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ABSTRACT

Given the salience of biological sex, it is not surprising that gender stereotypes are pervasive. To explore the prevalence of such stereotypes, the accuracy of gender stereotyping regarding occupations is presented in this paper. The paper opens with an overview of gender stereotype measures that use self-perceptions as benchmarks of accuracy, followed by a discussion of more objective criteria as benchmarks of accuracy. For this study, male (N=68) and female (N=96) college students at a small university in the Midwest estimated the percentage of female and male workers and their salaries in 40 occupations that were either female-dominated, neutral, or male-dominated. These estimates were then compared to Census information. The average size of the wage gap for the feminine occupations was \$4,410, for neutral occupations it was \$6,760, and for masculine occupations it was \$6,439. Results indicate that the participants were unaware of the extent of occupational segregation by gender and they underestimated the size of the wage gaps. It is suggested that the erroneous perception of the absence of gender differences in occupational settings may serve to maintain inequality by creating the belief that discrimination is a thing of the past. Contains 42 references and 2 tables. (RJM)

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The accuracy of gender stereotypes regarding occupations¹

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Abstract

This study investigated the accuracy of gender stereotypes regarding occupations. Participants' estimates of the percentage of female and male workers and their salaries for 40 occupations were compared to Census Bureau data to assess the accuracy of the estimates. The data indicate that participants were unaware of the extent of occupational segregation by gender and underestimated the size of the wage gap. The implications of this are discussed.

A "stereotype is an individual's set of beliefs about the characteristics or attributes of a group" (Judd and Park, 1993, p. 110). One of the most salient groups, a basic category so to speak, is biological sex (Fiske, 1993; Stangor & Lange, 1994). As Eagly and Diekmann (in press) point out, unlike members of many other social groups, males and females have a vast amount of information about each other because they interact on a daily basis.

Given the salience of biological sex, it is not surprising that gender stereotypes are pervasive. They are well-documented in the research literature. For example, in an oft-cited article Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz (1972) found that males were described more often than females in terms connoting competence. Although females were described positively for their warmth and expressiveness, they were also seen as incompetent and passive. Males and females held these gender stereotypes to a similar degree (Broverman et al., 1972). More recent studies have also found that males are assumed to have instrumental traits, whereas females are considered expressive (Best & Williams, 1993; Deaux & Lewis, 1983; Martin, 1987). This research has been cited as evidence for the existence of pervasive gender stereotypes which might ultimately lead to discrimination (e.g., O'Leary & Hansen, 1983). However, stereotypes are *not* by definition inaccurate (e.g., Judd & Park, 1993; Jussim, Eccles, & Madon, 1996; Lee, Jussim, & McCauley, 1995; Mackie, 1973). For example, there is truth to the stereotype that most construction workers are male. An intriguing question is whether stereotypes are inaccurate exaggerations of relatively minor real differences or whether they accurately reflect reality.

Some investigators have voiced concern over research on

stereotype accuracy. They fear that this research "at worst may result in our unintentionally communicating to the society at large that stereotypes are by and large accurate and, thus, generally appropriate to use as a basis for judging others" (Stangor, 1995, p. 278). In addition to ethical concerns, progress in research on stereotype accuracy has been impeded by formidable methodological challenges. A major difficulty has been finding an objective benchmark for real differences against which stereotypes can be compared. One purpose of this study is to show that the accuracy of gender stereotypes is empirically assessable. Further, research on stereotype accuracy can, contrary to Stangor's claims, point to inequities, providing impetus for societal change. Presently, different approaches to the assessment of the accuracy of gender stereotypes coexist.

**Research on the accuracy of gender stereotypes
Measures using aggregated self-perceptions as benchmarks of accuracy**

Some researchers have used participants' self-perceptions as benchmarks of reality. For example, in their efforts to assess the accuracy of gender stereotypes Martin (1987) and Allen (1995) used criterion ratios as benchmarks for accuracy. Criterion ratio refers to the percentage of males who endorse a particular trait divided by the percentage of females who endorse the same trait (Martin, 1987). Thus, the criterion ratio represents a self-report measure of accuracy to which participants' gender stereotypes are compared. Both Martin (1987) and Allen (1995) found that stereotypes of gender differences in traits tended to be more extreme than self-reported differences in traits. Similarly, Jussim, Milburn, and Nelson (1991) found that females were stereotyped as more emotionally open than males, whereas there was only a small gender difference in self-reported emotional openness. Martin (1987), Allen (1995), and Jussim et al. (1991) concluded that although there was a kernel of truth to gender stereotypes, they were overgeneralizations of real gender differences. However, self-reports are a problematic measure of real gender differences because they may be fraught with social desirability biases. For example, female participants may describe other females as passive but present themselves in a favorable i.e., more active, light. Therefore, these findings should be interpreted with caution.

Relatively objective criteria as benchmarks of accuracy

Other studies used more objective benchmarks to which participants' stereotypes were compared. Britton and Hall (1995) found that participants' ratings of gender differences in nonverbal communication correlated very highly ($r = .68$ and $r = .74$ for males and females, respectively) with the gender differences reported in the literature (based mostly on observational studies). Hall and Carter (1997) found correlations of .39 to .43 between participants' estimates of gender differences for 76 behaviors and traits and meta-analytically derived actual gender differences. However, correlational studies do not address the question whether participants over- or underestimated gender differences.

Swim (1994) compared meta-analytically derived gender differences in social and nonverbal behaviors and cognitive abilities to participants' stereotypes of gender differences in these areas.

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In Study 1 she reported a greater incidence of over- than underestimation of real gender differences, especially for favorable female characteristics. However, in Study 2 she found more evidence for under- than overestimation of gender differences. McCauley, Thangavelu, and Rozin (1988), McCauley and Thangavelu (1991), and Swim, Aikin, Hall, and Hunter (1995) compared participants' estimates of the percentage of females in various occupations to census data on female representation in these occupations. Respondents underestimated the gender differences in employment patterns i.e., they underestimated the percentage of females in feminine occupations and overestimated the percentage of females in masculine occupations. In other words, participants were unaware of the extent of occupational segregation by gender. The correlations between perceived and actual distributions of males and females into occupations were high, providing some evidence for accuracy. However, by using mostly highly gender-segregated occupations, these researchers unwittingly introduced a ceiling effect: When the degree of occupational segregation is high, say 90% female, 10% male, overestimation of the degree of gender segregation is unlikely, and a finding of underestimation of real gender differences is virtually ensured. However, Cejka and Eagly (1997) used a more diversified distribution of occupations and still found underestimation of the amount of occupational gender segregation.

Beyer (1997a) compared participants' estimates of the percentage of females in an academic major and female and male students' GPAs to the actual percentage of females and their actual GPAs. She found that participants underestimated the extent of gender segregation in feminine majors but overestimated the degree of gender segregation in masculine majors. This pattern was obtained because of the pervasive tendency to underestimate the percentage of female students in all majors. Furthermore, participants underestimated the gender difference in GPAs (which favors female students). Especially for masculine majors participants were convinced that, contrary to fact, male students receive higher GPAs than do female students. This suggests that real gender differences are often underestimated, maybe in an effort to produce socially desirable responses. Such an underestimation of occupational and academic segregation, and of gender differences in GPAs favoring females is likely to lead to complacency and thus does not provide impetus for changes in the status quo.

Summary of the literature on the accuracy of gender stereotypes

The extant literature has found evidence for the inaccuracy of gender stereotypes. However, the direction of the inaccuracy is unclear. While research by Martin (1987), Allen (1995), Jussim et al. (1991), and Swim (1994, study 1) suggests that gender stereotypes are overestimations of real gender differences, the research by McCauley (& Thangavelu, 1991; McCauley et al., 1988), Cejka and Eagly (1997), Beyer (1997a), and Swim (1994, study 2; et al., 1995) suggests that gender stereotypes are underestimations of real gender differences.

This inconsistency in the findings may be due to 1. differences in the criteria used to assess accuracy (self-reports vs. objective criteria) and/or 2. the content area of the assessed stereotypes

(personality traits vs. gender representation in different occupations or majors). In addition, both strains of research have suffered from methodological problems, resulting in interpretational ambiguities.

Furthermore, research on stereotype accuracy in general has been criticized by Judd and Park (1993) for using methodologies that confound participant group, target group, and the stereotypicality of attributes. They recommend the use of a full-accuracy design in which the participant group is crossed with the target group. Furthermore, they recommend inclusion of the stereotypicality and valence of the rated attributes as independent variables.

The goals and hypotheses of this study

This study assessed the accuracy of gender stereotypes of occupations. Gender stereotypes regarding occupations are likely to have consequences for the choice of one's career. For example, gender-incongruent careers may be avoided. Negative stereotypes regarding the suitability of a group for an occupation may also produce stereotype threat, the concern that one will confirm the negative stereotype (Steele & Aronson, 1995), and/or self-fulfilling prophecies (e.g., Jussim et al., 1996) which can impair the performance of the stereotyped group.

In the present study male and female participants estimated the percentage of female and male workers (target group) and their salaries in 40 occupations that are female-dominated, neutral, or male-dominated (stereotypicality of attribute in Judd & Park's [1993] terminology). These estimates were compared to Census information (U.S. Department of Labor, 1995). Thus, the accuracy of these gender stereotypes could be assessed.

Estimates of the percentage of female and male workers and their salaries should be affected by the gender-type of the occupation i.e., whether a given occupation is perceived as male- or female-dominated. Studies on the accuracy of gender stereotypes have generally failed to include the gender-type of a domain as an independent variable. This is unfortunate because aggregating the results of the accuracy of gender stereotypes without regard for gender-type of domain might obscure meaningful patterns and hamper theoretical progress (Beyer, 1997a). Research on gender differences in the accuracy of self-perceptions has also pointed out how results can be confounded when ignoring the gender-type of a domain (Beyer, 1990, 1997b; Beyer & Bowden, 1997).

It was hypothesized that participants would underestimate the amount of occupational segregation which currently exists. This pattern is brought about by an underestimation of female workers in feminine occupations and overestimation of female workers in masculine occupations. This predicted main effect of the gender-type of occupation might be modified by a gender-type of occupation x participant gender interaction: Female participants should provide more accurate estimates for female-dominated occupations, males for male-dominated occupations. This hypothesis is predicated on the assumption that participants have more familiarity or experience with and/or interest in gender-congruent than gender-incongruent occupations which should increase accuracy (Judd, Ryan, & Park, 1991).

The predictions for the accuracy of salary estimates are more complex. It is predicted that participants underestimate the wage gap. For the 40 occupations used in the present study, full-time female workers earned \$5724 less on average than did male workers in the *same* occupation. Thus, if participants estimate that the salaries of female workers are similar to those of male workers, they would overestimate females' salaries. This would be revealed by a significant target group effect. This target group effect is hypothesized to interact with gender-type of occupation. Meta-analyses have found small differences in participants' ratings of the identical performances of female and male targets, favoring male targets (Eagly, Makhijani, & Klonsky, 1992; Swim, Borgida, Maruyama, & Myers, 1989). Females also subscribe to the view of lesser female competence (Browner et al., 1972). For example, they believe that their IQs are lower than those of male relatives (Furnham & Rawles, 1995). Such views of lower female competence are especially prevalent in masculine domains (Beyer, 1997a). Alternatively, participants might be most aware of a wage gap in traditionally masculine occupations. Therefore, salary estimates of female workers may be significantly lower than those of male workers in masculine occupations, resulting in more accurate estimates of the actual wage gap in masculine compared to feminine and neutral occupations. These effects may be qualified by the triple interaction between target gender, gender-type of occupation, and participant gender. Each gender may be more knowledgeable about the gender wage gap in gender-congruent rather than gender-incongruent occupations (cf. Judd & Park, 1993; Judd et al., 1991; Ryan, Park, & Judd, 1996). Thus, the present study provides an opportunity to examine whether ratings of in-groups are always more accurate than ratings of out-groups.

To summarize, it was hypothesized that participants are unaware of the extent of gender segregation in occupations. They underestimate the percentage of females (and concomitantly overestimate the percentage of males) in feminine occupations, but overestimate the percentage of females (and underestimate the percentage of males) in masculine occupations. It was also hypothesized that participants do not realize the extent of the wage gap and therefore underestimate the real differences in female and male workers' wages.

Method

Participants

Participants were 96 females and 68 males at a small university in the Midwest who participated for course credit in General Psychology.

Procedure

Participants estimated the percentage of female and male workers and their salaries for 40 occupations. Participants' estimates were compared to Census Bureau data on the actual percentage of male and female workers and their salaries. Thus, the accuracy of the estimates could be assessed.

Because of the possibility of the existence of framing effects, some participants were asked to estimate the percentage of female workers, whereas others estimated the percentage of male workers

in an occupation. Prior to data analysis, the data for male workers were transformed into percentages for female workers (e.g., 60% males was coded as 40% females). The 40 occupations that were rated included 21 occupations with a predominantly female and 19 with a predominantly male workforce. In addition, 20 of the rated occupations were extremely segregated (greater than 75% or less than 25% female workforce) and 20 occupations were moderately segregated (between 26% and 74% female workforce).

Results

Results were analyzed by means of analyses of variance (ANOVAs). Degrees of freedom vary slightly due to missing values. The 40 occupations were divided into feminine, neutral, and masculine occupations. Occupations with a labor force of greater than 60% or less than 40% female were labeled feminine and masculine, respectively. Occupations with a labor force representation of females between 40% and 60% were labeled neutral. This resulted in 16 feminine, 12 neutral, and 12 masculine occupations (see Table 1 for a list of the 40 occupations from the most female-dominated to the most male-dominated occupation).

The accuracy of percentage estimates

Accuracy scores represent the difference between participants' estimates and the actual percentage of females in each occupation. Positive (negative) difference scores indicate an overestimation (underestimation) of female workers. To understand the effect of the gender-type of occupation on the accuracy of stereotypes, average accuracy scores for the 16 feminine, 12 masculine, and 12 neutral occupations were calculated. These average accuracy scores were subjected to a 2 (participant gender) x 2 (wording of percentage question) x 3 (gender-type of occupation) ANOVA, with the last factor a within-participant variable.

Although absolute accuracy in estimating the percentage of female and male workers was not expected, if random processes were at work, participants should at times overestimate and sometimes underestimate the percentage of female workers. Actual and estimated percentages of female workers are depicted in Figure 1.

As hypothesized, the significant main effect of gender-type of occupation indicates that participants underestimated the percentage of females in feminine and neutral occupations, but overestimated the percentage of females in masculine occupations, $F(2, 159) = 228.40, p < .0001$. The net effect of this was that participants were not appropriately aware of the extent of occupational segregation by gender. There was considerably more evidence for underestimation than overestimation of the percentage of females in occupations. To illustrate, although 21 of the 40 occupations were predominantly female, participants' estimates indicated that they viewed only 15 as predominantly female.

The phrasing of the percentage question significantly affected the results. Participants who were asked about the percentage of females estimated higher percentages of female workers in an occupation than did participants who were asked to estimate the percentage of male workers. This resulted in more accurate

estimates for feminine and neutral occupations, but less accurate estimates for masculine occupations, $F(2, 159) = 3.02, p < .06$. The wording effect interacted significantly with participant gender, $F(1, 160) = 9.07, p < .003$. Females were much more affected by the wording than males for all occupations. This finding underscores how great the effect of minor variations in the wording of questions can be. Apparently, framing the question in terms of one gender elicits higher ratings for that gender (cf. to research on anchoring e.g., Tversky & Kahneman [1982]).

It is clear from these data that random factors were not at work: The underestimation of the percentage of female workers was pervasive. It occurred for neutral and feminine occupations and for both genders. For masculine occupations the percentage of female workers was overestimated. Cejka and Eagly (1997) referred to this as a contraction effect i.e., participants give estimates that are closer to parity than is appropriate. Furthermore, participants used a restricted range of estimates compared to the actual gender segregation in occupations. Although several of the occupations used in this study are extremely segregated (over 90% female or male workforce), participants' average estimates never exceeded 80% females or 87% males. Such a contraction effect may present a serious methodological confound. If the results are due to contraction, then extremely segregated feminine and masculine occupations should show the same amount of inaccuracy but in opposite directions. However, the percentage of females in extremely feminine occupations (more than 75% female workers) was underestimated by 16.9 but overestimated by only 10.8 in extremely masculine (more than 75% male workers) occupations. In addition, feminine and masculine occupations that are not extremely segregated should be estimated with similar accuracy. However, the percentage of females was underestimated in both feminine and masculine occupations that are not extremely segregated (by 13.4 and 2.4, respectively). Thus, although participants clearly shy away from making extreme estimates, this cannot completely account for the pattern of results.

The accuracy of salary estimates

The average size of the wage gap for the feminine occupations in this study is \$4410, for neutral occupations it is \$6760, and for masculine occupations \$6439. Out of the 40 occupations used in this study, there was no occupation in which the female workforce earned more on average than the male workforce. Were participants aware of the size of the wage gap?

A 2 (participant gender) x 2 (target gender) x 3 (gender-type of occupation) ANOVA, with the last two factors as within-participant variables, was conducted on participants' estimates of the income of males and females. A significant target effect revealed that participants believed that males have significantly higher incomes than females employed in the same occupations, $F(1, 160) = 87.22, p < .0001$. Thus, participants were aware of the existence of a gender gap in wages. This was modified by a significant interaction between gender-type of occupation and target gender, $F(2, 159) = 36.71, p < .0001$. Participants thought that the wage gap would be greatest in masculine and least in feminine occupations.

To address whether participants under- or overestimated the salaries of female and male workers or whether their estimates were accurate reflections of reality, discrepancy scores were calculated. Participants' estimates of female and male students' salaries were subtracted from actual salaries. Positive (negative) difference scores indicate an overestimation (underestimation) of salaries. A 2 (participant gender) x 2 (target gender) x 3 (gender-type of occupation) ANOVA, with the last two factors as within-participant variables, was conducted on the accuracy of participants' estimates of the income of males and females. The findings regarding the accuracy of the salary estimates provide evidence of participants' unawareness of the size of the wage gap.

In general, the salaries of workers in masculine occupations were overestimated more than those of workers in neutral and feminine occupations, $F(2, 159) = 21.90, p < .0001$ (see Figure 2). As hypothesized, there was a significant main effect for target gender. Although the incomes of males and females were overestimated for most occupations, the overestimation was greater for female than male targets, $F(1, 160) = 110.95, p < .0001$, because the estimates for females' salaries were too close to those of males (see Figure 2). The interaction between target gender and gender-type of occupation assesses the accuracy with which the wage gap is estimated. The interaction was highly significant, $F(2, 159) = 71.68, p < .0001$. Because of the existence of a large wage gap (on average \$5724), the fact that females' salaries were estimated too close to males' resulted in an underestimation of the actual size of the wage gap (see Figure 3). The significant interaction reveals that, as hypothesized, the wage gap was underestimated least for masculine occupations (by \$1418 compared to \$3473 for feminine and \$4355 for neutral occupations). The borderline interaction between gender-type of occupation, participant gender, and target gender indicates that, as hypothesized, the wage gap in gender-congruent occupations was estimated more accurately than for gender-incongruent occupations, $F(2, 159) = 2.46, p < .09$.

Discussion

Stangor (1995, p. 278) claims that a "focus on the content accuracy of stereotypes is premature because we do not yet have a well-established method for documenting those group differences." The present study has demonstrated that the pessimism in this statement is unjustified. This study meaningfully assessed the content accuracy of gender stereotypes. Furthermore, this study should allay Stangor's (1995) concern that research on stereotype accuracy may have dangerous societal repercussions. As the discussion will show, the results of this study indicate that gender stereotypes are inaccurate and likely to be detrimental to the occupational advancement of females.

The low awareness of occupational segregation

Presently, to reach parity in gender representation across occupations, 77% of the U.S. labor force would have to change jobs (Tomaskovic-Devey, 1995). The existence of occupational segregation is both a cause and a consequence of the current state of gender inequality, especially the wage gap (Pratto, Stallworth,

Sidanius, & Siers, 1997). A lack of awareness of occupational segregation may lead to the belief that gender equality has been achieved and therefore elicit complacency.

A finding of the present research is that college students lack an awareness of occupational segregation. The results are similar to the findings by Beyer (1997a), Cejka and Eagly (1997), McCauley et al. (1988), McCauley and Thangavelu (1991), and Swim (1994; et al., 1995, Study 2) who found that participants underestimated occupational and academic segregation. This unawareness is a pervasive phenomenon shown by male and female participants (see Figure 1). Banaji and Greenwald (1995), Jussim et al. (1991), and Swim et al. (1989) also found that there is no difference in the extent to which females and males hold gender stereotypes. Participants were not more accurate when providing percentage estimates for gender-congruent than gender-incongruent occupations. Thus, familiarity may not always imply greater accuracy (cf. this view to Kruglanski's [1989] and Cantor & Kihlstrom's [1987] argument that familiarity can lead to unwarranted confidence in one's perceptions and therefore greater inaccuracy).

The low awareness of the size of the wage gap

In all of the 40 occupations studied, male workers earned higher average salaries than female workers did. The average size of the wage gap across the 40 occupations was \$6439 for masculine, \$4410 for feminine, and \$6760 for neutral occupations. Although participants were aware of the existence of a wage gap, they were unaware of its substantial size, underestimating it by \$1418 for masculine, \$3473 for feminine, and \$4355 for neutral occupations. Such a profound lack of awareness of inequality may prevent individuals from realizing when they are the victim of discrimination and may convince individuals that victims of discrimination are actually disgruntled employees.

Generalizability of results

This research provides evidence for a fairly substantial amount of inaccuracy in estimates of gender differences. Why did the present study and much of the previous literature on the accuracy of occupational and academic stereotypes (Beyer, 1997a; Cejka & Eagly, 1997; McCauley & Thangavelu, 1991; McCauley, Thangavelu, & Rozin (1988); Swim, 1994, Study 2; Swim et al., 1995) find that participants are unaware of the size of gender differences when other studies indicate that participants overestimate gender differences (Martin, 1987; Allen, 1995; and Jussim et al., 1991; Swim, 1994, Study 1)? One interpretation is that individuals are acutely aware of gender differences in personality and social behavior and actually amplify those through processes such as the confirmation bias. However, the distribution of females and males into different occupations and their receipt of unequal salaries for the same job reveals cultural barriers and discrimination. In a democratic society this may threaten people's belief in justice, fairness, and equal opportunities for all. To believe that males and females differ in certain psychological characteristics is one thing; to believe that they should be treated differently (by denying access to certain occupations, unequal pay, etc.) is quite another. Thus, participants may be protecting

their view of the world as a just place by underestimating gender differences in occupational segregation and the wage gap.

The finding of inaccurate views of gender differences may or may not generalize to other target groups (e.g., racial, ethnic, or age groups). The accuracy of the perception of a group should be empirically determined for each group of interest, rather than inferred on the basis of research on one group. As Funder (1995) has pointed out, some individuals are "better" targets i.e., judged more accurately than others. Analogously, some target groups may be judged more accurately than others.

In addition to this caveat, I would like to point out that the finding of underestimations of gender differences does not imply that people are always inaccurate perceivers of reality. For example, research on the accuracy of personality judgments of others and the self has found substantial evidence for accuracy (e.g., Funder, 1995). Similarly, in the area of self-fulfilling prophecies, there is more evidence for accurate than inaccurate judgments (e.g., Jussim, 1989; Jussim & Eccles, 1992; Jussim et al., 1996). Finally, research on the accuracy of self-perceptions has found that accuracy depends on individual difference variables and situational variables (Beyer, 1990, 1997b; Beyer & Bowden, 1997). Whether there are interrelations among the accuracy of stereotypes, judgments of others, and self-perceptions is an empirical question. Results from one of the research domains may not generalize to the others.

Conclusions

This study found that college students lack an awareness of occupational segregation and the size of the wage gap. This erroneous perception of the absence of gender differences in occupational settings ironically may serve to maintain inequality by creating the belief that discrimination is a thing of the past and thereby instilling complacency.

References

- Allen, B. P. (1995). Gender stereotypes are not accurate: A replication of Martin (1987) using diagnostic vs. self-report and behavioral criteria. *Sex Roles*, 32, 583-600.
- Banaji, M. R., & Greenwald, A. G. (1995). Implicit gender stereotyping in judgments of fame. *Journal of Personality and Social Psychology*, 67, 181-198.
- Best, D. L., & Williams, J. E. (1993). A cross-cultural viewpoint. In A. E. Beall & R. J. Sternberg (Eds.), *The psychology of gender* (pp. 215-248). New York: Guilford.
- Beyer, S. (1990). Gender differences in the accuracy of self-evaluations of performance. *Journal of Personality and Social Psychology*, 59, 960-970.
- Beyer S. (1997a). *The accuracy of gender stereotypes regarding college majors*. Manuscript under review.
- Beyer S. (1997b). *Gender differences in self-perception and negative recall biases*. Manuscript under review.
- Beyer, S., & Bowden, E. M. (1997). Gender differences in self-perceptions: Convergent evidence from three measures of accuracy and bias. *Personality and Social Psychology Bulletin*, 23, 157-172.
- Briton, N. J., & Hall, J. A. (1995). Beliefs about female

and male nonverbal communication. *Sex Roles*, 32, 79-90.

Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., & Rosenkrantz, P. S. (1972). Sex role stereotypes: A current appraisal. *Journal of Social Issues*, 28, 59-78.

Cantor, N., & Kihlstrom, J. F. (1987). *Personality and social intelligence*. Englewood Cliffs, NJ: Prentice-Hall.

Cejka, M. A., & Eagly, A. H. (1997). *Gender-stereotypic images of occupations correspond to the sex segregation of employment*. Manuscript in preparation.

Deaux, K., & Lewis, L. L. (1983). Components of gender stereotypes. *Psychological Documents*, 13, 25. (Ms. No. 2584).

Eagly, A. H., & Diekmann, A. B. (in press). The accuracy of gender stereotypes: A dilemma for feminism. *Revue Internationale de Psychologie Sociale/International Review of Social Psychology*.

Eagly, A. H., Makhijani, M. G., & Klonsky, B. G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin*, 111, 3-22.

Fiske, S. T. (1993). Social cognition and social perception. *Annual Review of Psychology*, 44, 155-194.

Funder, D. C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review*, 82, 652-670.

Furnham, A., & Rawles, R. (1995). Sex differences in the estimation of intelligence. *Journal of Social Behavior and Personality*, 10, 741-748.

Hall, J. A., & Carter, J. D. (1997). *Accuracy of gender stereotypes: Relations to behavior domain, judges' gender, and judges' gender schematicity*. Unpublished manuscript.

Judd, C. M., & Park, B. (1993). Definition and assessment of accuracy in social stereotypes. *Psychological Review*, 100, 109-128.

Judd, C. M., Ryan, C. S., & Park, B. (1993). Accuracy in the judgment of in-group and out-group variability. *Journal of Personality and Social Psychology*, 61, 366-379.

Jussim, L. (1989). Teacher expectations: Self-fulfilling prophecies, perceptual biases, and accuracy. *Journal of Personality and Social Psychology*, 57, 469-480.

Jussim, L., & Eccles, J. S. (1992). Teacher expectations II: Construction and reflection of student achievement. *Journal of Personality and Social Psychology*, 63, 947-961.

Jussim, L., Eccles, J., & Madon, S. (1996). Social perception, social stereotypes, and teacher expectations: Accuracy and the quest for the powerful self-fulfilling prophecy. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 281-388). New York: Academic.

Jussim, L., Milburn, M., & Nelson, W. (1991). Emotional openness: Sex-role stereotypes and self-perceptions. *Representative Research in Social Psychology*, 19, 35-52.

Kruglanski, A. W. (1989). The psychology of being "right": The problem of accuracy in social perception and cognition. *Psychological Bulletin*, 106, 395-409.

Lee, Y.-T., Jussim, L. J., & McCauley, C. R. (1995). *Stereotype accuracy: Toward appreciating group differences* (pp. 217-243). Washington: American Psychological Association.

Mackie, M. (1973). Arriving at "truth" by definition: The case of stereotype accuracy. *Social Problems*, 20, 431-447.

Martin, C. L. (1987). A ratio measure of sex stereotyping. *Journal of Personality and Social Psychology*, 52, 489-499.

McCauley, C., & Thangavelu, K. (1991). Individual differences in sex stereotyping of occupations and personality traits. *Social Psychology Quarterly*, 54, 267-279.

McCauley, C., Thangavelu, K., & Rozin, P. (1988). Sex stereotyping of occupations in relation to television representations and census facts. *Basic and Applied Social Psychology*, 9, 197-212.

O'Leary, V. E., & Hansen, R. (1983). Performance evaluation: A social-psychological perspective. In F. Landy, S. Zedeck, & J. Cleveland (Eds.), *Performance measurement and theory*. Hillsdale, NJ: Erlbaum.

Pratto, F., Stallworth, L. M., Sidanius, J., & Siers, B. (1997). The gender gap in occupational role attainment: A social dominance approach. *Journal of Personality and Social Psychology*, 72, 37-53.

Ryan, C. S., Park, B., & Judd, C. M. (1996). Assessing stereotype accuracy: Implications for understanding the stereotyping process. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 121-157). New York: Guilford.

Stangor, C. (1995). Content and application inaccuracy in social stereotyping. In Y.-T. Lee, L. J. Jussim, & C. R. McCauley (Eds.), *Stereotype accuracy: Toward appreciating group differences* (pp. 275-292). Washington: American Psychological Association.

Stangor, C., & Lange, J. E. (1994). Mental representations of social groups: Advances in understanding stereotypes and stereotyping. *Advances in Experimental Social Psychology*, 26, 357-416.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69, 797-811.

Swim, J. K. (1994). Perceived versus meta-analytic effect sizes: An assessment of the accuracy of gender stereotypes. *Journal of Personality and Social Psychology*, 66, 21-36.

Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology*, 68, 199-214.

Swim, J., Borgida, E., Maruyama, G., & Myers, D. G. (1989). Joan McKay versus John McKay: Do gender stereotypes bias evaluations? *Psychological Bulletin*, 105, 409-429.

Tomaskovic-Devey, D. (1995). Sex composition and gendered earnings inequality: A comparison of job and occupational models. In J. A. Jacobs (Ed.), *Gender inequality at work* (pp. 23-56). Thousand Oaks, CA: Sage.

Tversky, A., & Kahneman, D. (1982). Judgment under uncertainty: Heuristics and biases. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 3-20). New York: Cambridge University Press.

U.S. Department of Labor, Bureau of Labor Statistics. (1995, Jan.). Median weekly earnings of full-time wage and salary workers by detailed occupation and sex. *42*(1), 209-213.

Table 1. Percentage of Female Workers by the Gender-type of an Occupation

Feminine		Neutral		Masculine	
Registered Nurse	93.8	Psychologist	58.6	Chemist	36.8
Bookkeeper	91.9	Second. School Teache	55.6	Insurance Sales Representative	35.1
Nursing Aide	88.8	Bartender	55.1	Computer Programmer	29.3
Textile Machine Operator	86.0	Accountant	51.8	Lawyer	24.6
Elementary Sch. Teacher	85.6	Dispatcher	51.4	Physician	22.3
Data Entry Keyer	83.8	Public Official	49.1	Correctional Officer	19.3
Special Education Teacher	83.7	Editor/Reporter	48.8	Farm Worker	16.6
Maid or Houseman	83.3	Real Estate Agent	48.4	Police Officer	13.2
Cashier	79.8	Financial Manager	46.1	Electric. Equipment Repairer	12.4
Waiter or Waitress	78.6	Inventory Clerk	44.1	Truck Driver	4.5
Lab Technician	77.2	Cook	43.3	Mechanic or Repairer	4.5
Insurance Adjustor	74.6	Professor	42.5	Construction Worker	2.2
Social Worker	69.3				
Vocational Counselor	68.1				
Educational Administrator	62.0				
Computer Operator	60.6				

Figure 1. Actual and Estimated Percentages of Female Workers

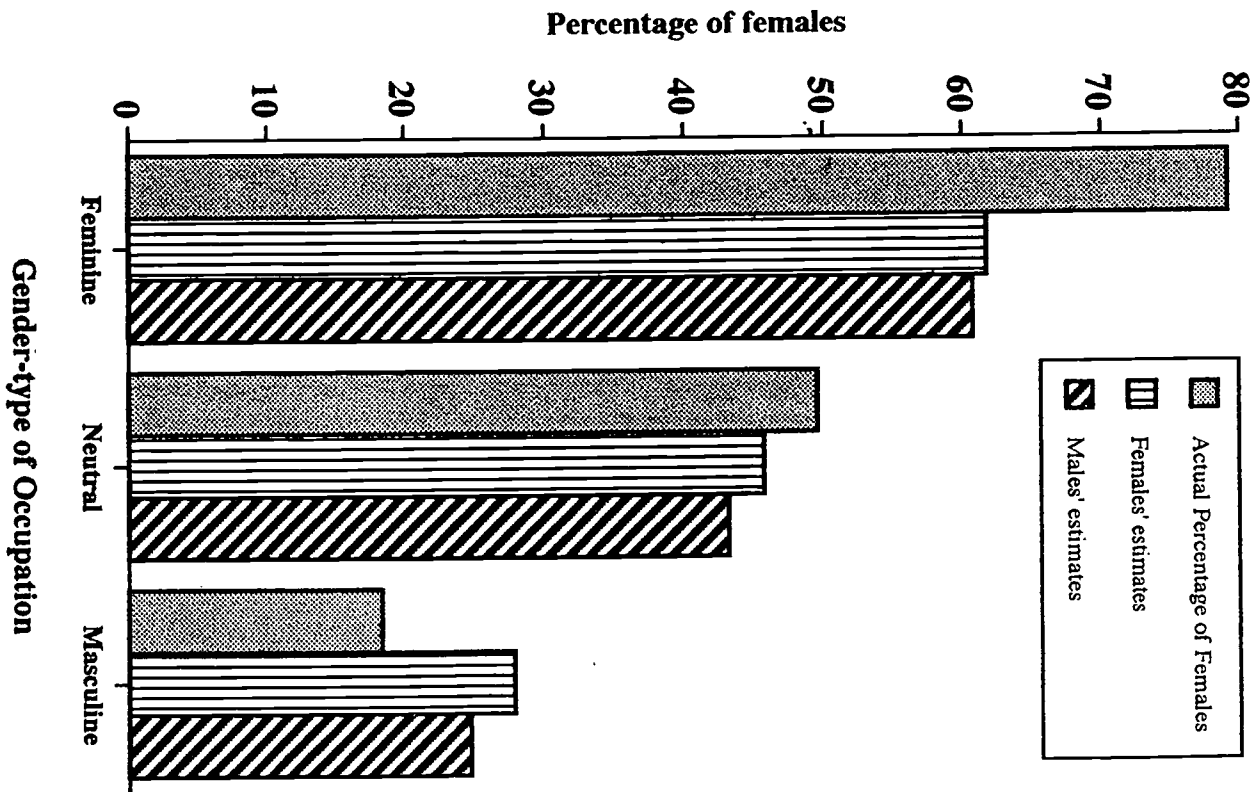
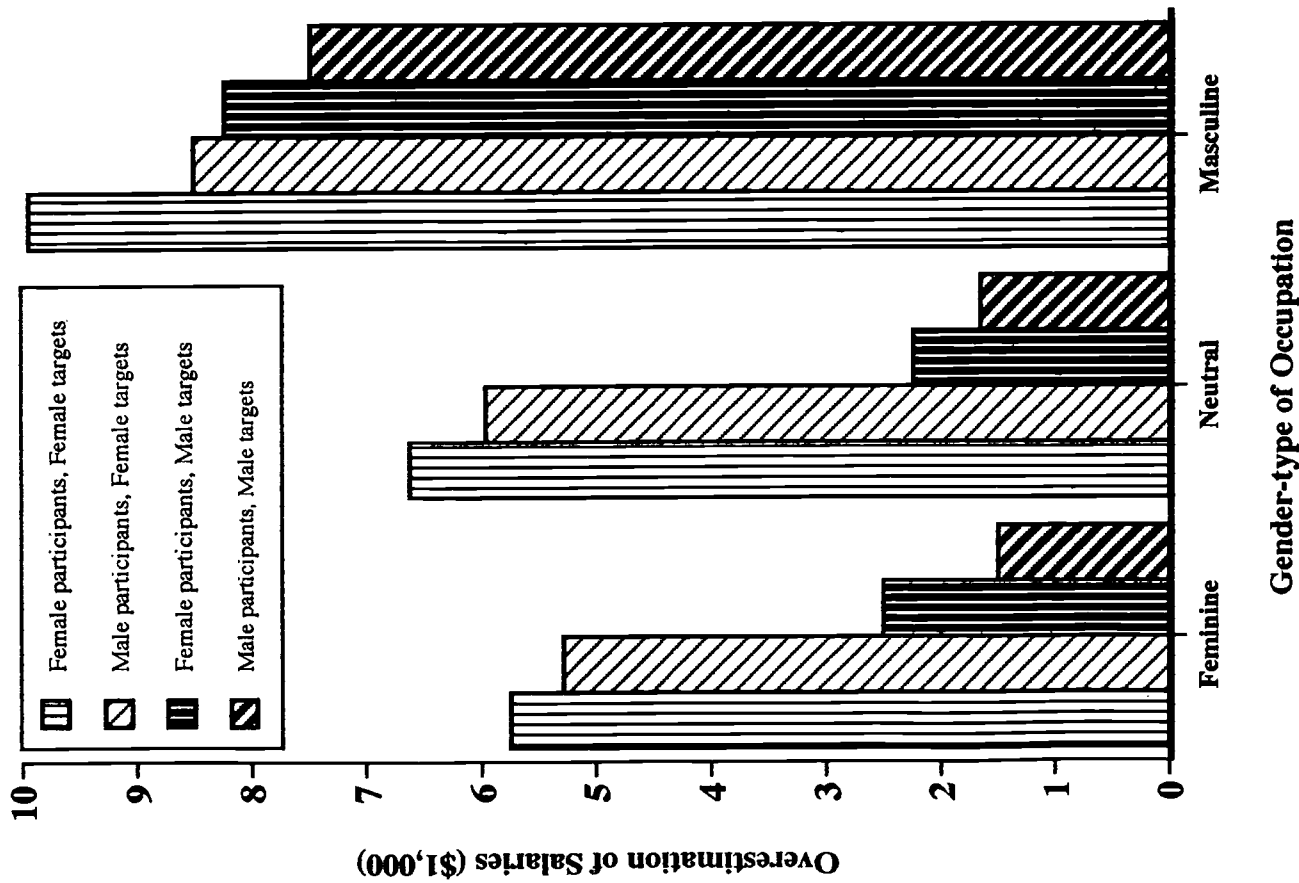
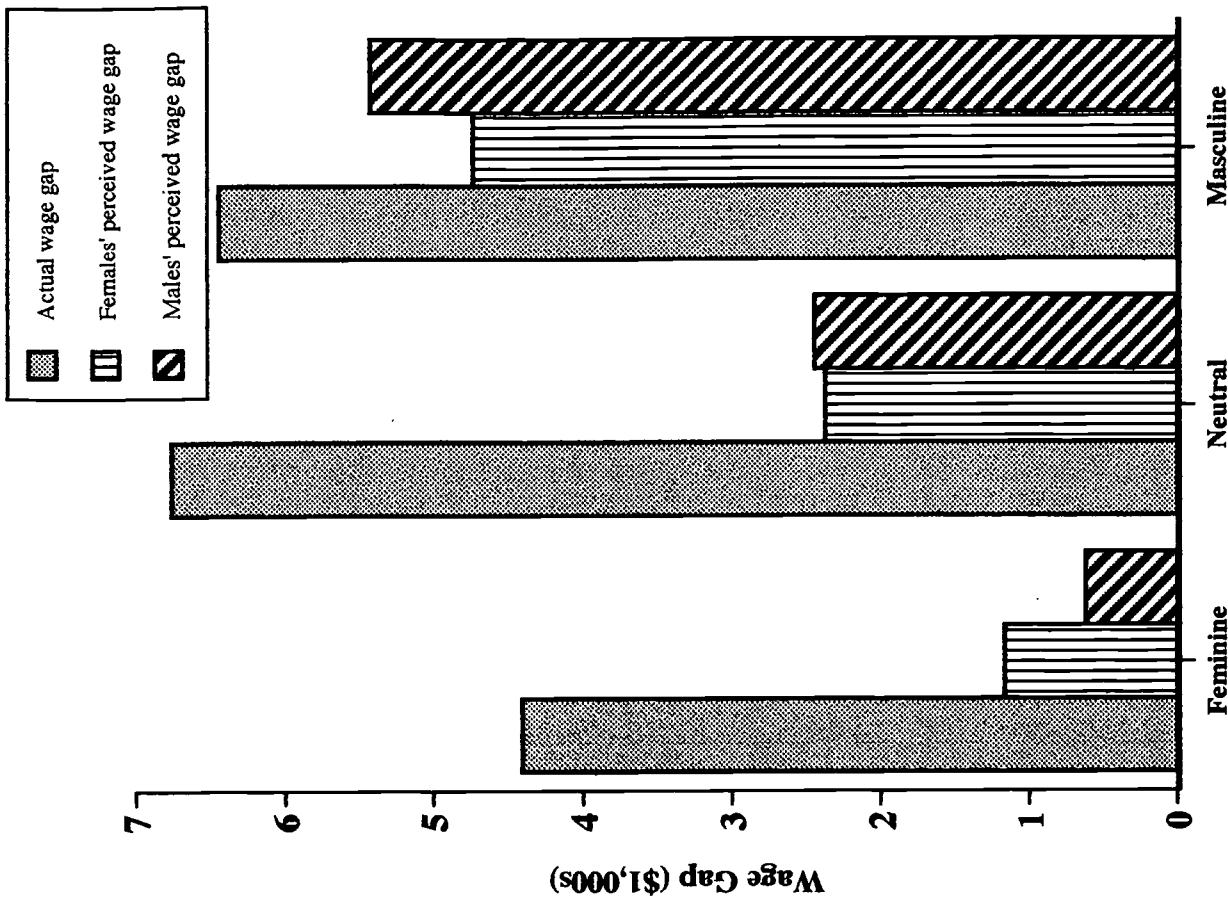


Figure 2. Accuracy of Salary Estimates



Gender-type of Occupation

Figure 3. Actual and Estimated Wage Gaps



Gender-type of Occupation



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