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Stalled Progress? Gender Segregation and Wage Inequality Among Managers, 1980-2000

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Abstract

Trends toward gender equality largely stalled in the 1990s, but the progress of women in management was mixed. Given the importance of managers as actors in the reproduction of inequality, and managerial positions as rewards in their own right, this study investigates the relative status of women in management over the past two decades, using U.S. Decennial Census data from 1980 to 2000. The authors find that women's entry into management occupations slowed markedly in the 1990s. Furthermore, after decreasing in the 1980s, gender segregation *among* managers rebounded sharply upward in the 1990s. However, greater segregation coincided with a decreasing gender earnings gap, which largely resulted from narrowing gaps within integrated or male-dominated managerial occupations. Finally, there remains a substantial earnings penalty for managers who work in female-dominated occupations.

Keywords

gender inequality, segregation, management, gender and work

In recent decades, gender inequality in the United States has displayed interesting, and sometimes contradictory, trends. One particularly visible aspect of inequality—women's representation in management positions—improved

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substantially in the last half of the 20th century (Blum, Fields, & Goodman, 1994; P. N. Cohen & Huffman, 2007; Huffman, 1999; Maume, 1999). On the other hand, there is compelling evidence that, after several decades of marked improvement, progress toward gender inequality more generally has slowed or stalled in or around the 1990s, depending on the indicators used (Cotter, Hermsen, & Vanneman, 2004). Managerial gender integration has slowed (P. N. Cohen & Huffman, 2007), and the labor force participation rate for professional and managerial women has stalled, albeit at a high level (Percheski, 2008).

Figure 1 shows the percentage of all managers that were women from three different data sources: the EEO-1 reports from the U.S. Equal Employment Opportunity Commission, which reflect only medium- and large-sized private-sector establishments (Huffman, Cohen, & Pearlman, 2008); the Current Population Survey, the primary source for annual labor force data; and the Decennial Census data we analyze in this article.[1] Although the trend is toward women's increased managerial representation, both the EEO-1 reports and census data results show a definitive stall in overall progress toward managerial integration in the 1990s.[2] Additionally, women's access to top-level managerial positions has been much more limited. For example, in 2007 and 2008 women held just 15% of Fortune 500 corporate director seats and officer positions, also reflecting stalled progress over the previous decade (Catalyst, 2009).[3]

Whether women in management represent the cutting edge of progress toward equality, or the outcome of accumulated improvements at lower levels of power—or both—their symbolic importance is great. Therefore, the prospect of slowing progress toward equality raises a new questions posed by Jacobs (1992), who offered several "skeptical interpretations" of women's improved access to management. Analyzing data through 1988, he asked, "Are women's positions being renamed to increase the appearance of managerial integration? Are women entering those managerial occupations that are losing their authority and prestige, and becoming resegregated in those niches?" It is noteworthy that our understanding of trends in gender inequality among managers has not been systematically updated, because, as we argue below, the questions Jacobs raised have perhaps become even more pertinent in the last several decades. Moreover, researchers interested in the stalled gender revolution (e.g., Cotter et al., 2004) have not attended to changes in women's access to managerial occupations, an important indicator of gender inequality.

In this article, we offer a systematic analysis of changes in women's status in management from 1980 through 2000 using data from the U.S. Census. Our analysis is timely and significant on three counts. First, the critical questions

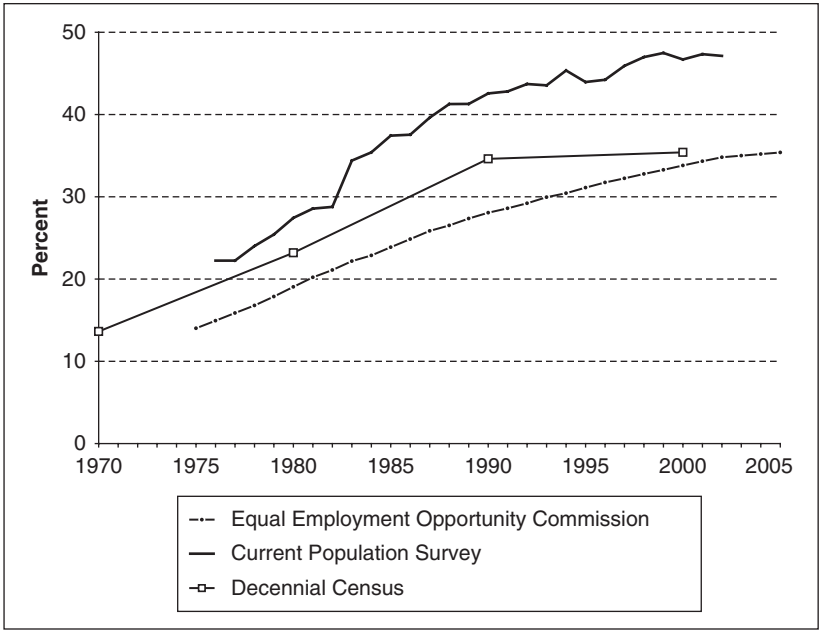

Figure 1. Percentage female among managerial workers, 1970-2005

about the status of female managers posed by Jacobs (1992) have not been reconsidered since he posed them in the early 1990s. We believe that Jacobs's questions have become even more consequential since that time—the intervening years have seen a proliferation of managerial occupations generally, and women's increased representation in management specifically.[4] These changes are a clarion call to researchers charged with understanding patterns of work-based gender inequality, who usually do not address access to managerial positions or the relative status of female managers (P. N. Cohen & Huffman, 2007). Second, our detailed analysis of changes in women's status in management augments a growing, although incomplete, literature on the stalled gender revolution (e.g., Cotter et al., 2004). This literature has focused on key trends in gender inequality, but has not engaged changes in women's status in managerial occupations, a vital component of gender inequality. Our analyses directly target this shortcoming, by showing where women's progress in management has been most pronounced, and where it has stalled.

Finally, the progress of managerial women is not just a concern of those poised to claim top-level positions. A limited, but suggestive body of

research suggests that the presence of female managers helps extend gender equality to the workers below them (e.g., L. E. Cohen, Broschak, & Haveman, 1998; P. N. Cohen & Huffman, 2007; Hultin & Szulkin, 2003). Indeed, the increased presence of women in managerial roles is one reason Cotter, DeFiore, Hermsen, Kowalewski, and Vanneman (1997) argue that all women may benefit from occupational gender integration. To better understand the role of women in management—in terms of the advantages they receive, and the benefits they bring to others in the labor market—we need a more complete understanding of women's progress into managerial occupations, and their status relative to male managers in their occupations and across the managerial labor force. To this end, we examine trends in three critical indicators of gender inequality: gender segregation, relative earnings, and the effect of gender composition on earnings. Our analyses extend prior research on gender inequality by focusing exclusively on managers, rather than combining them with other workers (e.g., P. N. Cohen & Huffman, 2003; Jacobs, 1992). In addition, we analyze gender inequality among managers across a unique unit of analysis, industry-specific managerial occupations. This innovation allows for greater differentiation of managerial workers according to their skills and responsibilities, and permits a more fine-grained analysis of patterns of gender inequality among managers.

Managers and the Stalled Gender Revolution

We focus on managerial occupations for two reasons. First, although numerous, and becoming more common over time, managerial positions remain relatively scarce, bestowing numerous advantages on their incumbents, who are disproportionately male (Huffman & Cohen, 2004; Reskin & Ross, 1992). Managerial occupations confer increased levels of job autonomy, relatively higher wages and an improved overall employment experience (Choi, Leiter, & Tomaskovic-Devey, 2008; England, Herbert, Kilbourne, Reid, & Megdal, 1994; Reskin & Ross, 1992). Thus, access to managerial positions remains an important goal for gender equality. Second, managers by definition exercise authority over others in the workplace, and therefore the composition of their ranks, and their relative status, have potential implications for all workers (P. N. Cohen & Huffman, 2007; Wright, 1997).

Cotter et al. (2004) are among the few to explicitly describe stalling progress for women in the 1990s, in labor force participation, occupational segregation and earnings, in stark contrast to the previous three decades. A review of recent research confirms this pattern, although scholars have not always remarked on the trend. We find slowing—albeit continued—progress after the 1980s on

indicators such as occupational segregation (Tomaskovic-Devey et al., 2006), and women's entry into specific scientific and technical occupations, lawyers and judges, and business services (Katz, Stern, & Fader, 2005). O'Neill's (2003) analysis documents the narrowing of the gender wage gap ending about 1992, with no further progress in 1992-2000 (with or without controls for education, part-time work, and occupational characteristics). Furthermore, although women continued to increase their college graduation rates relative to men through the early 2000s (and now surpass them), the *pace* of their relative gains slowed markedly for those born in the 1960s compared with the cohorts born in the 1930s to 1950s, who made the most rapid gains and brought women to parity with men (Goldin, Katz, & Kuziemko, 2006).

Some of the concern over women's progress in the labor market reflects the allegedly growing inclination of professional women to drop out of employment after they have children. Whether caused by a postfeminist "opting out" from women's careers—as reported by some in the news media (e.g., Belkin, 2003; Story, 2005)—or by increased workplace pressures and parenting demands on professional women (Stone, 2007), there was a decline in college-educated mothers' employment after the late 1990s. The negative net effect of children on mother's employment, which fell substantially between from the late 1970s until 2000, stopped falling (and may have increased) in the first 5 years of the 2000s (Boushey, 2008). Percheski (2008) also reports the "child penalty" on professional women's labor force participation stalled in the most recent period after decades of decline, but continued to fall for full-time and full-year employment. The "opting-out" debate underscores concerns about women's stalled progress that have focused on those in the upper echelons of the labor force—the very women who benefited most from occupational integration in the 1970s and 1980s (Cotter et al., 2004).

Implicit in this research is the assumption that female managers are important actors in the advance of women's equality more generally. Some empirical research supports this idea. Findings from the 2000 U.S. Census show that the nonmanagerial gender gap in wages is smaller in local industrial niches with more female managers, but only if those managers are in relatively high status positions (P. N. Cohen & Huffman, 2007). Furthermore, Huffman et al. (2008) report that individual work establishments with more female managers exhibit less gender segregation among their nonmanagerial workers. In this same vein, Hultin and Szulkin (2003) find less severe wage inequality in work organizations with high concentrations of female managers and supervisors—a relationship that remained after controlling for various organizational and individual characteristics. Other studies demonstrate the potential for female managers to mitigate gender inequality. For example,

savings and loans with women in management are more likely to hire women into managerial roles (L. E. Cohen et al., 1998), and California state agencies with more female managers exhibited increased gender integration during the 1970s and 1980s (Baron, Mittman, & Newman, 1991).

Jacobs (1992) noted the trend toward greater representation of women in management, but also a growing skepticism among researchers about its implications given persistent evidence of a "glass ceiling" blocking women's access to *top* managerial positions. In his discussion, he proposed two "principal skepticisms" representing the suspicion that increasing representation of women in managerial positions did not or would not lead to concomitant growth in power, prestige, and compensation. First, the *glorified secretary* hypothesis, under which legal pressures and fear of lawsuits drives employers to reclassify women as managers without actually elevating their status within organizations. Second, the *resegregation* hypothesis, under which managerial ghettos emerge that draw women into those managerial occupations that already are losing power and prestige, leading to the feminization of a narrow range of jobs that are managerial in name only.[5] The processes underlying resegregation have drawn some scholarly attention. For example, detailed case studies of resegregation in the banking industry can have been offered by Bird (1990) and Skuratowicz and Hunter (2004). For example, Bird (1990) documented how bank branch management's numerical tilt toward female dominance was concomitant with its loss of job security and shrinking wages relative to other male-dominated, white-collar jobs.

To address possible gender retrenchment in light of these hypotheses, we compare the 1990s—when progress toward equality and integration appears to have stalled—with the rapid improvement of the 1980s. We measure segregation between male and female managers, the gender earnings gap among managers, and the effect of managerial occupations' gender composition on earnings. Next, we describe our data and methods, then present results for each of these trends.

Data and Method

We examine women's progress in managerial roles by analyzing data from three decades of the decennial U.S. Census, drawn from the 1% Public Use Microdata Samples distributed by Integrated Public Use Microdata Series (IPUMS). These data files contain approximately 1% of the total U.S. population in each census. We have selected all managerial workers who worked full-year and full-time in the previous year according to an occupational recoding based on the 1990 occupation codes conducted by IPUMS.[6]

Identifying managerial jobs over time is not a straightforward task. Many managerial occupations have generic descriptions, especially "managers and administrators, not elsewhere classified," which represent a large portion of managers, especially in the IPUMS cross-decade recoding scheme. However, if these titles are cross-classified with industry they yield interpretable occupations (e.g., managers in banks versus managers in restaurants). Thus, following previous research that has constructed occupation–industry cells to investigate gender inequality in the broader labor market (see P. N. Cohen & Huffman, 2003; England, Reid, & Kilbourne, 1996), we create industry-specific managerial occupations, or ISMOs. This unique unit of analysis allows for greater differentiation of managerial workers according to their skills and responsibilities. For this coding, we used the IPUMS-created three-digit 1990 industry codes.[7]

To reliably estimate the gender composition for each ISMO in each decade, we limited the sample to ISMOs with at least 50 incumbents in each decade in the 1% PUMS sample. This reduced our total number of ISMO cells from 1,599 combinations with any incumbents to just 153, but retained 72% of all managers (158,020 out of 218,268). A final restriction—excluding self-employed workers—reduced the sample to 134,613 managers in 153 ISMOs with at least 50 incumbents in each of the 3 census years.

We acknowledge both the theoretical and empirical complexities of measuring workplace authority, which has long vexed and divided social scientists (for a review, see Smith, 2002). Approaches to measuring authority reflect the diversity of research questions asked and underlying theoretical approaches. As a result, some researchers operationalize workplace authority continuously, as a status scale, whereas others employ dichotomous or polytomous authority measures (see Dahrendorf, 1959; England et al., 1996; Kalleberg & Griffin, 1980; Robinson & Kelley, 1979; Spaeth, 1985). Whatever position one takes regarding the operationalization of workplace authority, we confront an empirical reality in which there is no adequate contemporary measure of decision-making authority that matches existing occupational coding schemes (neither the older *Dictionary of Occupational Titles* nor the more recent O*Net capture this quality in their rankings). Whereas England et al. (1994) used a dichotomous indicator to identify all workers with the words "manager," "supervisor," or "administration" in their title, we use a narrower definition, including only those classified as managerial in the 1990 Census occupation codes.[8]

For our regression models, we use variables commonly employed in wage determination models. The dependent variable is the natural logarithm of annual earnings, adjusted for inflation. We control for education with dummy variables for less than high school (the excluded category), high school graduate, some college, and college graduate or higher; potential experience in

the labor market, calculated as age minus education minus 6, and its square to capture reduced returns to experience at older ages; the natural logarithm of hours worked per week; race/ethnicity with the four mutually exclusive categories of White (the excluded category), Black, Latino, Asian, and other race/ethnicity; foreign-born status, with a dummy variable; family status with a dummy variable indicating married workers, a continuous variable for the number of the householder's own children in the household, and a dummy variable for the presence of an own child younger than age 5 in the household; dummy variable indicators for the four census regions of the country (Northeast, Midwest, South, and West); and a dummy variable indicating workers with a work-related disability. Means for these variables for men and women in each decade appear in Table 1.[9]

Because average earnings differ markedly across industries, earnings models often include controls for industrial context, including those that investigate gender inequality (e.g., England, Hermsen, & Cotter, 2000). However, among managers, gender segregation across industries may be an important source of earnings inequality. For example, in 2000, female managers were disproportionately concentrated in the professional services industry, and managers in that industry had lower than average earnings. Through of the process of gender devaluation, the lower earnings in that industry may partly result from its concentration of women (P. N. Cohen & Huffman, 2003). With a control for industry, then, our estimates for the effect of ISMO gender composition on earnings might be downwardly biased. On the other hand, if ISMO gender composition (which reflects both occupation and industry) has significant effects on earnings *after* controlling for earnings differences across broad industries, that will suggest that female managers are concentrated in lower-paying ISMOs even within industries. Thus, we estimate regression models both with and without controlling for industry at the broader level, using 14 dummy variables for the major industry groups in the 1990 codes.

We compute three measures of managerial gender segregation. The first is the index of dissimilarity (D), which shows how the gender-specific distribution of managers differs across ISMOs (see Duncan & Duncan, 1955). Specifically, D is given by

$$D = 0.5 \times \Sigma \mid (F_i / F) - (M_i / M) \mid,$$

where F is the number of women in all ISMOs and F_i equals the number of women in the ith ISMO. M and M_i are the analogous values for male managers, and the summation is taken over the entire set of ISMOs. D represents the percentage of men or women who would have to change ISMOs in order for the two groups to be evenly distributed across the ISMO categories.

Table 1. Means of Variables Used in the Regression Analyses: Managerial Employees, 1980-2000

	Men			Women		
	1980	1990	2000	1980	1990	2000
Earnings	62,900.14	68,761.00	71,888.80	34,134.04	39,270.57	47,191.57
Earnings(ln)	10.91	10.95	10.96	10.32	10.44	10.58
ISMO % female	.23	.32	.32	.33	.44	.48
Education						
High school graduate	.23	.17	.15	.42	.27	.20
Some college	.23	.30	.30	.24	.38	.35
BA or more	.47	.50	.52	.25	.32	.43
Potential experience	21.98	21.42	22.19	21.42	19.78	21.40
Potential experience^2	604.07	558.42	584.48	593.73	493.64	552.69
Hours per week (ln)	3.81	3.83	3.86	3.73	3.76	3.79
Race/ethnicity						
Black	.03	.04	.05	.07	.07	.09
Latino	.02	.02	.03	.02	.02	.03
Asian	.01	.02	.04	.01	.02	.03
Other	.001	.0003	.001	.0003	.0004	.001
Foreign born	.06	.08	.10	.05	.06	.08
Family status						
Married	.86	.82	.78	.59	.62	.61
Children <18 years	1.27	1.11	1.06	.79	.81	.81
Child <5 years	.17	.18	.17	.06	.10	.11
Disabled	.03	.03	.07	.02	.02	.08

(continued)

Table 1. (continued)

	Men			Women		
	1980	1990	2000	1980	1990	2000
Region						
Northeast	.22	.23	.21	.22	.23	.20
Midwest	.24	.21	.21	.21	.20	.22
South	.31	.33	.35	.33	.33	.36
West	.20	.22	.23	.22	.23	.23
No state	.03	.01	.00	.02	.01	.00
Industry						
Agriculture, forestry, fisheries	.002	.005	.004	.001	.003	.001
Mining	.006	.006	.004	.002	.001	.001
Construction	.050	.091	.123	.020	.028	.024
Manufacturing, nondurable	.095	.086	.074	.050	.052	.044
Manufacturing, durable	.148	.149	.147	.045	.055	.051
Transport, communication, and utilities	.094	.105	.101	.070	.071	.069
Wholesale trade	.061	.032	.020	.030	.023	.007
Retail trade	.111	.091	.098	.144	.118	.107
Finance, insurance, and real estate	.131	.114	.106	.198	.192	.222
Business and repair services	.039	.055	.068	.041	.050	.060
Personal services	.022	.026	.032	.033	.033	.036
Entertainment and recreational services	.014	.009	.014	.013	.007	.014
Professional and related services	.137	.145	.155	.237	.256	.297
Public administration	.090	.087	.055	.117	.111	.068
N	25,999	31,963	30,821	8,830	18,454	18,546

Note: ISMO = industry-specific managerial occupation.

We also compute an adjusted segregation measure that accounts for the fact that *D* weights ISMOs according to their size, giving larger units more influence over the measure. The size-standardized segregation index (*SSI*), which adjusts for differences across ISMOs in their share of the labor force, is given by

$$SSI = 0.5 \times \sum \left| \frac{F_i/T_i}{\sum F_i/T_i} - \frac{M_i/T_i}{\sum M_i/T_i} \right|,$$

where F_i is defined above, and T_i is the total number of women and men in the *i*th ISMO. *SSI* measures the percentage of women or men that would have to switch ISMOs in order to achieve complete gender integration, if the occupations were the same size (Charles & Grusky, 1995; Weeden, 1998). As such, the size-standardized measure describes changes in segregation net of fluctuations in the relative size of ISMOs, and is commonly used to supplement *D* when changes in segregation are analyzed over time (Jacobs, 1989). However, although it adjusts for changes in relative ISMO size, *SSI* is sensitive to changes gender composition of the entire labor force under study (Charles, 1992), which in our case refers to managerial workers. Clearly, the gender composition of managers changed markedly over this period. Therefore, we compute a margin-free log-linear segregation index (*A*), defined by Charles and Grusky (1995) and Weeden (1998):

$$A = \left\{ \frac{1}{n} \times \sum \left[\ln \frac{Fi}{Ti} - \frac{1}{n} \sum \ln \frac{Fi}{Ti} \right]^2 \right\}^{1/2},$$

where *n* represents the total number of ISMOs, and all other notations follow the previous definitions. The log-linear index weights each occupation equally and depends on neither marginal distribution (Weeden, 1998).

Results

To give a descriptive sense of the ISMOs, Table 2 shows the five ISMOs at the top of four categories for the beginning and the end of the period we study: the greatest and smallest proportion female in 1980 and 2000, and the greatest increase in the number (sample size) and proportion of women in the 1980s and 1990s. The table shows, for example, that the ISMO with highest proportion of women in 1980 was managers in doctors' offices (89%), and in 2000 it was child day care services (94%). The smallest proportion female at both points was found in heavily blue-collar industries (motor vehicles in 1980, at 1.5%, and construction machines in 2000, at 1.6%). In both decades, the largest

Table 2. Top Industry-Specific Managerial Occupations, by Gender Composition or Change, 1980-2000

Greatest Proportion Female		
Occupation	Industry	Proportion
1980		
Managers and administrators, NEC	Offices and clinics of physicians	.890
Managers in education and related fields	Child day care services	.811
Managers and administrators, NEC	Legal services	.786
Human resources and labor relations managers	Department stores	.694
Human resources and labor relations managers	Banking	.577
2000		
Managers in education and related fields	Child day care services	.941
Human resources and labor relations managers	Department stores	.817
Financial managers	Savings institutions, including credit unions	.766
Human resources and labor relations managers	Banking	.753
Managers of medicine and health occupations	Nursing and personal care facilities	.738
Smallest Proportion Female		
Occupation	Industry	Proportion
1980		
Managers and specialists in marketing, advertising, and publics relations	Machinery, equipment, and supplies	.034
Managers and specialists in marketing, advertising, and publics relations	Industrial and miscellaneous chemicals	.031
Managers and specialists in marketing, advertising, and publics relations	Machinery, except electrical, NEC	.029
Managers and administrators, NEC	Petroleum refining	.022
Managers and specialists in marketing, advertising, and public relations	Motor vehicles and motor vehicle equipment	.015
2000		
Managers and administrators, NEC	Automobile parking and carwashes	.052
Managers and administrators, NEC	Ship and boat building and repairing	.041
Managers and administrators, NEC	Lumber and construction materials	.035
Man agers and administrators, NEC	Cement, concrete, gypsum, and plaster products	.033
Managers and administrators, NEC	Construction and material handling machines	.016

(continued)

Table 2. (continued)

Greatest Increase in Number of Women		
Occupation	Industry	Increase (*n*)
1980s		
All managers	Eating and drinking places	837
Managers of properties and real estate	Real estate, including real estate insurance	625
Financial managers	Banking	606
Managers in education and related fields	Elementary and secondary schools	419
Managers and administrators, NEC	General government, NEC	388
1990s		
Managers in education and related fields	Elementary and secondary schools	490
Managers of medicine and health occupations	Hospitals	408
Financial managers	Banking	384
Managers of properties and real estate	Real estate, including real estate insurance	245
Managers of medicine and health occupations	Health services, NEC	241
Greatest Increase in Proportion Female		
Occupation	Industry	Increase
1980s		
Managers and specialists in marketing, advertising, and public relations	Machinery, equipment, and supplies	.276
Managers and specialists in marketing, advertising, and public relations	Insurance	.258
Financial managers	Savings institutions, including credit unions	.248
Financial managers	Insurance	.241
Managers and specialists in marketing, advertising, and public relations	Telephone communications	.238
1990s		
Financial managers	Hospitals	.235
Financial managers	All construction	.206
Managers and administrators, NEC	Justice, public order, and safety	.181
Managers and administrators, NEC	Banking	.177
Managers and specialists in marketing, advertising, and public relations	Radio and television broadcasting and cable	.166

Note: NEC = not elsewhere classified.

absolute growth in female management was apparent in service industries (food, health care, real estate, and insurance) and government (including education). Finally, the greatest growth in proportion female was found among general managers and financial managers, in industries with low female representation

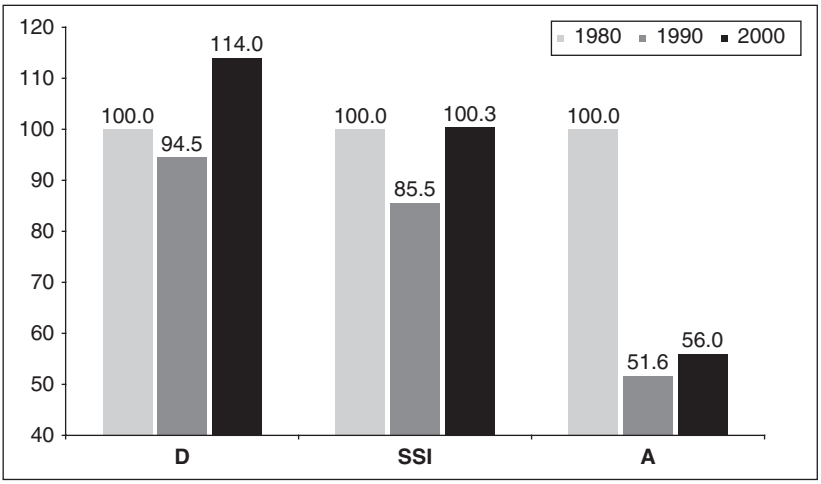

Figure 2. Gender segregation across industry-specific managerial occupations, 1980-2000
Note: *A* = log-linear index; *D* = dissimilarity index; *SSI* = size-standardized index.

at the start of the period (plus hospitals). Furthermore, in additional descriptive analysis (not shown), we found that increasing female representation was concentrated in industries that grew over the period, suggesting that industrial growth was an important contributor to women's increased representation. Moreover, the concentration of female managers conforms to the description by Zweigenhaft and Domhoff (2006), who argued that women in managerial and executive positions play buffering roles, either between social strata within organizations (e.g., human resources and labor relations) or between the company and the public (e.g., service industries and public relations).

Managerial Segregation Trends

We plot our three segregation measures, by decade, in Figure 2. The dissimilarity index (*D*) appears in the left part of the figure, the size-standardized index (*SSI*) is shown in the middle, and the log-linear index (*A*) is on the right. Each segregation score is expressed as a percentage of its 1980 value, following Weeden (1998). The trends in *D* suggest a small decline in gender segregation during the 1980s, then a sharp increase in the 1990s (up 14% from the 1980 value). However, the comparison between *D* and *SSI* is instructive. The sharp increase in *D* in the 1990s is explained by changes in the relative size of ISMOs, suggesting that growing ISMOs were more segregated in the 1990s. Moving to the right side of Figure 2, the change in segregation as measured by the

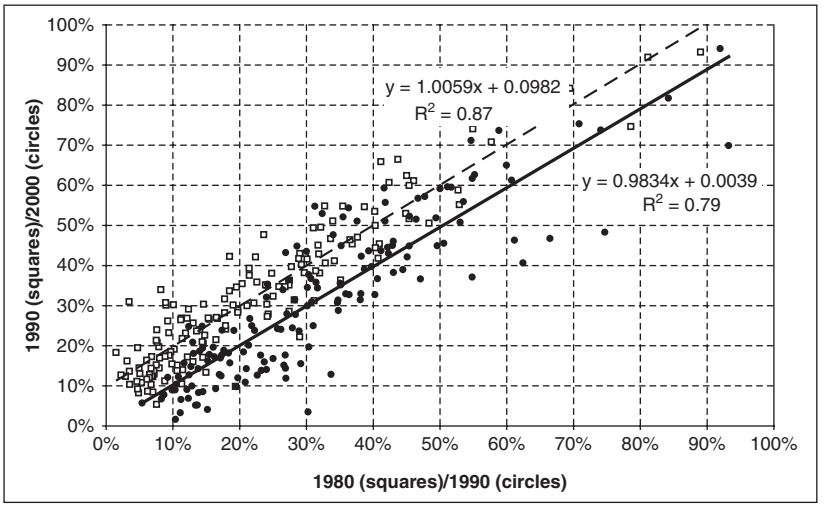

Figure 3. Female concentration in industry-specific managerial occupations, 1980-1990 and 1990-2000

log-linear segregation measure (*A*) is compelling evidence for the stall in the progress of female managers—it suggests that relative access to ISMOs stalled in the 1990s, holding constant change in both the relative size of ISMOs and women's overall presence in managerial occupations. The *A* measure shows that desegregation in the 1980s did not result from the growth of integrated managerial occupations, or from the increasing presence of women overall. On the other hand, holding constant those marginal changes, there was no further integration in the 1990s.

This stall is illustrated in Figure 3, which shows the change in female concentration in ISMOs during the decades 1980-1990 and 1990-2000. The white squares and dashed slope show the change from 1980 composition (*x*-axis) to 1990 composition (*y*-axis). The intercept of the top line is .098 (9.8%), and its slope is 1.0, which means the average ISMO increased its female representation by 10%, and that increase was constant across the range of gender composition. The figure also shows the 1990-2000 change on the same axes, with black dots and the solid slope. That relationship is described by essentially the same slope (.98), but an intercept of zero, which means the average ISMO had no change in its gender integration in the 1990s.[10] Examination of cases reveals that whereas only six ISMOs had declining female representation in the 1980s, half of them (49%, $N = 75$) had declining proportion female in the 1990s. Thus, by all measures the 1990s was at best a decade of stalled progress, but most indicators describe a period of *increased* gender segregation.

Earnings Analyses

Turning to managerial earnings inequality, Table 3 reports the findings from a series of OLS regression models, which regress logged annual earnings on gender and the set of individual-level control variables described above, with major industry controlled in the second of each pair of models. In Panel A, we see a significant ($p < .001$) net gender gap in all years, which holds with or without controls for industry. However, contrary to the evidence on gender segregation, we find that this gap sharply decreases across both decades. Specifically, the net gender effect declined during the 1980s from −.425 to −.340, and to −.256 over the 1990s. The industry controls account for between 10% (1980) and 14% (2000) of the gender gap in earnings.

If gender integration did not improve in the 1990s, but the earnings gap narrowed, this implies that progress did not come from women moving into more lucrative managerial occupations. Rather, either earnings gaps within ISMOs narrowed, or earnings increased (relatively) in female-dominated ISMOs. The latter process would be shown by changes in the earnings effects of gender composition, if the tendency for female-dominated ISMOs to be paid less decreased during the 1990s.

Results from our second set of earnings models appear in Panel B of Table 3. These models nest managerial workers within ISMOs, and estimate the net effect of managerial gender composition on logged annual earnings.[11] All three models that do not include industry controls (Model 1 for each year) show a statistically significant ($p < .001$) effect of gender composition, such that ISMOs with greater female representation have lower earnings, net of individual gender and other characteristics. That gender composition effect weakened over the 1980s, from −.538 ($p < .001$) in 1980 to −.372 ($p < .001$) in 1990—a drop of 31% in the earnings penalty for working in a female-dominated ISMO. But during the 1990s there was almost no change—the effect decreased only to −.361 ($p < .001$), a drop of only 3%. Thus, although the gender composition effect did not increase, progress in its reduction largely stalled during the 1990s.

Controlling for major industry (Model 2 for each year) reduces the effect of gender composition on earnings to nonsignificance in 1980 and 1990, but in 2000 the effect remains statistically significant net of industry controls (−.256, $p < .05$). That industry controls account for much of the gender composition effect is not surprising, indicating that the gender composition effect is in large part the result of female managers working in less lucrative industries. (Note also that, because these models account for clustering within ISMOs, the effective sample size for these tests is 153.) The fact that the

Table 3. OLS Regression Models for Managers' Annual Earnings on Individual Characteristics

	1980		1990		2000	
	(1)	(2)	(1)	(2)	(1)	(2)
Panel A						
Intercept	8.615***	8.259***	7.670***	7.392***	7.418***	7.161***
Female	−.425***	−.378***	−.340***	−.303***	−.256***	−.219***
Industry controls	No	Yes	No	Yes	No	Yes
R^2	.34	.38	.37	.40	.28	.31
Panel B						
Intercept	4.893***	4.399***	3.928***	3.494***	3.692***	3.347***
Female	−.369***	−.369***	−.296***	−.299***	−.199***	−.202***
ISMO % female	−.538***	−.178	−.372***	−.068	−.361***	−.256*
Industry controls	No	Yes	No	Yes	No	Yes
R^2	.35	.37	.34	.37	.25	.27
Panel C						
Intercept	4.926***	4.413***	3.947***	3.486***	3.679***	3.311***
Female	−.456***	−.396***	−.342***	−.286***	−.152**	−.120**
ISMO % female	−.631***	−.215	−.420***	−.050	−.323**	−.177†
Female × ISMO % female	.287*	.091	.117	−.035	−.112	−.194†
Industry controls	No	Yes	No	Yes	No	Yes
R^2	.35	.37	.34	.37	.25	.27
N	34,829		50,417		49,367	

Note: OLS = ordinary least squares; ISMO = industry-specific managerial occupation. All models include control variables shown in Table 1.

†$p < .10$, two-tailed. *$p < .05$, two-tailed. **$p < .01$, two-tailed. ***$p < .001$, two-tailed.

effect of gender composition is statistically significant in the most recent model, however—in conjunction with the increased segregation in 2000—shows the concentration of female managers in lower-paid niches, even accounting for the lower average earnings in major industries where female managers are found. This is consistent with the resegregation hypothesis. Importantly, both sets of models in Panel B suggest that the narrowing of the net gender earnings gap for the 1990s resulted from smaller gender gaps

within managerial occupations, rather than the movement of women in more lucrative managerial positions.

We supplemented the models in Panel B with a Female × IMSO Percentage Female interaction term, and present the results in Panel C. These models tell us, for each decade, how the net gender wage gap varies as a function of the gender composition of the ISMOs. The only significantly positive interaction is in the 1980 model without industry controls (.287, $p < .05$). The percentage female effect is negative for all managers, but it is stronger among men (−.631) than among women (−.631 + .287 = −.344). Thus, the model predicts narrower gender gaps among managers in ISMOs with higher levels of female representation in 1980. The Female × IMSO Percentage Female interaction is not significantly different from zero in either 1990 or 2000, but the *trend* in the interaction coefficient is significant, showing a worsening situation for female managers in female-dominated ISMOs. Specifically, the negative interaction term in 2000 is significantly smaller than the 1980 coefficient ($p < .05$). In the models with industry controls, the interaction terms are not significantly different from zero (except at the .10 level in 2000), but the trend is in the same direction, showing women faring significantly worse in female-dominated ISMOs in 2000 than in 1980.

Discussion

Jacobs (1992) concluded that, "The notion that the entry of women into management represents a wholesale subterfuge on the part of corporations trying to present themselves as supportive of opportunities for women is not consistent with the results in this paper" (p. 298). However, he added, "female managers have a long way to go before they reach parity with their male counterparts" (p. 298). This conclusion remains salient, and indeed our results strongly suggest a dramatic slowing of progress for women in managerial occupations. First, although gender segregation among managers decreased in the 1980s, by most measures it increased again in the 1990s. Regarding women's representation overall, the average industry-specific managerial occupation increased its female share by 10% during the 1980s—and almost all had some increase—but there was no average increase in the 1990s, and half the ISMOs showed declines in women's representation.

Second, however, despite lack of progress toward integration, the net gender gap in earnings among managers continued to narrow in the 1990s. This finding—decreasing wage inequality occurring alongside increasing gender segregation—clearly warrants further investigation, ideally based on longitudinal analyses of female managers' careers. However, we speculate that this finding might result from slowing growth in the representation of female

managers. Fewer female managers with low levels of experience might effectively narrow the experience gap among managers and contribute to a narrowing of the gender wage gap. Although our models do not control for actual work experience, our measure of the approximate number of years since completing one's education is fully consistent with this interpretation (see Table 1). The male advantage in potential experience increased from 0.6 years in 1980 to 1.6 years in 1990—presumably as younger women flooded into management positions—but then narrowed again to 0.8 years in 2000, consistent with a stall in new entrants.[12]

Third, despite the narrowing earnings gap, the effect of gender composition—that is, the earnings penalty for working in a managerial occupation with a large proportion of women—remained strong in the 1990s after having shrunk during the 1980s. The effect dropped by a third in the 1980s, but only an additional 5% in the 1990s. Female-dominated managerial occupations remain lower paid, net of gender and other measured individual-level characteristics. Although our models cannot identify the source of this effect, it is consistent both with the devaluation of managerial occupations based on their gender composition (P. N. Cohen & Huffman, 2003; Huffman & Velasco, 1997; England et al., 1994) and crowding explanations (Bergmann, 1974; Sorensen, 1990).

Finally, we find that the narrowing earnings gap that did occur was concentrated in managerial occupations with fewer women. Thus, although gender segregation remained high, and female-dominated occupations continue to pay less, the good news for female managers in the 1990s was that the gender gap in earnings narrowed within integrated managerial occupations. Ironically, this may be the result of increasing average experience of women relative to men, as the flow of new women into these managerial positions slowed.

Although we cannot strictly test Jacobs's hypotheses, they can facilitate the interpretation of our findings. Taken together, our wage and segregation findings do not fully support Jacobs's (1992) glorified secretary hypothesis for the 1990s, which predicts both a growing wage gap (which we did not find) and increased gender segregation (which we did), as low-status women are reclassified into managerial positions. Such a mechanism could be at work but partly masked by other dynamics, resulting in stalled declines in segregation and gender composition effects. On the other hand, Jacobs's resegregation hypothesis—that women have been moved into managerial occupations with low power and prestige—draws some support from our finding that gender gaps narrowed more substantially in integrated occupations, leaving women in female-dominated managerial occupations much more poorly paid. If improvements in earnings for women have been concentrated in those managerial occupations that have fewer women, then the cost of segregation has increased for women working in low-status managerial ghettos.

Perhaps Jacobs's (1992) hypotheses ask too much for analysis of the 1990s, when women already held large proportions of managerial jobs. We believe they remain useful, however. Rather than finding *absolute* erosion of female standing among managers, as predicted by the skepticism that concerned Jacobs, we have seen that the progress for women in management ranges from improving (earnings relative to men) to stagnating (gender composition effects) to deteriorating (segregation and gender composition effects on women relative to men). It is where we see *relative* erosion that the mechanisms proposed by Jacobs may be most relevant. Where progress for women in management slowed in the 1990s, processes of resegregation in particular may be at work.

Conclusion

A large body of research examines changes in women's representation in managerial occupations and the "glass ceiling," which blocks women's access to high-level positions and corporate boards (Cotter, Hermsen, Ovadia, & Vanneman, 2001; Hultin, 2003; Smith, 2002; Wright & Baxter, 2000). In contrast, research examining trends in gender inequality among managers is far sparser, despite sharp increases in the prevalence of managerial workers in the U.S. labor market and managers' importance in the stratification system more generally. We believe the study of managerial authority—who holds these positions, what authority they have, and how they wield it—should be an important part of the research agenda addressing gender inequality. Although we cannot here demonstrate the connection between managerial trends and those broader changes, the presumption of managerial authority suggests that who holds such positions affects the practices of managers and the policies of organizations, providing potential mechanisms for the reproduction, or reduction, of gender and other forms of inequality (Reskin, 2003).

By focusing explicitly on trends in three key dimensions of inequality among managerial workers, we contribute to the literature on gender inequality and the stall in its reduction. However, our analysis is not without weaknesses, many of which provide fertile starting points for further research in this area. Most obviously, future research would benefit immeasurably from the development of a measure of decision-making authority that matches existing occupational coding schemes. Additionally, longitudinal analyses of female managers' careers—ideally including direct measures of individual workers' managerial authority—would permit a stricter test of the questions that guide the present research.

Finally, we believe that the location and nature of stalled progress for managers should be seen in the context of the stall in overall trends toward

gender equality (Cotter et al., 2004). Clearly, the importance of understanding trends in women's representation in managerial occupations should not be understated. However, if increases in representation are accompanied by the entrenchment of other forms of inequality, our conclusions about the trajectory of gender inequality will be less sanguine. Studying the relationships between various forms of inequality permits stronger inferences and allows more nuanced conclusions about both the current contours of inequality and the prospects of increasing or decreasing inequality in the future.

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Notes

1. To facilitate comparisons with individual-level data, the EEO-1 data are weighted by the number of managers in each establishment.
2. We note that the Current Population Survey self-reports may overstate women's representation in managerial occupations. This may account for why it yields the highest representation.
3. Women's representation on *Fortune* boards of directors increased from 2.3% in 1984 to 9.5% in 1995, a rate of .65% per year. In the 12 years that followed, the increase to 14.7% female occurred at a rate of just .44% per year (Zweigenhaft & Domhoff, 2006, pp. 51-52).
4. Our own analyses (not shown) of data from the Current Population Survey indicates that the percentage of all U.S. workers employed in managerial occupations increased from 12.6% in 1980 to 15.5% in 2000.
5. A third hypothesis, termed *title inflation*, suggested that the status returns of all managers were falling as bureaucracy reduced their discretion and authority (Jacobs, 1992). That

question is beyond the scope of this analysis, but would be a fruitful area for future research on gender and management.

6. The period 1980-2000 spans three sets of occupation codes, with the 2000 representing the most distinct scheme.
7. Examination of the industrial and occupational distributions showed several problems with the IPUMS recoding. In particular, some occupations are industry specific. In 1980, there are many managers "not elsewhere classified" in the food service industry and the hotels and motels industry, but in 1990 and 2000 they are classified under the occupation "managers of food service and lodging." To include the many managers from hotels and restaurants, we separated those managers by industry and combined them across occupations. As a result, in our coding managers in hotels and restaurants are differentiated only by industry. We did this rather than discarding these ISMOs because they are so large, together accounting for almost 16,000 managers in the sample—the second and eighth largest ISMOs after the combination.
8. One large group that defies easy classification is professionals, many of whom clearly exercise authority over others (e.g., doctors and lawyers who maintain their own practices, or researchers who manage assistants). We do not include them because that authority is not the central aspect of their occupational definition.
9. In 1980 and 1990, the 1% IPUMS file did not identify the state for about a small percentage of cases; we include a dummy variable for this condition in the models. The definition of disability changed over these census years, so these variables are not strictly comparable over the decades covered.
10. Second-order polynomial lines did not provide a better fit for these scatterplots. The R^2 values are .87 for 1990 and .79 for 2000.
11. Models in Panel B and Panel C were estimated using STATA's cluster command, so that standard errors are adjusted for correlations among managers nested within ISMOs.
12. Similarly, the percentage of female managers with young children increased dramatically in the 1980s (from 6.1% to 10.5%), but then increased by less than half a percentage point in the 1990s (to 10.9%).

References

Baron, J. N., Mittman, B. S., & Newman, A. E. (1991). Targets of opportunity: Organizational and environmental determinants of gender integration within the California Civil Service, 1979-1985. *American Journal of Sociology*, *96*, 1362-1401.

Belkin, L. (2003, October 26). The opt-out revolution. *New York Times Magazine*.

Bergmann, B. R. (1974). Occupational segregation, wages and profits when employers discriminate by race and sex. *Eastern Economic Journal*, *1*, 103-110.

Bird, C. E. (1990). High finance, small change: Women's increased representation in bank management. In B. Reskin & P. Roos (Eds.), *Job queues, gender queues: Explaining women's inroads into male occupations* (pp. 145-166). Philadelphia: Temple University Press.

Blum, T. C., Fields, D. L., & Goodman, J. S. (1994). Organization-level determinants of women in management. *Academy of Management Journal*, *37*, 241-268.

Boushey, H. (2008). Opting out? The effect of children on women's employment in the United States. *Feminist Economics*, *14*, 1-36.

Catalyst. (2009, February 25). *Quick takes: Women in U.S. management*. Retrieved June 2, 2009, from http://www.catalyst.org/file/192/qt_women_in_us_management.pdf

Charles, M. (1992). Cross-national variation in occupational sex segregation. *American Sociological Review*, *57*, 483-502.

Charles, M., & Grusky, D. B. (1995). Models for describing the underlying structure of sex segregation. *American Journal of Sociology*, *100*, 931-971.

Choi, S., Leiter, J., & Tomaskovic-Devey, D. (2008). Contingent autonomy: Technology, bureaucracy, and relative power in the labor process. *Work and Occupations*, *35*, 422-455.

Cohen, L. E., Broschak, J. P., & Haveman, H. A. (1998). And then there were more? The effect of organizational sex composition on the hiring and promotion of managers. *American Sociological Review*, *63*, 711-727.

Cohen, P. N., & Huffman, M. L. (2003). Individuals, jobs, and labor markets: The devaluation of women's work. *American Sociological Review*, *68*, 443-463.

Cohen, P. N., & Huffman, M. L. (2007). Working for the woman? Female managers and the gender wage gap.*American Sociological Review*, *72*, 681-704.

Cotter, D. A., DeFiore, J., Hermsen, J. M., Kowalewski, B. M., & Vanneman, R. (1997). All women benefit: The macro-level effect of occupational integration on gender earnings inequality. *American Sociological Review*, *62*, 714-734.

Cotter, D. A., Hermsen, J. M., Ovadia, S., & Vanneman, R. (2001). The glass ceiling effect. *Social Forces*, *80*, 655-681.

Cotter, D. A., Hermsen, J. M., & Vanneman, R. (2004). *Gender inequality at work*. New York: Russell Sage Foundation.

Dahrendorf, R. (1959). *Class and class conflict in industrial society.* Stanford, CA: Stanford University Press.

Duncan, O. D., & Duncan, B. (1955). A methodological analysis of segregation indexes. *American Sociological Review*, *20*, 210-217.

England, P., Herbert, M. S., Kilbourne, B. S., Reid, L. L., & Megdal, L. M. (1994). The gendered valuation of occupations and skills: Earnings in 1980 census occupations. *Social Forces*, *73*, 65-100.

England, P., Hermsen, H. M., & Cotter, D. A. (2000). The devaluation of women's work: A comment on Tam. *American Journal of Sociology*, *105*, 1741-1751.

England, P., Reid, L. L., & Kilbourne, B. S. (1996). The effect of the sex composition of jobs on starting wages in an organization: Findings from the NLSY. *Demography*, *33*, 511-521.

Goldin, C., Katz, L. F., & Kuziemko, I. (2006). The homecoming of American college women: The reversal of the college gender gap. *Journal of Economic Perspectives*, *20*, 133-156.

Huffman, M. L. (1999). Who's in charge? Organizational influences on women's representation in managerial positions. *Social Science Quarterly*, *80*, 738-756.

Huffman, M. L., & Cohen, P. N. (2004). Occupational segregation and the gender gap in workplace authority: National versus local labor markets. *Sociological Forum*, *19*, 121-147.

Huffman, M. L., Cohen, P. N., & Pearlman, J. (2008). *Management matters? Female managers and workplace segregation, 1975-2005*. Unpublished manuscript, University of North Carolina, Chapel Hill and University of California, Irvine.

Huffman, M. L., & Velasco, S. C. (1997). When more is less: Sex composition, organizations, and earnings in U.S. firms. *Work and Occupations*, *24*, 214-244.

Hultin, M. (2003). Some take the glass escalator, some hit the glass ceiling? Career consequences of occupational sex segregation. *Work and Occupations*, *30*, 30-61.

Hultin, M., & Szulkin, R. (2003). Mechanisms of inequality: Unequal access to organizational power and the gender wage gap. *European Sociological Review*, *19*, 143-159.

Jacobs, J. A. (1989). Long-term trends in occupational segregation by sex. *American Journal of Sociology*, *95*, 160-173.

Jacobs, J. A. (1992). Women's entry into management: Trends in earnings, authority, and values among salaried managers. *Administrative Science Quarterly*, *37*, 282-301.

Kalleberg, A. L., & Griffin, L. J. (1980). Class, occupation, and inequality in job rewards. *American Journal of Sociology*, *85*, 731-768.

Katz, M. B., Stern, M. J., & Fader, J. J. (2005). Women and the paradox of economic inequality in the twentieth century. *Journal of Social History*, *39*, 65-88.

Maume, D. J. (1999). Glass ceilings and glass escalators: Occupational segregation and race and sex differences in managerial promotions. *Work and Occupations*, *26*, 483-509.

O'Neill, J. (2003). The gender gap in wages, circa 2000. *American Economic Review*, *93*, 309-314.

Percheski, C. (2008). Opting out? Cohort differences in professional women's employment rates from 1960 to 2005. *American Sociological Review*, *73*, 497-517.

Reskin, B. F. (2003). Including mechanisms in our models of ascriptive inequality. *American Sociological Review*, *68*, 1-21.

Reskin, B. F., & Ross, C. (1992). Job, authority, and earnings among managers: The continuing significance of sex. *Work and Occupations*, *19*, 342-365.

Robinson, R. V., & Kelley, J. (1979). Class as conceived by Marx and Dahrendorf: Effects on income inequality, class consciousness, and class conflict in the U.S. and Great Britain. *American Sociological Review*, *44*, 38-58.

Skuratowicz, E., & Hunter, L. W. (2004). Where do women's jobs come from? Job resegregation in an American bank. *Work and Occupations*, *31*, 73-110.

Smith, R. A. (2002). Race, gender, and authority in the workplace: Theory and research. *Annual Review of Sociology*, *28*, 509-542.

Sorensen, E. (1990). The crowding hypothesis and comparable worth. *Journal of Human Resources*, *25*, 55-89.

Spaeth, J. L. (1985). Job power and earnings. *American Sociological Review*, *50*, 603-617.

Stone, P. (2007). *Opting out? Why women really quit careers and head home*. Berkeley: University of California Press.

Story, L. (2005, September 20). Many women at elite colleges set career path to motherhood. *The New York Times*, p. A18.

Tomaskovic-Devey, D., Zimmer, C., Stainback, K., Robinson, C., Taylor, T., & McTague, T. (2006). Documenting desegregation: Segregation in American workplaces by race, ethnicity, and sex, 1966-2003. *American Sociological Review*, *71*, 565-588.

Weeden, K. A. (1998). Revisiting occupational sex segregation in the United States, 1910-1990: Results from a log-linear approach. *Demography*, *35*, 475-487.

Wright, E. O. (1997). *Class counts: Comparative studies in class analysis*. Cambridge, UK: Cambridge University Press.

Wright, E. O., & Baxter, J. (2000). The glass ceiling hypothesis: A comparative study of the United States, Sweden, and Australia. *Gender & Society*, *14*, 275-294.

Zweigenhaft, R. L., & Domhoff, G. W. (2006). *Diversity in the power elite: How it happened, why it matters* (2nd ed.). Lanham, MD: Rowman & Littlefield.

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