared with those of women in less advantageous occupations are partly due to differences in their respective preparations for their chosen fields. The paths that women must take to enter professional and managerial occupations differ greatly from those taken by women entering low-status, male-dominated occupations¹ (Bergmann 2011; Evertsson, et al. 2009; From et al. 2006). Recently, Bergmann (2011) remarked that the elimination of barriers for women seeking professional training was not

accompanied by a corresponding increase in training opportunities for women in male-dominated, blue-collar trades. In fact, the training opportunities for women in blue-collar occupations are as limited now as they were in 1960. To illustrate the implications of this situation for women's performance in male-dominated occupations, let us consider a tale of two women: one who becomes an electrical engineer and another who becomes a plumber.

The first woman must undergo years of higher education in male-dominated classrooms before entering the occupation. This experience in effect introduces women to the gender dynamics of their chosen career. Research over the last decades has provided ample evidence of gender inequity in the classroom. In classroom interactions, male students systematically assume center stage, while female students are largely sidelined (Sadker 1999; Sadker and Sadker 1995). Furthermore, women's minority status in these higher education classrooms increases their inability or unwillingness to compete against men, as well as their susceptibility to being interrupted by their male classmates. Indeed, research shows that the development of self-esteem and, later on, self-confidence in a profession, may be linked to gendered classroom dynamics. This could be argued to ultimately hurt women's performance in male-dominated professions. However, by being exposed to male-dominated classrooms for years, our female electrical engineering student could also learn to manage the gendered aspects of the field before embarking on her career. This exposure would lead to decreased levels of attrition in two ways. Either the training experience helps her cope with future (gendered) career challenges, or, alternatively, it could convince her to leave the field before her exit is considered attrition (Ceci and Williams 2010). In fact, Shauman (2009) shows that among graduates in male-

dominated fields, women are significantly less likely than men to take advantage of their education in the labor market.

Becoming a plumber, by contrast, does not require the same credentialing process as becoming an electrical engineer. Rather, the second woman is first hired by a manager and then receives on-the-job instruction from coworkers (Bergmann 2011, Roos and Reskin 1993, O'Farrel and Harlan 1993). Two main differences emerge from this entirely different path. First, the lack of prior training in a male-dominated educational environment deprives the second woman of learning opportunities to handle gendered issues before entering the field. Therefore, women in managerial and professional occupations might be better equipped than women in lower-status jobs to resist the exclusionary practices of male-dominated occupations. Second, coworkers play a fundamental role in training newly hired workers in low-status occupations (Bergman 2011, Roos and Reskin 1993). Consequently, prospering as a plumber may depend heavily on the goodwill and cooperation of male coworkers, goodwill and cooperation that may be in short supply (Bergman 2011). Both factors could contribute to the increased attrition of women in such low-status occupations.

Drawing from these differentiated processes, I hypothesize the following: *All else being equal, the probability of women's attrition from male-dominated occupations will increase with the number of males in the occupation more for low-status workers (clerical, service and blue-collar) than for high-status workers (managers and professionals).*

This hypothesis is not inconsistent with previous studies; rather, it qualifies them and introduces a new source of inequality. Mine is consistent with the conventional demand-side approach that claims discrimination against women on the basis of their minority status (Kanter 1977). However, it adopts an intersectional approach and predicts a differential effect depending on women's position in the labor market. This differential effect represents a key contribution to the previously predominant views. Additionally, according to this hypothesis, differences will persist if we control for other relevant characteristics of the occupation that may affect women's mobility. Thus, the approach builds on the supply-side theories holding that women's departures can be explained by the demands and requirements of male-dominated occupations (Altman 2001; Filer 1989).

By controlling for alternative existing theories, the present study provides a necessary first step in empirically testing a complementary explanation for attrition in male-dominated occupations. If after controlling for both individual and occupation-related explanations the hypothesis above holds true, then occupational status would necessarily be a key explanatory variable in the processes of segregation. First, women would be in an unfavorable position relative to their male counterparts who constitute the majority in those professions. Additionally, women in low-status occupations would be doubly disadvantaged, both relative to men and to other women in high-status occupations.

Data

To test the hypotheses formulated above, I used data from multiple sources to analyze the determinants of female attrition from male-dominated occupations as a function of individual and occupational characteristics. In particular, I employed the March Supplement of the 2013 CPS to obtain information on the socio-demographic characteristics of individuals and their occupational mobility. The CPS includes information on each respondent's longest job duration during the previous year and data on their current job, thus allowing for an analysis of occupational mobility over a one-year period. The CPS provides detailed (3-digit) occupational data that enable coding the gender composition of specific occupations and capturing occupational shifts that would be missed if only a limited set of broadly defined occupations were measured. In total, data includes 502 occupations. This large sample also provides a sizable population of females who have changed occupations. Appended to the CPS is the sex composition of 3-digit census occupations for 2010².

Information on occupational attributes was provided by the O*Net database produced by the US Department of Labor/Employment and Training Administration. The O*Net database is a revised version of the previous Dictionary of Occupational Titles and offers expanded content and higher-quality data. (For a full review of the literature, see Hadden, Kravets, and Muntaner 2003.) This dataset contains detailed, occupation-specific descriptors for 449 occupations in the United States. Specifically, the data contain as many as 227 descriptors of job-specific tasks, in addition to information on the knowledge, skills and abilities required for each occupation. These data were initially collected from occupational analysts and then updated through rolling surveys of each occupational population, with additional information from labor market experts.

A factor analysis was conducted to investigate the main dimensions of occupation-related characteristics and to avoid multi-collinearity (Hadden, et al. 2003; Jacobs and Steinberg 1990; Glass 1990; Shauman 2006). With some modifications, the factor analyses followed Shauman (2006) and Hadden, Kravets, and Muntaner (2003) and their factor analyses of O*Net variables. Like Shauman, I conducted separate principal component analyses of the variables measuring worker abilities, work interest values, work activities and occupational work contexts. I also performed factor analysis after first collapsing the SOC occupation codes to the equivalent 3-digit Census occupation codes. When Census categories included more than one SOC category, I assigned the mean of the O*Net variables weighted by the size of the original occupation as measured in the O*Net database³ (more details on factor-guided scales and descriptors upon request). Once created, the scales were standardized, with scores ranging from 0 to 1.

Dependent variable

The dependent variable “exit from male-dominated occupations” was created using CPS information on the respondent’s current job and her longest job in the previous year. This variable was coded 1 when a woman working in a male-dominated occupation in 2012 moved to a female-dominated occupation in 2013, and 0 otherwise. Occupations were classified as male-dominated when the female presence in the occupation was below 33.3 percent and as female-dominated when women’s representation was 66.6 percent or above. All other variables were gender neutral. These cut-off points, similar to those used in previous research, were arbitrary. I chose three equal-frequency categories to make the results comparable with previous findings (Jacobs 1989). However, the results remained robust to the use of other classification schemes (e.g. 40-20-40). In 2012, the total of

women employed in male-dominated occupations was 6727, of which 33 percent relate to women working in high-status occupations (managerial and professional occupations), and the remaining 67 percent to women in low-status occupations (service, clerical, and blue-collar occupations).

Finally, I limited the analyses to women's transitions from male- to female-dominated occupations because women moving between occupations with similar gender compositions will very likely have similar experiences at both. By contrast, the larger the difference in the gender composition of the occupations before and after the change, the more dramatic the transition will be (see Appendix A). Moreover, in contrast to transitioning to male-dominated occupations, moving to female-dominated occupations adversely affects promotion opportunities (Rosenbaum 1985), lessens status, and reduces pay (England et al. 1994; Glass 1990; Levanon et al. 2009). Consequently, moving into a female-dominated occupation challenges the logic of occupational attainment. Supplemental analyses for exits towards gender-neutral occupations provided upon request. Main findings are consistent. However, they have to be carefully interpreted given the consequential differences of both types of transitions.

Covariates

The *percentage of men* in a given occupation was a key variable. This indicator revealed the extent to which women's attrition from male-dominated occupations was related to their minority status within the occupations and whether the percentage of males had a differential impact on the risk of attrition from high- and low-status occupations.

Also crucial for the aims of this paper, the *Level of training* captured the investment in training required in a particular occupation. This measure indicated whether high levels of investment in training was negatively related to women's attrition rates, as expected by the human capital theory (Polacheck 1981), and whether this effect varies with women's occupational status. In order to control for existing explanations, occupation-related attributes were divided into five groups encompassing the main dimensions identified in previous research. The first set of factors included measures for commitment-enhancing features, such as *authority*, *extrinsic values* and *intrinsic values*, which are found to reduce turnover in occupations (Lincoln and Kalleberg 1990; Marsden et al. 1993; Meyer and Allen 1991; Mowday et al. 1982). Second, *bad working conditions* and *job hazards* were used to control for unpleasant work environments that, according to previous findings, reduce commitment and encourage women's departure from jobs (Filer 1989). Third, *long working weeks* and *time pressures* captured the potential conflicts that arise for women attempting to balance work and family obligations. Finally, the analysis controlled for potential gender-specific skills, such as the levels of quantitative knowledge, verbal skills and physical performance required for an occupation (Xie and Shauman 2003). Additionally, this study accounted for the *people-things* dichotomy, according to which women work at disproportionately higher rates in occupations that require them to interact with people and maintain interpersonal relations, whereas men choose to work more with machines and tools rather than with people (Lippa 1998)⁴.

The analyses also included controls for *age*, *educational level* (high school or less, some college and college or above), *marital status* (single, married and separated or divorced)

and the *presence of young children in the household*. Appendix B describes the variables included in the analyses.

Analytical strategy

A key objective of this paper is to document the differential impact of the proportion of men in an occupation on the risk of attrition across groups of women. More specifically, this analysis seeks to determine whether the effect of an occupation's sex composition varies among high-status workers (managers and professionals) and low-status workers (service, clerical and blue-collar workers), once we account for other relevant occupational variables. However, coefficients in binary regression models are often confounded with residual variation (unobserved heterogeneity) (Allison 1999; Mood 2009). Unobserved heterogeneity refers to the variation in the dependent variable that is caused by unobserved variables. In this particular case, professional women could have more heterogeneous career patterns and unmeasured variables that render them more likely to exit male-dominated occupation than low-status women. If the residual variance is greater among high-status women, then the slope coefficients will be lower, possibly creating the false impression that the number of males has less impact on high-status women than on low-status women. To address this critical issue, I used heterogeneous choice models that allowed me to control for this potential source of heterogeneity⁵ (Williams 2009, 2010). Additionally, I calculated marginal effects to interpret the substantive effects of coefficients, as suggested by Mood (2009)⁶. Concretely, I regressed women's attrition from male-dominated occupations using the following specification:

$$(1) Pr(y = 1) = \text{logit} \left(\frac{x_i \beta}{\exp(z_i \gamma)} \right) = \text{logit} \left(\frac{x_i \beta}{\exp(\ln(\sigma_i))} \right) = \text{logit} \left(\frac{x_i \beta}{\sigma_i} \right)$$

where the numerator is the *choice equation* that models the effect of a series of variables on the outcome and the denominator is the *variance equation* that models the effect of a series of variables on the variance in outcomes. More specifically, the x values are the explanatory variables, including the individual and occupation-related measures defined above. The z values define groups with different error variances in the underlying latent variable, which is occupational status in this study. β and γ are vectors of coefficients, and σ is the variance.

Sex-type mobility in the sample: descriptive overview

In 2012, approximately 13 percent of female workers were employed in male-dominated occupations; this figure is almost 2.5 times less than those employed in sex-neutral occupations (32 percent) and 4.2 times less than those in female-dominated occupations (55 percent). Mobility rates across sex-type boundaries also varied according to the sex composition of the occupation. For example, only 4 of every 10 women changing occupations from a high-status male-dominated occupation moved into another male-dominated occupation. The proportion is even smaller in the case of low-status occupations. For these women, only 22 percent of occupational changers moved within male-dominated occupations, and the remaining 78 percent moved to a sex-neutral or female-dominated occupation. By contrast, retention rates in sex-neutral and female-dominated occupations were much higher for both high- and low-status workers. Among those changing occupations from a sex-neutral occupation, 60 percent of professionals moved to another sex-neutral occupation, and 40 percent of non-professionals did so.

These proportions were 63 percent and 54 percent, respectively, in the case of women employed in female-dominated occupations.

Findings

In the following analyses, Model 1 regresses women's attrition in male-dominated occupations based on individual attributes, occupation-related attributes and the sex composition of the occupations. Model 2 adds two interaction terms. One, between the sex composition of the occupation and women's type of occupation. Second, between the *Level of training* and women's type of occupation. Table 1 displays the estimates of the regressions, and Figure 1 charts the effect of the interaction terms.

(Table 1, and Figure 1, about here)

The most revealing findings concern the sex composition of the occupation, which refers to the effect of the percentage of males in a given occupation on the probability of women leaving that occupation (controlling for both individual and occupation-related attributes). The coefficient in the first column shows a positive and significant association between the proportion of males in an occupation and the probability of women's exit from that occupation. Thus, according to Kanter's theory of tokenism (1977), females in male-dominated occupations suffer from their minority status. Particularly relevant to this paper, however, is what occurs when the type of occupation interacts with the sex composition of the occupation in Model 2. The negative and significant coefficient of the interaction term indicates a differential effect of occupational sex composition depending on women's position in the labor market. These effects are clearly observable in Figure 1, which illustrates the probability of women's exit based on the percentage of males in the

occupation. The upper graph shows the lowest predicted probability of a switch to a female-dominated occupation⁷. Under these conditions, the left plot shows the probability of attrition for all women in male-dominated occupations. In line with prior studies (Kanter 1977; Moore et al. 2013), the risk of exit rises slightly when the number of males in the occupation increases. This effect, however, is a statistical artifact resulting from the combination of high- and low-status workers. The central and right plots show visible divergences between women in high- and low-status occupations. The right plot represents women working in low-status occupations and shows how the probability of exit rises by approximately 20 percent as the percentage of males in the occupation increases from 50 percent to 100 percent. Managers and professional women are represented in the central plot. The probability of leaving high-status occupations is lower (10 percent for occupations with a 50 percent male presence) than that of leaving low-status occupations (32 percent for the same type of occupations). Moreover, in this case, the probability of exit is negatively related to the number of men in the occupations when relevant occupational attributes are controlled.

Also decisive for the argument here is the interaction effect of training in the occupation and occupational group. Model 1 show that the *level of training* has a negative impact on the probability of moving toward female-dominated occupations. According to human capital expectations, women who invest in training are likely to stay in their jobs to recoup their initial investments. The interaction term in Model 2, however, show a differential effect of training for women in high- and low-status occupations. As clearly observed in the lower graph of Figure 1, increases in *the level of training* significantly reduce reasonably the risk of exit from high-status occupations. The opposite, however, is

observed in the right plot, supporting the idea that high levels of training raise the probability of leaving from low-status occupations.

One could argue, however, that these findings are a function of being a manager or professional worker of either sex more than the result of increasing differentiation among women. To address this crucial issue, I examine men's and women's mobility in high- and low-status, male-dominated occupations. Firstly, I estimate the likelihood of changing occupations to observe whether men and women display different rates of mobility. In a second step, I estimate their probability of exiting the male-dominated field for female-dominated occupations. The upper plots in Appendix C reveal that the probability of changing occupations is higher for men than it is for women, both in high- and low-status occupations. However, as observed in the bottom plots, men are less likely to leave the male-dominated field than women. This is particularly true among low-status occupations, where the risk of exiting is almost 5 times higher for women than it is for men. In other words, men are more prone to changing occupations but also more likely to do so within the male-dominated field. In fact, only 6% of men in male-dominated occupations leave to enter the female-dominated field. All in all, findings confirm that differences among occupations interact with gender, particularly in the case of low-status occupations.

The central portion of the table shows the effects of occupational characteristics and working conditions on women's exits. The coefficients in columns 1 and 2 are highly consistent across regressions. First, commitment-enhancing features, such as extrinsic values and authority, significantly reduce the probability of turnover. At the other extreme, women are also significantly less likely to leave occupations with bad or

dangerous working conditions. This paradoxical result refutes human capital expectations about women's desire for pleasant and easy working conditions (Filer 1989). Likewise, because the analyses control for extrinsic rewards in occupations, it does not seem viable to argue that women keep jobs with bad conditions because of the better pay for those jobs in female-dominated fields (Padavic 1992). The results may suggest, however, that such workers may feel trapped in their jobs because of their lower bargaining power and poorer likelihood of finding better jobs.

In regard to work and family balance, the analyses show that women are significantly prone to leaving occupations that involve long hours. However, it is difficult to link this result to family responsibilities, as other variables measuring the potential conflict between work and family do not influence women's attrition from male-dominated jobs. Women do appear to be capable of coping with occupations involving challenging deadlines. Examples could be "computer operators," "other office managers," and "prepress technicians"—occupations with average working hours but very intense time pressure. Additionally, the lower part of the table shows that women's exits do not vary according to individual attributes. Notably, neither having children nor marital status appears to motivate women's departure to female-dominated occupations.

In sum, the analyses emphasize the negative consequences of being a numerical minority but challenge the general claim that women's departures result from their desire for less specialized occupations, pleasant work conditions and less demanding schedules. Additionally, the positive coefficient for this variable in the variance equation reveals more residual variability among high-status workers than among low-status workers. The implications of these findings are discussed in the next section.

Finally, I provide supplemental analyses for women's mobility in the early years of their careers. More concretely, I run the analyses for women younger than 27 years old. In this way, differences among women in high- and low-status occupations can be attributed to experience and knowledge gained in the school system, since by limiting the sample to young women I minimize the impact of experience gained in the labor market. Appendix D reveals that findings remain robust after limiting the sample.

Discussion

Why do women leave male-dominated occupations? Do they leave as a result of acceptance and integration problems? Do they leave because these jobs have problematic characteristics for women (i.e., long hours, inflexibility, or physically taxing work)? Answering these questions is important to explaining the persistence of segregation in the face of socioeconomic improvements and legal efforts to prevent inequality (Ridgeway 2011). The answers may also help us understand the *stall* in the gender revolution noted by Cotter and his colleagues (2011) and England (2010, 2011). Finally, the answers to these questions are important because reducing the number of women exiting male-dominated occupations could substantially reduce current levels of occupational segregation (Jacobs 1989).

Building on supply- and demand-side explanations, this study examines both the consequences of being an occupational minority, and the effect of occupational attributes on women's exit from male-dominated occupations. As an original contribution, I argue that because of differences in education and training opportunities, women employed in high-status occupations are better prepared than women in low-status occupations to

combat the problems of integration derived from their minority status. Consequently, women's exits might vary according to their relative position in the labor market.

The analyses reveal that the relationship between the proportion of males in an occupation and the likelihood of exit for high-status women is the opposite of the relationship observed for low-status women. For women employed in low-status occupations, the number of males in the occupation increases the probability of moving to a female-dominated occupation. However, the opposite effect is observed for female managers and professionals: the more males are in the occupation, the lower the probability of exit is for women. This result holds after controlling for an extensive set of occupational characteristics. While being a numerical minority is a disadvantage for women in male-dominated occupations (Kanter 1977), the analyses refine this conclusion by establishing that women in low-status occupations are particularly vulnerable to future discrimination. Thus, the results are consistent with the idea that inequalities at the time of entry are at least partly responsible for subsequent attrition from male-dominated occupations. The results do not mean that discrimination against female professionals and managers has disappeared; in fact, such discrimination persists in job assignment, promotion, and salary (e.g., Roth 2006), and rates of attrition from high-status occupations remain high (Torre 2014). However, women in low-status occupations are highly dependent on the goodwill and cooperation of coworkers to succeed in male-dominated occupations. Thus, these women suffer a double disadvantage—relative to males and relative to other females in more advantageous positions. These findings expand previous research showing that most of women's gains in recent decades derive from achievements in high-status, male-dominated occupations (England 2010, 2011;

Mandel 2012). These findings also support Bergmann's claim (2005, 2011) that government action has been far more efficacious in professions requiring postgraduate qualifications than in blue-collar jobs.

Analyses of occupational attributes do not support the claim that women are willing to move into occupations that offer greater flexibility and ease of work at the cost of missing promotion opportunities, higher salaries and prestige. On the contrary, I found that high levels of specialization, authority, rewards and bad working conditions reduce the probability of women's exit. Additionally, consistent with prior research (Preston 1994) there is no clear link between exits and family issues. Alternatively, women who are unable to balance work and family might be more likely to exit the labor market, as suggested recently by Moore et al. (2013) in their study of scientific occupations. Overall, although women might be discouraged from investing in occupations with high levels of on-the-job training and other requisites that hinder the balance of work and family life (a question that is beyond the scope of this study), such reasons do not explain the later exit of those who decide to enter male-dominated occupations. The results hint that segregation does not disappear when women overcoming the barriers to entering sex-atypical occupations. Rather, segregation is a consequence of a life-long system of social control and constraining forces that channel and re-channel women into female-dominated occupations (Epstein 1988; Jacobs 1989).

Inevitably, this study also raises a number of interesting questions that cannot be answered with the available data. One could argue that exposure to women in male-dominated classrooms increases egalitarian attitudes among men and helps to reduce segregation in managerial and professional occupations (Charles and Grusky 2004). By

contrast, men in low-status occupations are less welcoming of female colleagues (Moccio 2009). Recent research, however, calls into question the role of male egalitarian values in reducing segregation and shows that women in highly male-dominated occupations are particularly vulnerable to suffering penalties when their occupation trajectories do not fit the well-established male-dominated patterns (Torre 2014). Available data do not allow testing for specific mechanisms, and further investigative work that includes detailed data on social networks and workers' attitudes would refine our understanding of segregation processes. Similarly, future research could explore whether withdrawals from the job market or switches from full-time to part-time work schedules are relevant alternatives to exits toward female-dominated occupations.

Overall, this study provides new insight into the processes and perpetuation of occupational sex segregation and establishes that women's attrition from male-dominated fields cannot be adequately explained without considering differences among women at the point of hiring.

Endnotes

1 There may be national variations, for example, in countries with a strong system of vocational training. Arguments should be delimited with respect to national structures.

2 <http://www.bls.gov/tus/census10ocodes.pdf>

3 This is a departure from the analyses conducted by Shauman (2006), who assigned the mean value without weightings.

4 Appendix B shows occupational characteristics distributed by the percent of males in the occupation.

5 *Oglm* in Stata. For a complete description of the program, see Williams 2010.

6 All regressions have been estimated using a Linear Probability Model, with no noteworthy differences. LPM is not the preferred technique here because the relative proportion of LPM predicted probabilities that fall outside the unit interval is very high, increasing the potential bias. The results are available upon request.

7 Dummy variables (except *college degree* for the high-status group) are set at 0 and continuous variables at their mean.

References

- Allison, Paul D. 1999. "Comparing logit and probit coefficients across groups." *Sociological Methods and Research* 28: 2: 186-208
- Altman, Morris. 2001. "Preferences and labor supply: casting some light into the black box of income-leisure choice." *Journal of Socio-Economics* 33: 199-219
- Becker, Gary S. 1965. "A theory of the allocation of time." *Economic Journal* 75: 493-517.
- Bergmann, Barbara R. 2005. *The economic emergence of women*. New York: Palgrave Macmillan.
- Bergmann, Barbara R. 2011. "Sex segregation in the blue-collar occupations: Women's choices or Unremedied discrimination?: Comment on England." *Gender and Society* 25: 1: 88-93.
- Ceci, Stephen, and Wendy Williams. 2011. "Understanding current causes of women's underrepresentation in science." *Proceedings of the national Academy of Sciences* 108: 3157-3162.

- Cha, Yougjoo. 2013. "Overwork and the persistence of gender segregation in occupations." *Gender & Society* 27: 2: 158-184.
- Charles, Maria, & Grusky, D. B. 2004. *Occupational ghettos. The worldwide segregation of women and men*. Stanford University Press.
- Choo, Hae Y., and Myra M. Ferree. 2010. Practicing intersectionality in sociological research: A critical analysis of inclusions, interactions, and institutions in the study of inequalities. *Sociological Theory* 28:129-48
- Cohen, Phillip N., Matt L. Huffman, and Stephanie Knauer. 2009. "Stalled progress? Gender segregation and wage inequality among American managers, 1980-2000." *Work & Occupations* 36: 318-342.
- Correll, Shelley J. 2001. "Gender and the career choice process: The role of biased self-assessment." *American Journal of Sociology* 106:6:1691-1730
- Cotter, David A., Joan M. Hermsen, and Reeve Vanneman. 2011. "The End of the Gender Revolution? Gender Role Attitudes from 1977 to 2008." *The American Journal of Sociology* 117: 259-289.
- Cotter, David A., Joan M. Hermsen, and Reeve Vanneman. 2004. "*Gender inequality at work*." New York: Russell Sage Foundation.
- Crompton, Rosemary, Linda Hantrais, and Patricia Walters. 1990. "Gender relations and employment." *British Journal of Sociology* 41: 3: 329-349.
- Deaux, Kay. 1984. "Blue-collar barriers." *American Behavioral Scientist* 27: 287-300.
- Devine, Fiona. 1994. "Segregation and Supply: Preferences and Plans among 'Self-Made' Women." *Gender, Work and Organization* 1:2:94-108

- England, Paula. 2010. "The gender revolution: Uneven and stalled." *Gender and Society* 24:2:149-66.
- England, Paula. 2011. "Reassessing the uneven gender revolution and its slowdown." *Gender and Society* 25: 113-24.
- Evertsson, Marie, Paula England, Irma Mooi-Reci, Joan Hermsen, Joanne De Bruijn, and David Cotter. 2009. "Is gender inequality greater at lower or higher educational levels? Common patterns in the Netherlands, Sweden, and the United States." *Social Politics* 16:2: 210-241
- Filer, Randall K. 1989. "Occupational segregation, compensating differentials and comparable worth." In R. Michael, H. Hartmann and B. O'Farrel (Eds.), *Pay equity: Empirical inquiries*: pp. 153-170. Washington DC: National Academy Press.
- Frome, Pamela M., Corinne J. Alfeld, Jacquelynne S. Eccles, and Bonnie L. Barber. 2006. "Why don't they want a male-dominated job? An investigation of young women who changed their occupational aspirations." *Educational Research and Evaluation* 12:4: 359-372
- Glass, Jennifer. 1990. "The effect of occupational segregation on working conditions." *Social Forces* 68:3: 779-796.
- Glauber, Rebecca. 2011. "Limited Access: gender, occupational composition, and flexible work scheduling." *The Sociological Quarterly* 52:471-494.
- Gruber, James E. and Lars Bjorn. 1982. "Blue-Collar Blues: The sexual Harassment of women autoworkers." *Work and Occupations* 9: 271-198.

- Hadden, Wilburg C., Nataliya Kravets, and Carles Muntaner. 2003. "Descriptive dimensions of US occupations with data from the O*NET." *Social Science Research* 33:64-78.
- Hegewisch, Ariane, Hannah Liepmann, Jeffrey Hayes, and Heidi Hartmann. 2010. "Separate and Not Equal? Gender Segregation in the Labor Market and the Gender Wage Gap." *Institute for Women's Policy Research Briefing Paper IWPR C377*
- Hough, J.R. *Education and the national economy*. New York: Croom Helm.
- Jacobs, Jerry A. 1989. *Revolving doors. Sex segregation and women's careers*. Stanford, California: Stanford University Press.
- Jacobs, Jerry A. 1992. "Women's entry into management: Trends in earnings, authority, and values among salaried managers." *Administrative Science Quarterly* 37:2: 282-301.
- Jacobs, Jerry A., and Ronnie Steinberg. 1990. "Compensating differentials and the male-female wage gap: Evidence from the New York state comparable worth study." *Social Forces* 69:2: 439-468.
- Jacobs, Jerry. A., and Kathleen Gerson. 2004. *The time divide: Work, family and gender inequality*. Harvard University Press.
- Kanter, Rosabeth M. (1977). *Men and women of the corporation*. Basic Books.
- Konrad, Aison M., Yang Yang, Caren Goldberg, and Sherry Sullivan. 2005. "Preferences for job attributes associated with work and family: A longitudinal study of career outcomes." *Sex Roles* 53: 303-315.

- Levanon, Asaf, Paula England, and Paul D. Allison. 2009. "Occupational feminization and pay: Assessing causal dynamics using 1950-2000 census data." *Social Forces* 88: 497-517.
- Lincoln, J.R. and Arne Kalleberg. 1990. *Culture, control, and commitment: A study of work organization and work attitudes in the United States and Japan*. New York: Cambridge University press.
- Lippa, Richard. 1998. "Gender-related individual differences and the structure of vocational interests: The importance of the people–things dimension." *Journal of Personality and Social Psychology* 74: 996– 1009.
- Mandel, Hadas. 2012. "Occupational mobility of American women: Compositional and structural changes, 1980-2007." *Research in Social Stratification and Mobility* 30:5-16.
- Mandel, Hadas. 2013. "Up the down staircase: Women's upward mobility and the wage penalty for occupational feminization, 1970-2007." *Social Forces* 91:4: 1183-1207.
- Maume Jr. David J. 1999. "Glass ceiling and glass escalators: Occupational segregation and race and sex differences in managerial promotions." *Work and Occupations*, 26:483-509.
- McPherson, Miller, Lynn Smith-Lovin, and James Cook. 2001. "Birds of a feather: Homophile in social networks." *Annual Review of Sociology* 27: 415-444.
- Meyer, John P., and Natalie J. Allen. 1991. "A Three-component Conceptualization of Organizational Commitment". *Human Resources Management Review* 1:1:61-89
- Moccio, Francine A. 2009. *Live wire: Women and brotherhood in the electrical industry*. Philadelphia: Temple University Press.

- Mood, Carina. 2009. "Logistic Regression: why we cannot do what we think we can do, and what we can do about it." *European Sociological Review* 26:1:67-82.
- Moore, Gwen. 1988. "Women in elite positions: Outsiders or insiders?" *Sociological Forum* 3:4: 566-585.
- Moore, Thomas S., Peter Meiksins, and Ken Root. 2013. Leaving Science: Gender differences in career continuity following a job loss." *Sociological Forum* 28:1:109-134
- Mowday, Richard T., Lyman W. Porter, and Richard M. Steers. 1982. *Employee-organization linkages: The psychology of commitment absenteeism and turnover*. New York: Academic Press
- O'Farrell, B, and SH Harlan. 1984. "Job integration strategies: today's programs and tomorrow's needs", in Barbara Reskin, ed., *Sex segregation in the workplace: Trends, explanations, remedies*, pp. 267-91. Washington, D.C.: National Academy of Sciences.
- Okamoto, Dina, and Paula England. 1999. "Is there a supply side to occupational sex segregation?" *Sociological Perspectives* 42:4: 557-582.
- Padavic, Irene A. 1992. "White-Collar Work Values and Women's Interest in Blue-Collar Jobs." *Gender and Society* 6: 2: 215–30.
- Percheski, Christine. 2008. "Opting out? Cohort differences in professional women's employment rates from 1960 to 2005." *American Sociological Review* 73: 497-517.
- Pettit, Becky, and Jennifer L. Hook. *Gendered tradeoffs: Family, social policy, and economic inequality in twenty-one countries*. New York: Russell Sage.

- Polachek, Solomon W. 1981. "Occupational self-selection: A human capital approach to sex differences in occupational structure." *Review of Economics and Statistics* 63:1: 60-69.
- Princeton, NJ: Princeton University Press.
- Preston, Anne. 1994. "Why Have All the Women Gone? A Study of Exit of Women from the Science and Engineering Professions," *American Economic Review* 84: 1446–1462
- Reskin, Barbara F., and Catherine E. Ross. 1991. "Jobs, Authority, and Earnings among Managers: The continuing significance of sex." *Work and Occupations* 19:4:342-65.
- Ridgeway, Cecilia L. 2011. *Framed by gender: How gender inequality persists in the modern world*. New York: Oxford University Press.
- Ridgeway, Cecilia L., and Paula England. 2007. "Sociological approaches to sex discrimination in employment" In F.J. Crosby, M. S. Stockdale, and S. A. Ropp (eds), *Sex discrimination in the workplace: Multidisciplinary perspectives*: pp: 189-211. Malden MA: Blackwell.
- Ridgeway, Cecilia. 1991. "The social construction of status value: gender and other nominal characteristics." *Social Forces* 70:367-386.
- Roos, Patricia, and Barbara Reskin. 1984. "Institutional factors contributing to sex segregation in the workplace", in Barbara Reskin, ed., *Sex segregation in the workplace: Trends, explanations, remedies*, pp. 235-60. Washington, D.C.: National Academy of Sciences.
- Rosenbaum, James E. 1985. "Jobs, Job Status, and Women's Gains from Affirmative Action: Implications for Comparable Worth." In H. I. Hartmann (ed.), *Comparable*

Worth: New Directions for Research: pp: 116–36. Washington, DC: National Academies Press.

Roth, Louise. 2006. *Selling women short: Gender and money on Wall Street*.

Sadker, David. 1999. "Gender Equity: Still knocking at the Classroom Door". *Educational Leadership* 65.

Sadke, Myra and Davi Sadker. 1995. *Failing at Fairness: How our schools cheat girls*. New York: Touchstone Press

Shauman, Kimberlee A. 2009. "Are There Sex Differences in the Utilization of Educational Capital Among College-Educated Workers?" *Social Science Research* 38:535-571.

Shauman, Kimberlee A. 2006. "Occupational sex segregation and the earnings of occupations: What causes the link among college-educated workers?." *Social Science Research* 35: 577-610.

Sheridan, Jennifer T. 1997. "The Effects of the Determinants of Women's Movement into and out of Male-Dominated Occupations on Occupational Sex-Segregation". Available as CDE Working Paper 97-07. Center of Demography and Ecology. University of Wisconsin-Madison.

Sousa-Poza, Alfonso, and Fred Henneberger F. 2002. "An empirical analysis of working hours constraints in twenty-one countries." *Review of Social Economy* 60: 209-242.

Tam, Tony. 1997. "Sex segregation and occupational gender inequality in the United States: Devaluation or Specialized training." *American Journal of Sociology* 102: 1652-1692.

- Taylor, Catherine J. 2010. "Occupational sex composition and the gendered availability of workplace support." *Gender and Society* 24: 189-212.
- Taylor, Shelley E. 1981. "A categorization approach to stereotyping." In D. L. Hamilton (ed.), *Cognitive processes in stereotyping and intergroup behavior*: pp: 83-114. Hillsdale, N.J.: Lawrence Erlbaum.
- Torre, Margarita. 2014. "The Scarring Effect of "Women's Work": The determinants of Women's Attrition from Male-dominated occupations." *Social Forces* 93(1):1-29
- Walby, Sylvia. 1986. *Patriarchy at work: Patriarchal and capitalist relations in employment, 1800-1984*. Cambridge, UK: Polity Press in association with B. Blackwell, Oxford, 1986.
- Walshok, M. L. 1981. *Blue-collar women: Pioneers on the male frontier*. Doubleday.
- Williams, Christine L. 1989. *Gender Differences at Work: Women and Men in Nontraditional Occupations*. University of California Press.
- Williams, Richard 2009. "Using heterogeneous choice models to compare logit and probit coefficients across groups." *Sociological Methods and Research* 37:4: 531-559
- Williams, Richard A. 2010. "Fitting heterogeneous choice models with Oglm". *The Stata Journal* 10: 4: 540-567.
- Xie, Yu, and Kimberlee A. Shauman. 2003. *Women in science: Career processes and outcomes*. Cambridge, MA.: Harvard University Pre

Table 1. OGLM regression of women's attrition from male-dominated jobs

	Model 1	Model 2
<u>Women's minority status</u>		
<i>Percent of males in the occupation</i>	0.034** (0.014)	0.0370** (2.66)
<i>High-status occupation</i>	-8.598*** (0.014)	23.01 (4.32)
<u>Diversity</u>		
High-status * Percent of males in the occ.		-0.306*** (-4.72)
Level of training	-1.608** (0.811)	1.227 (1.35)
High-status * Level of training		-16.65*** (-5.25)
<u>Variation among occupations</u>		
<i>Work commitment</i>		
Authority	-6.374*** (1.288)	-5.396*** (-4.66)
Extrinsic values	-12.139*** (-1.526)	-13.49*** (-9.31)
Intrinsic values	15.437*** (1.778)	14.71*** (9.23)
Security	0.659 (1.528)	-0.0124 (-0.01)
Bad working condition	-6.979*** (1.111)	-8.260*** (-7.45)
Dangerous conditions	-6.967*** (1.129)	-6.171*** (-5.70)
<i>Work and family balance</i>		
Long working weeks	2.395*** (0.800)	2.482** (3.17)
Time pressures	-4.304*** (0.813)	-4.966*** (-6.13)
<i>Skills and occupational values</i>		
Verbal abilities	-7.751*** (1.894)	-8.700*** (-4.59)

Quantitative abilities	5.502*** (1.009)	5.139*** (5.72)
Physical strength	-14.812*** (1.562)	-14.43*** (-9.54)
Social content	10.685*** (1.404)	10.57*** (7.61)
Working with things	7.284*** (1.247)	7.531*** (6.28)
<u>Individual attributes</u>		
Age	0.141*** (0.024)	0.139*** (5.80)
Age ²	-0.002*** (0.000)	-0.00164*** (-6.14)
High school (rc: college)	0.235 (0.182)	0.208 (1.15)
Some college (rc: college)	0.010 (0.186)	0.000421 (0.00)
Married (rc: single)	-0.236 (0.177)	-0.256 (-1.45)
Divorced (rc: single)	0.174 (0.212)	0.160 (0.76)
Children in the household	-0.063 (0.126)	-0.0485 (-0.39)
Cutpoint	-5.741*** (1.430)	-6.389*** (-4.37)
VARIANCE		
High-status occupation	0.756*** (0.204)	0.644** (3.22)
N	6002	6002

Standard errors in parentheses; * p<.10, ** p<.05, *** p<.01

Figure 1. Probability of women's exit from a male-dominated occupation by the percentage of men in the occupation, the level of training in the occupation, and the type of occupation.

Appendix A. Occupational characteristics distributed by the percent of males in the occupation

	% of Males in the occupation									
	10	20	30	40	50	60	70	80	90	100
Work and Family Balance										
On-the-Job training	0.287	0.205	0.288	0.344	0.374	0.358	0.421	0.506	0.429	0.494
Long-Working Weeks	0.256	0.337	0.185	0.349	0.48	0.385	0.493	0.544	0.565	0.537
Time pressures	0.578	0.571	0.229	0.611	0.655	0.675	0.661	0.693	0.711	0.694
Abilities										
Verbal	0.681	0.722	0.696	0.726	0.697	0.627	0.671	0.675	0.644	0.54
Quantitative	0.335	0.369	0.497	0.481	0.438	0.449	0.332	0.452	0.411	0.34
Physical	0.379	0.375	0.438	0.312	0.306	0.463	0.426	0.372	0.546	0.725
Types of work										
People	0.584	0.619	0.52	0.504	0.473	0.403	0.356	0.353	0.321	0.265
Things	0.344	0.299	0.279	0.326	0.382	0.439	0.451	0.496	0.476	0.623
Intrinsic	0.376	0.399	0.243	0.34	0.42	0.355	0.259	0.362	0.289	0.215
Extrinsic	0.474	0.468	0.303	0.509	0.586	0.564	0.493	0.628	0.528	0.445
Authority	0.422	0.515	0.313	0.538	0.549	0.556	0.366	0.573	0.492	0.354
Security	0.612	0.618	0.536	0.599	0.536	0.59	0.603	0.601	0.577	0.476
Bad Working Conditions	0.321	0.215	0.277	0.203	0.245	0.319	0.382	0.293	0.541	0.682
Job Hazards	0.149	0.304	0.282	0.139	0.282	0.181	0.114	0.155	0.195	0.139

Appendix B. Individual and occupation-related attributes (means and standard deviations)

Occupation-related attributes (min= 0, max=1)	Mean	S.D.
<i>Sex-composition (% males)</i>	0.511	0.297
<i>Skill-specialization</i>		
On-the-Job Training	0.368	0.192
<i>Work commitment</i>		
Authority	0.463	0.292
Extrinsic	0.499	0.245
Intrinsic	0.324	0.203
Security	0.572	0.15
Bad working conditions	0.362	0.227
<i>Work and Family Balance</i>		
Long-Working Weeks	0.414	0.253
Time pressures	0.632	0.159
<i>Abilities</i>		
Verbal	0.656	0.138
Quantitative	0.402	0.174
Physical	0.446	0.234
People	0.441	0.198
Things	0.421	0.177
Individual attributes (N=47,431)		
<i>Age</i>	41,083	13,175
<i>Educational Level</i>		
High school or less	0.333	0.471
Some college	0.319	0.466
College	0.348	0.476
<i>Marital Status</i>		
Single	0.28	0.449
Married	0.538	0.498
Divorced	0.181	0.385
<i>Young children at home</i>	0.559	0.496
<i>Occupational Category</i>		
Managers and professionals	0.403	0.49
Service	0.227	0.417
Clerical	0.191	0.393
Other blue-collar workers	0.671	0.25

Appendix C. Men and women’s mobility in male-dominated occupations.

Appendix D. OGLM regression of young women's attrition from male-dominated jobs
(women less than 27 years old)

<u>Women's minority status</u>	
<i>Percent of males in the occupation</i>	0.0943** (3.10)
<i>High-status occupation</i>	19.83* (2.05)
<u>Diversity</u>	
High-status * Percent of males in the occ.	-0.110** (0.050)
Level of training	3.399* (1.99)
High-status * Level of training	-12.62* (-2.28)
Cutpoint	2.798 (0.49)
VARIANCE	
High-status occupation	-0.461 (-0.79)
<i>N</i>	1251
Standard errors in parentheses; * p<.10, ** p<.05, *** p<.01	
Controlled by occupational and individual attributes. Full table upon request.	