



# THE MASCULINITY OF MONEY: AUTOMATIC STEREOTYPES PREDICT GENDER DIFFERENCES IN ESTIMATED SALARIES

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We present the first empirical investigation of why men are assumed to earn higher salaries than women (the *salary estimation effect*). Although this phenomenon is typically attributed to conscious consideration of the national wage gap (i.e., real inequities in salary), we hypothesize instead that it reflects differential, automatic economic valuing of men and women. In the four studies described here, we demonstrate that the salary estimation effect is present in both student and community samples, is not explained by participants' awareness of real gender inequities in pay, and appears in descriptive tasks (i.e., estimating what men and women do earn; Studies 1 and 2) as well as in a prescriptive task (i.e., determining what men and women should earn; Study 3). Further, the salary estimation effect is best predicted by the degree to which participants hold an automatic stereotype that links men, more than women, with wealth (Study 4). These results suggest that differential estimates of men's and women's salaries, rather than deliberately reflecting reality, instead indicate a male-wealth stereotype that operates largely outside of awareness. We discuss the implications of these results for salary decision making and the unintentional perpetuation of the gender gap in wages.

The Lord said to Moses, "Speak to the Israelites and say to them, 'If anyone makes a special vow to dedicate persons to the Lord by giving equivalent values, set the value of a male between the ages of 20 and 60 at 50 shekels of silver, according to the sanctuary shekel; and if it is a female, set her value at 30 shekels.

—Leviticus 27:1-4

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The differential valuing of men and women has a long history, as suggested by this Old Testament passage. Moreover, social science research suggests that even in the United States, where women have made enormous economic and occupational advances over the last century, their labor continues to be valued less than men's (Blau & Kahn, 2000). In this work, we seek to connect the macro-level phenomenon of the gender gap in wages to micro-level salary estimates made by individuals. Working from a social role theory framework (Eagly, 1987; Eagly, Wood, & Diekmann, 2000), we argue that observations of men as higher earners than women has led to a stereotype that associates men (more than women) with wealth, and that this stereotype itself may serve to perpetuate the wage gap at both conscious and nonconscious levels.

The gender gap in wages remains one of the most intractable inequities faced by American women. In the United States, the average woman who works full time and year-round earns \$0.81 for every dollar earned by the average full-time, year-round working man (U.S. Department of Labor, 2007). Women in other nations are similarly affected; in no country in the world have women's wages been found to equal men's (Weichselbaumer & Winter-Ebmer, 2005). Scientists in a broad range of disciplines have investigated this disparity, focusing particularly on macro-level factors such as the over-concentration of women in service-sector jobs, differences in men's and women's training and work experience, the persistence of caregiving duties for employed women, the segregation of men and women into

different fields of study, and systemic discrimination (see Blau & Kahn, 2000, for a comprehensive review). Yet, although traditional models of the gender gap in wages focus on human capital variables such as differences in men's and women's work experience and education, these variables account for only part of the story. Indeed, even while the overall size of the wage gap has decreased somewhat over time, the proportion of the gap that is unexplained by these human capital variables is *increasing* (Blau & Kahn, 2007). Such findings suggest the need for additional research into how salary decisions are made at the micro or individual level.

Toward that end, psychologists researching the gender gap in wages have focused on the interpersonal and intrapersonal processes involved in salary decision making. For example, a large number of studies working from different theoretical perspectives show that women, relative to men, expect, demand, and allocate lower salaries to themselves (Callahan-Levy & Messé, 1979; Desmarais & Curtis, 1997a, 1997b; Hogue & Yoder, 2003; Jackson, 1989; Jackson, Gardner, & Sullivan, 1992; Jost, 1997; Kaman & Hartel, 1994; Martin, 1989; Moore, 1994; Pelham & Hetts, 2001). Another line of research on "the paradox of the contented female worker" (Crosby, 1982, p. 12), conducted in the relative-deprivation tradition, demonstrates that women are more satisfied with their (lower) salaries than are men (Graham & Welbourne, 1999; Jackson, 1989; Jackson et al., 1992).

Social role theory states that stereotypical descriptions of men and women emerge from repeated observations of men and women in different social roles. Laboratory research from both social-role and other theoretical perspectives reveals that study participants of both genders tend to estimate that men earn higher salaries than women (Bierman, Manis, & Nelson, 1991; Diekmann & Eagly, 2000; Eagly & Steffen, 1984; Eagly & Wood, 1982; Jackson & Grabski, 1988; Morrison, Bell, Morrison, & Murray, 1994). We designate this phenomenon the *salary estimation effect*. For example, in an incidental finding that emerged from now-classic work on the origins of gender stereotypes, Eagly and Steffen (1984) note that estimates of men's salaries were consistently higher than estimates of women's salaries for the same job.

Although many of the studies noting a salary estimation effect were conducted in decades past, there is no a priori reason to believe that the effect would not recur in the 21st century. Indeed, pointing to the durability of this belief, Diekmann and Eagly (2000) find that although people predict that men's and women's personalities will become more similar in the future, they expect that men will still earn more than women in the year 2050. Further, social role theorists have observed a "cultural lag" between veridical gender-role changes and changes in gender stereotypes (Diekmann, Eagly, Mladinic, & Ferreira, 2005). For this reason, we would anticipate that the salary estimation effect would be likely to last at least as long—if not longer—than the gender gap in wages itself.

Further, there have been no empirical attempts to account for the salary estimation effect in the literature. Eagly and Steffen (1984, p. 739) speculated that the disparity could be attributed to participants' consideration of the national wage gap (i.e., of actual differences in wages earned by men and women). However, using a macro-level phenomenon such as the national wage gap to estimate individual salaries may be a challenging task for many participants, particularly in light of the between-participants design used by many past studies. For example, in Eagly and Steffen (1984), each participant rated either a male or a female store manager, but not both. In such a task we would not expect gender to be a necessarily salient factor. More importantly, participants did not have access to a benchmark salary from which they could increase or decrease their estimates according to the employee's gender and their perception of the size of the national wage gap. Finally, we note that participants' ability to draw upon national wage gap statistics in their salary estimates is contingent upon their awareness of the actual size of the gap, as well as their belief that it is a "real" phenomenon. Seventeen percent of Americans and nearly 25% of American men do not believe there is any difference between the average wages of full-time working women and men (American Association of University Women, 2005). For these reasons, it may be that only a small subset of participants—perhaps those who have above-average knowledge of the wage gap issue and for whom gender is chronically salient with regard to workplace decisions—are able to apply their knowledge of the national wage gap to salary estimates. Most people are likely to rely instead on heuristics and stereotypes in order to guess which employees seem to "go with" higher salaries.

In this work, we draw upon the central framework of social role theory to further develop this possibility and to explore the antecedents and consequences of the salary estimation effect. Our work expands upon previously suggested explanations for the salary estimation effect in three ways. First, we suggest that the salary estimation effect is not primarily driven by an awareness of the societal phenomenon of the gender gap in wages. Second, we suggest that the operative factor driving the salary estimation effect is a generalized stereotype linking men (more than women) with wealth. Social role theory would hold that this stereotype emerged from repeated observations of men occupying breadwinning roles, holding the highest-earning occupations, and managing household income at a greater frequency than women. Third, we argue that this male-wealth stereotype can operate outside of awareness, guiding salary estimates and thus increasing the likelihood that the stereotype can perpetuate real gender salary differences even among the well intentioned. In summary, we suggest that the connection between observed salary differences at the macro level and judged salary differences at the micro level is mediated by a stereotype that can operate outside of conscious awareness.

### *A Male-Wealth Stereotype*

We suggest that people may assign higher salaries to men than women based on automatic stereotypic associations; that is, wealth may belong to a general stereotype of men but not of women. Although no studies to date have directly implicated money as part of the male stereotype, several papers indirectly demonstrate ways in which money is associated with men and masculinity. For example, both men and women pay themselves less for completing a task that is labeled “feminine” rather than “masculine” (Major & Forcey, 1985). Similarly, participants estimate higher salaries for jobs they believe to be masculine rather than feminine, even when job duties are identical (Alknis, Desmarais, & Curtis, 2008). These findings suggest that gender labels contribute to the perceived appropriateness of compensation independent of the nature of the task. Other work establishes relationships between male-stereotypic personality traits and the salary of an occupation (Cejka & Eagly, 1999) or a target person (Johannesen-Schmidt & Eagly, 2002).

Additional evidence for a male-wealth relationship comes from research in a legal context. Nagel and Weitzman (1971) reported that personal-injury awards were higher to men than women, even in cases where injuries were not directly relevant to the victim’s earning capacity. In an experimental paradigm, mock juries awarded larger amounts in wrongful-death suits when the deceased person was male versus female, even when the victims’ previous earnings were identical (Goodman, Loftus, Miller, & Greene, 1991). These researchers note that the guidelines given to real juries about how to make such decisions, particularly those for punitive damages, tend to be limited and variable, permitting jurors to determine for themselves the value of a person’s life. It seems that without specific guidelines or formulas, jurors may understand maleness to be associated with greater financial worth than femaleness.

Gender stereotypes of communality and agency arise out of people’s observations of women enacting communal behaviors via their social roles as caregivers, and of men enacting agentic behaviors via their roles as breadwinners (Eagly et al., 2000). Likewise, we hypothesize that people associated maleness with wealth, arguably as a result of observing men (more than women) earn and manage personal income.

Alternatively, given that stereotypes about men’s and women’s traits and roles include many components likely to influence wealth, it is possible that people do not associate maleness with money directly, but rather associate men with other characteristics that are related to wealth. For example, people may estimate higher salaries for men than women because they associate men with greater occupational status (Hogue & Yoder, 2003) or competence (Fiske, Xu, & Cuddy, 1999). People also may perceive men as more entitled to or deserving of resources (Major, 1987). We consider these possibilities in Study 4.

### *Stereotypes and Self-Fulfilling Prophecies*

The fact that participants estimate that people with male first names earn higher salaries than people with female first names (Biernat et al., 1991; Diekmann & Eagly, 2000; Eagly & Steffen, 1984; Eagly & Wood, 1982; Jackson & Grabski, 1988; Morrison et al., 1994) may seem unproblematic on the surface, because, after all, men *do* earn more than women. Thus, participants are increasing the accuracy of their salary estimates by incorporating gender inequality. Yet problems arise if participants are not intending to be accurate in this way but rather are basing their estimates on stereotypes. Social psychologists have long known that stereotypes not only reflect group differences but also create and sustain them by influencing behavior in the direction of stereotypic expectations (Olson, Roese, & Zanna, 1996; Snyder, Tanke, & Berscheid, 1977). Social role theory, too, argues for stereotypes as both the causes and the consequences of gender roles: Gender-based divisions of labor are theorized to lead to prescribed social roles for men and women, which further lead to gender stereotypes, but these stereotypes in turn can influence and reinforce gendered social roles (Eagly et al., 2000).

To the extent that a male-wealth stereotype operates as a self-fulfilling prophecy, the implications may be profound. For example, a male-wealth stereotype may influence an employer’s initial salary offer to a male job candidate, or a female college graduate’s intuitive sense about what salary she can appropriately ask for at her first job. Aggregated over time, these decisions made by individuals may ultimately reinforce the gender gap in wages at a macro level. The effects of stereotypes may be particularly pernicious in the case of salary, in which starting-salary differences can be compounded over a lifetime with percentage-based raises. In other words, a belief that men earn more than women, while accurate, may ultimately cause men to earn more than women.

Stereotypes that operate largely outside of awareness may be particularly vulnerable to these self-fulfilling cycles. The majority of Americans are unlikely to express an explicit belief that men should earn more than women; to do so would violate social norms against sexism and, in the case of decisions made in organizations, the Equal Pay Act of 1963. Still, individuals who automatically associate the concepts of maleness and wealth may make discriminatory salary judgments without awareness that they are doing so.

### *Hypotheses*

We hypothesize that an automatic association between maleness and wealth will help account for people’s tendency to estimate higher salaries for men than women. We position this prediction against the hypothesis that the salary estimation effect reflects people’s deliberate attempts to accurately reflect the national wage gap. We first investigate the possibility of deliberate use of the national

wage gap in estimates of what men and women do earn (Studies 1 and 2) and what they should earn (Study 3). We then test the hypothesis that the salary estimation effect can be predicted by an automatic male-wealth association (Study 4).

In each study, we test for the relationship between participants' gender and the degree to which their salary estimates differ by target gender. However, we did not hypothesize that participant gender would necessarily moderate these effects. On the one hand, men might advantage fellow men in their salary judgments as a function of in-group favoritism (e.g., Rudman & Goodwin, 2004). However, other work has shown that women as well as men hold sexist beliefs (e.g., Glick et al., 2000), including those related to wage entitlement (Desmarais & Curtis, 1997a; Hogue & Yoder, 2003). Moreover, system justification theory would predict that women may be especially likely to show a male-wealth association on measures that are indirect and those in which gender is not salient to the respondent (Jost, Banaji, & Nosek, 2004), such as those used in the present studies. Social role theory, similarly, does not propose that men and women must be differentially susceptible to the inference of trait stereotypes from social roles (Eagly et al., 2000). For these reasons, we did not have specific predictions about whether men and women would differ in their judgments of others' salaries.

## STUDY 1

The primary purpose of Studies 1–3 was to replicate and extend past findings of a gender difference in salary judgments and to determine whether this difference is related to participants' conscious beliefs about the national wage gap. If participants' beliefs about the national wage gap directly influence their estimates of men's and women's salaries, these beliefs should predict the salary estimation effect (i.e., the size of the difference between salaries estimated to be earned by men and women).

Studies 1–3, while methodologically similar, differ from each other in important ways. Studies 1 and 2 demonstrate the salary estimation effect in two very different samples (an undergraduate sample and a community sample) and use both between-participants and within-participants designs. Study 3 employs a different stimulus set and focuses on salary allocations, or beliefs about what men and women *should* earn for specific jobs.

## Method

### Participants

Undergraduates ( $N = 72$ ) at a public university on the U.S. West Coast participated in the study in exchange for partial course credit. The sample was majority female (60%) as well as 43% Asian, 40% White, 3% Latino, and 14% of mixed or other ethnic backgrounds. The average age was

20 ( $SD = 3.80$ , range 18–44). Male and female participants did not significantly differ on age,  $F(1, 71) < 1$ ,  $p = .80$ , or ethnicity,  $\chi^2 = 4.19$ ,  $p = .38$ .

### Materials and Procedure

A between-participants design was used for this study. Specifically, we alternated across two versions of a questionnaire, varying whether a male or female employee held each job.

Participants completed the study in a laboratory room in small groups. They were given a paper-and-pencil questionnaire in which they estimated the salaries of 16 ostensibly real individuals—8 men and 8 women. Following Eagly and Steffen (1984), only first names and job titles were given (e.g., "Harold is a physician. Please estimate his annual salary.").

We selected 16 pairs of male and female first names (Albert/Ruth, Alexander/Deborah, Brian/Danielle, David/Susan, Gary/Louise, Harold/Pauline, Jack/Luisa, Jake/Tracey, James/Lisa, John/Marilyn, Kenneth/Lynn, Mark/Karen, Michael/Linda, Robert/Donna, Sam/Patricia, and Tom/Mary) that, based on pilot testing ( $N = 31$ ), had balanced levels of perceived intelligence and attractiveness within each pair. Each of the 16 jobs was associated with one name from each pair such that target gender was counterbalanced across the two questionnaire versions.

Based on previous research on perceptions of various occupations as "masculine" or "feminine" (Glick, Wilk, & Perreault, 1995; White, Kruczek, Brown, & White, 1989), we selected job titles that were seen as relatively gender neutral and that denote various levels of occupational status: attorney, bartender, bus driver, convenience store clerk, life insurance agent, medical technologist, physical therapist, physician, professor, radio announcer, real estate agent, reporter, restaurant manager, social science teacher, systems analyst, and veterinarian. Jobs selected were rated between  $-0.5$  and  $0.5$  on the  $-2.0$  (*most feminine*) and  $2.0$  (*most masculine*) scale used by Glick et al. (1995), or between 3 and 5 on the 1 (*most masculine*) to 7 (*most feminine*) scale used by White et al. (1989).

After completing their salary estimates, participants received a second questionnaire containing demographic items as well as four questions regarding their beliefs about the national wage gap: (a) whether they had heard of the national wage gap (*yes* or *no*), (b) whether they believe that it is described accurately by the media (scale: 1 [*extremely inaccurate*] to 7 [*extremely accurate*]), (c) whether they were taking the national wage gap into consideration when making their salary estimates (with response choices of "I did not think about it," "I thought about the wage gap, but it didn't affect my salary estimates," or "I thought about the wage gap, and took it into account when I was making my salary estimates"), and (d) their estimate of the size of the national wage gap (the amount earned by the average woman for every dollar earned by the average man—the

**Table 1**  
Average Salaries Estimated for and Allocated to Male and Female Targets

	<i>Study 1</i> <i>Estimate Mean (SD)</i>	<i>Study 2</i> <i>Estimate Mean (SD)</i>	<i>Study 3</i> <i>Allocation Mean (SD)</i>	<i>Study 4</i> <i>Estimate Mean (SD)</i>
Male targets	\$58,800** (\$14,873)	\$59,048** (\$14,804)	\$54,289* (\$29,775)	\$55,721 (\$22,776)
Female targets	\$56,139 (\$14,570)	\$56,966 (\$13,899)	\$49,434 (\$17,043)	\$54,403 (\$19,532)

Note. Significance tests represent differences in estimates or allocations between male and female targets.

\* $p < .05$ . \*\* $p < .01$ .

higher this estimate, the greater the belief in pay equity). After completing this questionnaire participants were debriefed and thanked.

### Results and Discussion

We separately averaged the eight salary estimates for male targets and the eight salary estimates for female targets made by each participant. To test for the salary estimation effect, we analyzed the male averages and female averages using a mixed-model analysis of variance (ANOVA), with target gender as the within-participants factor and participant gender as the between-participants factor. Results showed a main effect of target gender, such that participants estimated significantly higher salaries for male than female employees,  $F(1, 71) = 12.09$ ,  $p = .001$ ,  $\eta^2 = .12$ , indicating a replication of the salary estimation effect. (See Table 1, first column.) There was no main effect of participant gender,  $F(1, 71) = 1.24$ ,  $p = .27$ , but there was a significant target gender by participant gender interaction, such that male participants showed a larger gender gap in their salary estimates ( $M_{\text{male targets}} = \$62,793$ ,  $M_{\text{female targets}} = \$56,659$ ), relative to female participants ( $M_{\text{male targets}} = \$56,107$ ,  $M_{\text{female targets}} = \$55,787$ ),  $F(1, 71) = 9.81$ ,  $p = .003$ ,  $\eta^2 = .12$ . Analyses of the simple effects showed that the gender gap was significant for male participants,  $F(1, 28) = 21.23$ ,  $p < .005$ ,  $\eta^2 = .43$ . The gender gap was not significant for female participants, although it was in the predicted direction.

Previous explanations for the salary estimation effect have focused on participants' awareness of the national wage gap. As shown in Table 2 (first column), nearly all participants indicated that they are aware of the national wage gap issue; further, they believe that women in the U.S. earn an average of \$0.76 to every dollar earned by men. Participants also believe the national wage gap issue to be reported relatively accurately by the media. Yet the majority (69%) said they did not think about the national wage gap when making their salary estimates. An additional 25% of participants said they thought about the issue but that it did not affect their salary estimates, and only 6% said they accounted for the wage gap in their estimates.

To measure the extent to which individual participants estimated lower salaries for female targets relative to male targets, we created a female:male salary estimate ratio by

dividing the average of each participant's female salary estimates by the average of his or her male salary estimates. Ratios closer to 1 therefore indicate more pay equity. If participants were in fact accounting for their understanding of the national wage gap when estimating salaries, their female:male salary estimate ratios should be positively correlated with their beliefs about the size of the national wage gap (measure (d) as described in the Materials and Procedure section).

However, results showed that female:male salary estimate ratios and estimates of the national wage gap were virtually unrelated. (See Table 2, second column.) In addition, female:male salary estimate ratios were effectively unrelated to whether participants reported having heard of the national wage gap, whether they said that they had been thinking about the national wage gap when estimating salaries, and how accurately represented they believe the national wage gap to be. Thus, we found no evidence to support the assumption that the salary estimation effect can be explained by explicit awareness of the national reports that men earn more than women in the United States.

### STUDY 2

The goals of Study 2 were similar to those of Study 1, with two modifications. First, we sought to replicate the results of Study 1 with a sample of participants who were likely to have more experience in the working world, compared to undergraduate students. Second, we sought to provide a stronger test of the possibility that explicit beliefs about the national wage gap account for the salary estimation effect by using a within-participants design. Each participant in Study 2 estimated a salary for *both* a male and female employee with the same job title, rather than for a male or a female employee. If research participants deliberately seek to replicate the national wage gap when making individual-level salary estimates, it would be easier for them to do so when asked to make salary estimates for both genders.

#### Method

##### Participants

Adults ( $N = 129$ ) visiting a public beach in Connecticut completed a questionnaire labeled "Impressions of the Working World" in exchange for a small payment (\$1, a lottery ticket, or a soft drink). A canopy was placed near

**Table 2**  
Beliefs About the National Wage Gap Across Studies

	Study 1		Study 2		Study 4	
	Response	Correlation ( <i>r</i> )	Response	Correlation ( <i>r</i> )	Response	Correlation ( <i>r</i> )
Have you heard of the national wage gap issue?	Yes, 95%	.06	Yes, 88%	.16	—	—
How much do women earn for every dollar earned by men?	\$0.76	.14	\$0.87	.09	\$0.78	-.02
How accurate is the national wage gap issue as described in the media?	<i>M</i> = 5.16 (1–7 scale)	-.08	<i>M</i> = 6.00 (1–9 scale)	-.04	<i>M</i> = 5.26 (1–7 scale)	-.03
–Were you thinking about the national wage gap issue when you made your salary estimates?	No, 69%	-.08	No, 59%	.15	No, 74%	-.03

*Note.* Correlations (*r*) are with female:male salary estimate ratios, or the ratio of the average salary estimated for female targets to the average salary estimated for male targets; all are *ns*. In Studies 1 and 4, participants chose one of three options regarding whether they were thinking about the national wage gap. However, because so few people reported that they were thinking about the national wage gap and that it affected their salary estimates, these responses were combined with responses indicating that the participant was thinking about the national wage gap but that it did not affect his or her salary estimates. Thus, a dummy-coded variable of 1 (was not thinking about the national wage gap) or 2 (was thinking about the national wage gap) was correlated with female:male salary estimate ratios. In Study 2, responses to this questions were classified into “yes” or “no” responses.

the entrance to the beach area, with a sign advertising the opportunity to complete surveys. Participants approached the canopy if they were interested in completing surveys. The sample had a mean age of 33 years (*SD* = 14.99, range 18–81), and was majority male (55%) as well as 88% White, 4% Asian, 3% Black, 3% Latino, and 2% of mixed or other ethnic backgrounds. The majority (83%) were employed, and 15% were students; one additional participant was retired and one was a homemaker. The median range of reported income was \$40,000 to \$49,999. Male and female participants did not significantly differ in age,  $F(1, 125) = 1.70, p = .19$ , or ethnicity,  $\chi^2 = 7.11, p = .21$ .

### Materials and Procedure

We used a within-participants design, such that all participants completed a single questionnaire in which they estimated salaries for both a male and a female target holding the same job. We presented the target estimates in two parts. Ten jobs, five paired with female names and five with male names, appeared on the first portion of the paper-and-pencil questionnaire (a shortened version of that used in Study 1). The second part of the questionnaire contained the same 10 jobs, but now paired with the other gender of each male-female name pair. As in Study 1, participants estimated a salary for each job.

After completing their salary estimates, participants answered, along with demographic questions, four questions about the national wage gap. These questions were similar to measures (a) through (d) used in Study 1, with the exceptions that measure (b) used a 1–9 scale, and measure (c) was open-ended. After returning the questionnaire to the experimenter, participants were paid and debriefed.

### Results and Discussion

We separately averaged the 10 salary estimates for male targets and the 10 salary estimates for female targets made by each participant. To test for the salary estimation effect, we analyzed the male averages and female averages by means of a mixed-model ANOVA, with target gender as the within-participants factor and participant gender as the between-participants factor. As predicted, the results showed a main effect of target gender, such that participants estimated that male targets earn more than female targets,  $F(1, 127) = 9.51, p = .003, \eta^2 = .07$ . (See Table 1, second column.) Thus, the salary estimation effect was replicated among a sample of adults who have direct experience with the working world. There was no main effect of participant gender,  $F(1, 127) < 1, p = .62$ , nor an interaction effect,  $F(1, 127) < 1, p = .95$ .

Participants' responses to the explicit national wage gap questions were similar to those of Study 1. (See Table 2, third column.) We created a female:male salary estimate ratio by dividing the average female salary estimate by the average male salary estimate for each participant. Consistent with Study 1, this ratio did not correlate significantly with participants' wage gap beliefs or their estimate of the wage gap size. (See Table 2, fourth column.)

Although null findings must be interpreted with caution, the combined results of Studies 1 and 2, using very different samples, suggest that the salary estimation effect cannot be fully explained by participants' explicit accounting for real gender inequities in pay. Further, the use of a within-participants design in Study 2 facilitated participants' ability to account for the national wage gap when making their salary estimates, in that they could have decreased the salaries they estimated for female employees

by the same degree that they believe that women in general earn less than men. Nonetheless, the relationship between their estimates and their wage gap beliefs was very small. Other factors are likely implicated in the salary estimation effect.

### STUDY 3

We have proposed that the salary estimation effect, in which men are assumed to earn more than women, has the potential to become self-fulfilling and thus perpetuate the national wage gap. One way this may occur is if assumptions about differences in what men and women *do* earn manifest as prescriptions about what men and women *ought* to earn.

In Studies 1 and 2, the participants' task was to guess the salary earned by ostensibly real workers. In this sense, the salary estimation effect might be characterized as a descriptive gender stereotype in that it captures participants' beliefs about existing differences between women and men. But expectations about earnings may also manifest as prescriptive gender stereotypes, or as beliefs that men *should* earn higher salaries than women. Prescriptive stereotypes are normative beliefs about how group members ought to behave to avoid negative evaluations from others (Burgess & Borgida, 1999). They are particularly common in the case of gender stereotypes, arguably because men's and women's mutual interdependence creates strong obligations for individuals to fulfill role expectations (Rudman & Glick, 1999). In Study 3, participants were placed in the role of employer and were asked to judge what newly hired men and women deserve to earn.

#### Method

##### Participants

Undergraduates ( $N = 102$ ) at a public university on the U.S. West Coast participated in the study in exchange for partial course credit. The sample was majority female (53%) as well as 42% East Asian, 38% White, 7% Latino, 7% South Asian, 1% Black, and 5% of mixed or other ethnic backgrounds. The average age was 20 ( $SD = 2.64$ , range 18–39). Male and female participants did not significantly differ on age,  $F(1, 99) < 1$ ,  $p = .38$ , or ethnicity,  $\chi^2 = 6.89$ ,  $p = .23$ .

##### Materials and Procedure

We used a between-participants design for this study, such that we alternated across two versions of a questionnaire, varying whether a male or a female employee held each job. Participants completed the study in a laboratory room in small groups. Upon arrival, the experimenter gave each participant one of the two paper-and-pencil questionnaire versions and described the study as being about their perceptions of the working world. Participants were informed that a group of employees had been recently hired for a

new research institute at the university's business school; their task was to decide how much each employee should earn.

We generated eight brief employee profiles to capture a range of occupations commonly found in a university setting: accounting supervisor, director of research institute, grants administrator, information technology supervisor, public relations specialist, receptionist, research assistant, and lab manager. Each occupational title was accompanied by (a) an employee first name and last initial, to indicate gender; (b) the employee's education level (high school diploma, four-year-college degree, or master's degree for the director and accounting supervisor positions); and (c) a brief description of the employee's duties (e.g., "greet visitors, answers phones, delivers mail"). Each of the eight jobs was associated with either a male name (four jobs) or a female name (four jobs), such that target gender was counterbalanced across the two questionnaire versions.

Participants were asked to place themselves in the role of employer, and to indicate what they thought each employee should be paid. They read the brief description about each employee, and then made a salary allocation in response to the prompt, "(employee's name) should be paid \_\_\_\_\_ per year." After completing the salary allocations, participants responded to the following statements regarding their explicit beliefs about appropriate salaries for men and women: (a) "Men who work full-time in paid employment should earn higher salaries than women who work full-time in paid employment," (b) "If I have the opportunity to hire employees in my career, I will pay male employees higher salaries than female employees," and (c) "In this survey, I assigned higher salaries to the male employees than the female employees." A 1 (*strongly disagree*) to 7 (*strongly agree*) scale was used. Participants were instructed not to look back at their salary decisions when responding to the final statement. Participants then estimated the size of the national wage gap, provided demographic information, and returned the packet to the female experimenter, who debriefed and thanked them.

#### Results and Discussion

We separately averaged the four salary allocations for male targets and the four salary allocations for female targets for each participant. We then analyzed the male averages and female averages using a mixed-model ANOVA, with target gender as the within-participants factor and participant gender as the between-participants factor. Results showed a significant main effect of target gender, such that participants allocated significantly higher salaries to male targets than to female targets,  $F(1, 99) = 4.25$ ,  $p = .04$ ,  $\eta^2 = .04$ . (See Table 1, third column.) There was no main effect of participant gender,  $F(1, 99) = 2.55$ ,  $p = .11$ , nor a target gender  $\times$  participant gender interaction effect,  $F(1, 99) < 1$ ,  $p = .45$ . This result shows that descriptive beliefs about

gender differences in salaries, as captured by the salary estimation effect in Studies 1 and 2, also extend to prescriptive stereotypes. The fact that these responses were made in response to a “should” prompt suggests that participants are open to the idea—at least at some subtle level—that men *should* earn more than women.

Next, we divided each participant’s average allocation to female employees by his or her average allocation to male employees, to create a female:male salary allocation ratio. There was no association between participants’ estimates of the size of the national wage gap ( $M = \$0.73$ ) and their female:male salary allocation ratios,  $r = -.08$ , *ns*. Moreover, participants’ allocation ratios did not significantly correlate with the degree to which they reported having allocated higher salaries to men,  $r = -.13$ , *ns*. This suggests that participants were largely unaware of (or unwilling to report) the extent to which target gender had influenced their salary allocations.

The two items asking about explicit prescriptions for wage inequality (the belief that men should be paid more than women, and intentions to pay men more than women in future hiring situations) were highly correlated with each other ( $\alpha = .84$ ), and thus were averaged to form a single index. This index was negatively correlated with participants’ allocation ratios,  $r = -.29$ ,  $p = .004$ . Thus, at least some participants explicitly endorsed the idea of gender inequities in salary and apparently expressed this prescriptive belief in their allocations. Further, this index was positively correlated with participants’ estimates of the size of the national wage gap,  $r = .36$ ,  $p = .001$ . Note that a larger wage gap response here reflects a belief in higher earnings for women (relative to men’s earnings)—that is, in *less* gender inequality in the United States. In other words, those least likely to acknowledge an existing inequality between men’s and women’s salaries may be those most likely to perpetuate such inequalities in the future.

## STUDY 4

Study 4 investigates the hypothesis that gender and wealth have become associated on an implicit level, and this stereotypic association will help account for gender differences in explicit salary judgments. For some individuals, the observation of men performing traditional roles in the paid workforce and as household breadwinners may have led to a stronger association of financial wealth with maleness than with femaleness. This association, made automatic over time, may affect salary judgments, even outside of conscious awareness. In Study 4, we investigate whether the salary estimation effect can be explained by the degree to which participants automatically associate maleness with wealth.

It is also possible that other relationships, likewise developed over time through observation of men and women in different social roles, could be implicated in the salary estimation effect. For example, people may estimate that

men earn more than women because they associate men with wealth indirectly, via greater status, competence, or deservedness. In the following experiment we measure participants’ automatic associations linking gender with wealth, status, competence, and deservedness, and we relate the strength of each association to participants’ salary estimates. Associations were measured using the Implicit Association Test, or IAT (Greenwald, McGhee, & Schwartz, 1998), a methodological tool based on the assumption that very rapid task responses made via computer keystrokes are less subject to effortful control compared to self-report responses, and thus are more reflective of automatic or implicit beliefs and attitudes. The IAT measures the strength of associations between pairs of categories by noting differences in response times between trials in which “matched” categories are compared (such as “flowers” and “good”) and trials in which “unmatched” categories are compared (such as “flowers” and “bad”).

## Method

### Participants

Undergraduates ( $N = 47$ ) at a private university on the U.S. East Coast completed the experiment in exchange for partial course credit. The sample was majority male (52%) as well as 56% White, 28% Asian, 11% Latino, 4% Black, and 1% of mixed or other ethnic backgrounds. Male and female participants did not significantly differ on age,  $F(1, 42) < 1$ ,  $p = .87$ , or ethnicity,  $\chi^2 = 2.35$ ,  $p = .50$ .

### Materials

**Implicit Association Tests.** To measure associations between gender and wealth, we developed an IAT, here termed the Wealth IAT, using the categories “male,” “female,” “rich,” and “poor.” Participants were asked to categorize gender-related terms (*man, male, boy, uncle, grandpa, husband, father, or son*; and *woman, female, girl, aunt, grandma, wife, mother, or daughter*) as belonging to the category “male” (assigned to one side of the computer screen) or “female” (assigned to the other side, Banaji & Hardin, 1996). Simultaneously, they were asked to categorize wealth-related terms (*rich, money, wealth, cash, paycheck, fortune, income*; or *prosperous*; and *poor, charity, welfare, debt, destitute, poverty, penniless, or unpaid*) as belonging to the category “rich” (assigned to one side of the computer screen) or “poor” (assigned to the other side). The strength of each participant’s association is measured as the difference between his or her average response latency in trials in which “male” is on the same side of the screen as “rich” (and “female” on the same side as “poor”) and his or her average response latency in trials in which “female” is on the same side of the screen as “rich” (and “male” on the same side as “poor”).

We developed three additional IATs for the present experiment. The Status IAT asked participants to classify



the same male and female words used in the Wealth IAT and to classify status-related words into the categories of “high-status” (*prominent, respected, influential, important, esteemed, powerful, dominant, and admired*) and “low-status” (*subordinate, disrespected, insignificant, dependent, unknown, powerless, assistant, and unrecognized*). The Competence IAT asked participants to classify male and female words as well as “skilled” (*skilled, capable, expert, qualified, trained, knowledgeable, experienced, and proficient*) and “unskilled” (*unskilled, inept, inexperienced, unqualified, untrained, inadequate, amateur, and incompetent*) words. Finally, the Deservedness IAT asked participants to classify male and female words as well as “deserving” (*entitled, earned, merited, eligible, and deserving*), and “undeserving” (*worthless, unentitled, unearned, undeserving, and ineligible*) words. For all four IATs, the stimulus words were chosen from a larger set based on pilot participants’ ratings of the words’ conceptual similarity to the target concept. Because previous research has shown a general tendency for people to associate “female” with “good,” we also included a Good IAT, used in previous studies (e.g., Rudman & Goodwin, 2004), as a valence control. This IAT measures the degree to which respondents associate good words (e.g., terrific) with “female” more than “male.”

**Salary estimates.** We used a between-participants design, as in Study 1, such that we alternated whether jobs were held by male or female employees across two versions of a questionnaire. Because of time constraints (because participants completed multiple IATs), we presented 6 rather than 10 jobs (*bartender, veterinarian, restaurant manager, attorney, bus driver, and life insurance agent*). Three jobs were described as being held by women and three by men, with target gender counterbalanced across the two questionnaire versions.

**Follow-up questionnaire.** A final questionnaire measured participants’ explicit gender-wealth associations on a 5-point scale (where 1 = “I strongly associate *wealth* with *males* and *poverty* with *females*” and 5 = “I strongly associate *wealth* with *females* and *poverty* with *males*”). As in Studies 1 and 2, participants reported their perception of the accuracy of media reports about the national wage gap using a scale from 1 (*extremely inaccurate*) to 7 (*extremely accurate*), reported whether they accounted for the national wage gap in their salary estimates, and estimated the size of the national wage gap.

### Procedure

Participants completed the experiment individually in a laboratory room equipped with a computer. They completed the five IATs in randomized order, followed by the salary estimates and demographic, explicit-association, and national wage gap questions.

## Results

### Salary Estimates

As in Studies 1 and 2, we separately averaged the three salary estimates for male targets and the three salary estimates for female targets made by each participant. To test for the salary estimation effect, we analyzed the male averages and female averages using a mixed-model ANOVA, with target gender as the within-participants factor and participant gender as the between-participants factor. In contrast to Studies 1 and 2 and previous literature, the main effect of target gender was not significant: Salary estimates for male targets were higher than those for female targets, but not significantly so,  $F(1, 42) < 1$  (see Table 1, fourth column). There also was no main effect of participant gender,  $F(1, 42) < 1$ ,  $p = .94$ , nor an interaction effect,  $F(1, 42) < 1$ ,  $p = .85$ . Although the salary estimation effect was not significant as a main effect, the primary goal of Study 4 was to determine whether individual differences in the degree to which participants estimated higher salaries for men than women could be accounted for by the strength of their stereotypic associations.

### Beliefs About the National Wage Gap

Participants’ beliefs about the national wage gap were similar to those in Studies 1 and 2 (see Table 2, fifth column). Most participants (74%) said they were not thinking about the national wage gap at all when making their salary estimates. An additional 24% of participants said they were thinking about the issue but that it did not affect their estimates, and just one participant said it affected his/her estimates.

We created a female:male salary estimate ratio by dividing the average female salary estimate by the average male salary estimate for each participant. Consistent with Studies 1 and 2, participants’ beliefs about the national wage gap were virtually unrelated to their female:male salary estimate ratios (see Table 2, sixth column).

### Automatic Associations

Scores for each of the IATs were calculated according to the algorithm outlined by Greenwald, Nosek, and Banaji (2003). Higher scores (see Table 3) indicate a faster association between the concept of interest and “male” relative to “female.”

For each of the four IATs, we used a repeated-measures analysis of covariance to compare participants’ scores on trials in which the concept of interest was paired with “male” versus trials in which the concept was paired with “female.” Scores on the Good IAT were entered as a covariate, so that the association between gender and the concept of interest could be examined independently of valence. The IAT of primary interest, the Wealth IAT, showed a significant effect of gender pairing, such that participants were significantly faster in responding

**Table 3**  
Implicit Association Test (IAT) Scores as Predictors of the Salary Estimation Effect, Study 4

	Mean IAT latencies (in ms) for female trials (SD)	Mean IAT latencies (in ms) for male trials (SD)	Relationship to female : male salary estimate ratio ( $\beta$ )
Wealth IAT**	823.82 (141.59)	797.53 (98.89)	-.35*
Competence IAT**	818.29 (150.57)	801.07 (110.92)	.17
Status IAT	804.37 (147.36)	808.32 (100.27)	-.10
Deservedness IAT	776.92 (129.80)	801.91 (120.56)	.24

*Note.* Significance levels associated with IAT latencies indicate that trial latencies were significantly longer when the concept was associated with “female” than with “male.”  $\beta$  values reflect the relationship between IAT scores and female: male salary estimate ratios, controlling for Good IAT scores. Higher salary estimate ratios indicate a smaller gender gap in salary estimates.

\* $p < .05$ . \*\* $p < .01$ .

to trials in which “male” (rather than “female”) was associated with wealth,  $F(1, 42) = 11.97$ ,  $p < .01$ ,  $\eta^2 = .23$ . In the Competence IAT, participants were also significantly faster in responding to trials in which “male” (rather than “female”) was associated with competence,  $F(1, 42) = 13.09$ ,  $p = .001$ ,  $\eta^2 = .24$ . There was no significant effect of gender pairing for the Status IAT,  $F(1, 42) = 2.36$ ,  $p = .13$ , or the Deservedness IAT,  $F(1, 42) < 1$ ,  $p = .53$ . Means and SDs are reported in Table 3.

### Regression Analyses

The principal aim of this experiment was to test whether participants’ male-wealth associations predicted the salary estimation effect. A series of regression analyses using each of the target IAT scores as predictor variables (along with Good IAT scores), and female:male salary estimate ratios as the dependent variable, revealed that only the Wealth IAT explained significant variance in participants’ salary estimate ratios ( $\beta = -.35$ ,  $p = .049$ ). As shown in Table 3, neither the Status, Competence, nor Deservedness IAT scores were significantly related to salary estimate ratios. Further, in a simultaneous regression in which the Good, Status, Competence, Deservedness, and Wealth IAT scores were entered as predictors of the female:male salary estimate ratios, only the Wealth IAT was a significant predictor of salary estimate ratios ( $\beta = -.43$ ,  $p < .05$ ). This reinforces the idea that it is a male-wealth stereotype in particular—independent of its conceptual overlap with stereotypes of men’s greater status, competence, or deservedness—that accounts for gender differences in estimated salaries.

Participants’ explicit male-wealth association—the degree to which they reported overtly associating wealth with men more than with women—was weakly (but non-significantly) related to female:male salary estimate ratios,  $r = .23$ , *ns*. We next tested the relative contribution of the implicit and explicit male-wealth associations to the salary estimation effect by regressing the salary estimate ratios on these two variables (along with Good IAT scores). The results of this analysis indicate that implicit male-wealth associations, as measured by the IAT, remain a significant

predictor of the salary estimation effect,  $\beta = -.35$ ,  $p < .05$ , independent of explicit male-wealth associations ( $\beta = .22$ , *ns*).

### Discussion

Study 4 investigated the hypothesis that the salary estimation effect can be predicted by an automatic association between maleness and wealth. As predicted, participants generally associated maleness, more than femaleness, with wealth. Moreover, consistent with our primary hypothesis, variability in the strength of participants’ male-wealth association explained meaningful variance in the degree to which their salary estimates differed based on target gender. Yet implicit associations between gender and competence, status, and deservedness were not significantly related to participants’ salary estimate ratios. Each of these ideas is both conceptually and empirically related to salary, and we certainly do not wish to argue that gender differences in perceived competence, status, and deservedness play no role in economic decision making. Wealth, however, arguably has the most direct conceptual connection to salary estimates. For this reason it is not surprising that it is a male-wealth stereotype that is most powerfully linked to gender differences in estimated salaries.

Contrary to expectation, the salary estimation effect was not significant in Study 4. This could be attributable to the smaller number of salary estimates (six) made in Study 4 relative to those in Studies 1 (16) and 2 (20), which may have contributed to greater variance in the salary-estimate averages. (Indeed, standard deviations in salary estimates were highest in Study 4; see Table 1.) The small sample size in this study (relative to Studies 1–3) also likely contributed to greater variance and reduced our power to detect the effect. Nevertheless, the focus of this study was on the covariation of the salary estimation effect with beliefs about the national wage gap and male-wealth stereotypic associations.

Future studies might seek to tease apart the degree to which this effect is influenced by the tendency of individuals with a strong male-wealth association to estimate lower

salaries for women versus the tendency of individuals with a weak male-wealth association to estimate higher salaries for women. Although the small sample size in the present study limits our ability to separate these two possibilities analytically, there may be interesting individual differences in the nature of the relationship between salary disparities and implicit associations. For example, individuals with weaker male-wealth associations may have had differential life experiences, perhaps with strong female heads of household, that may have led them to see women as equal or higher earners, compared to men.

The results of Study 4 further showed that an implicit male-wealth association (as measured by the IAT) was a significant predictor of the salary estimation effect, even controlling for explicit male-wealth associations. Certainly, explicit association strength, although nonsignificant, was not entirely unrelated to the salary estimation effect. Not surprisingly, some individuals consciously link maleness with wealth, and this relates to their tendency to estimate higher salaries for men than women. On the other hand, implicit associations accounted for unique variance in the salary estimation effect, indicating that the mechanisms that produce gender differences in salary estimates operate at least partially outside of awareness. Thus, even individuals who are motivated to treat men and women fairly, either for public reasons (such as wanting to appear unbiased or to abide by labor laws) or private ones (such as personally valuing gender equality), may nonetheless show associations between higher salaries and male employees.

## GENERAL DISCUSSION

These studies represent the first attempt to systematically investigate why men are assumed to earn more than women, here described as the salary estimation effect. The results implicate automatic associations between maleness and wealth as the best predictor of this effect. This association may be described as automatic in the sense that most people do not appear to deliberately apply it to their estimates of male and female salaries.

We do not argue, however, that this association must operate outside of awareness under all circumstances and in all individuals. Some individuals undoubtedly are aware that they perceive money as masculine, as suggested by responses to the explicit items in Study 4. Our particular interest was in a male-wealth stereotype that could be non-conscious. Such a stereotype could be particularly pernicious among employers who, even when consciously seeking to be egalitarian, may in fact be gender biased in their hiring and compensation decisions. It also could contribute to the “paradox of the contented female worker” (Crosby, 1982, p. 12) in that female employees who associate wealth more strongly with men than with women may be less likely to expect or demand salaries equal to those of their male counterparts.

In Study 1 (particularly among male participants) and Study 2, salaries estimated for men were significantly higher

than those estimated for women, replicating previous findings (Biernat et al., 1991; Diekmann & Eagly, 2000; Eagly & Steffen, 1984; Eagly & Wood, 1982; Jackson & Grabski, 1988; Morrison et al., 1994). The size of this salary estimation effect was comparable across two very different samples—an undergraduate sample in Study 1 and a community sample of adults in Study 2. Further, we found no evidence that salary estimate ratios for individual occupations varied systematically across studies, suggesting that the effect is not specific to any one type of job. The salary estimate effect may well have been considered expected or incidental in past studies because it occurs in the same direction as actual gender differences in salary. But although participants' salary estimates may in fact correspond with reality, it does not necessarily follow that these respondents are purposely trying to replicate the national wage gap. Instead, the salary estimation effect may be an example of how people selectively use information about base rates when such information serves their motivation to justify a social inequity (Uhlmann, Brescoll, & Pizarro, 2007). Our suggestion is that, rather than assuming that the national wage gap leads to a participant-level wage gap, this phenomenon may in fact ultimately operate in the other direction. Stereotypic associations in the minds of individual employers may lead them to offer higher salaries to men than women, leading to real-world gender disparities.

The studies presented here consistently failed to find support for the assumption that the salary estimation effect can be explained by conscious consideration of the national wage gap. The effect was unrelated to participants' estimates of the size of the national wage gap, their reported awareness of the wage gap issue, or their confidence in its actual existence and accurate depiction in the media. We observed these effects even with a within-participants design (Study 2), which presumably made it easier for participants to be consistent with the national wage gap, if that was their intent. Further, although the samples varied somewhat in their estimation of the size of the national wage gap, participants' estimates of the size of the national wage gap were unrelated to the salary estimation effect in both samples. When explicitly asked whether the national wage gap issue had affected their salary estimates, very few participants (6% in Study 2; 2% in Study 4) reported that it had.

What, then, explains the salary estimation effect? As hypothesized, an implicit link between maleness and wealth predicted participants' salary estimate ratios in Study 4. We argue that, for many people, wealth is seen as relatively masculine. This may be a consequence of repeated observations that men are more likely than women to hold paid employment outside the home and to earn high salaries. This idea is consistent with the model presented in social role theory, which traces the origins of gender stereotypes to people's everyday observations about men's and women's breadwinning and caregiving roles (Eagly & Steffen, 1984; Eagly et al., 2000).

A male-wealth association may have implications that go beyond the domain of work to expectations about men's and women's general economic and social value (Goodman et al., 1991; Nagel & Weitzman, 1971). Men may be valued more than women in a variety of contexts beyond labor, such as damage decisions awarded by juries (discussed previously), the calculation of life insurance rates for men and women, or death benefits paid to survivors of deceased soldiers. Especially because the male-wealth stereotype can operate without deliberate intent, its effects may extend beyond decisions about paid labor to broader decisions in which lives are quantified in economic terms.

Yet even if we restrict our focus to the work domain, the present studies have important implications. Although the participants in these studies were not actual employers, the fact that their salary estimates unintentionally reflected an inequitable reality is more ominous than it first appears. The belief that men earn more money than women for doing the same job is functionally equivalent to any other form of stereotype (see Hamilton & Trolier, 1986). Moreover, while many stereotypes correspond to some degree to social realities (Judd & Park, 1993), those that operate without deliberate intent may be especially likely to influence behavior and thus reinforce the reality from which they arose. Indeed, some theorists argue that individuals' motivation to justify the status quo—even at the expense of their own self-interest—is especially likely to manifest in indirect and implicit measures such as those described here (Jost et al., 2004).

Finally, Study 3 suggests that beliefs about gender differences in salaries are not merely descriptive but also prescriptive in that they imply a belief that men *should* earn more than women. In taking the role of an employer assigning salaries to new male and female employees, these student participants had the opportunity to correct a social inequity with which many disagreed. Yet they missed this opportunity by allocating higher salaries to men than women. Had their salary judgments been real, these participants clearly would have perpetuated the gender gap in wages. Although the actual wage gap has been shown to be influenced by a large number of macro-level phenomena, such as occupational segregation and familial and gender roles, meaningful variance remains unexplained (Blau & Kahn, 2007); micro-level variables such as implicit stereotyping in salary decision making represent an additional piece of the puzzle.

We view these findings as provocative starting points for future testing. Research that addresses the limitations of the present experiments would be one initial starting point. These studies demonstrate a lack of empirical support for the idea that the salary estimation effect results from people's deliberate attempts to accurately capture the national wage gap; however, null results such as these must always be interpreted with caution (cf. Greenwald, 1975). It is possible that we failed to capture the precise mechanism through which explicit beliefs about the national wage gap lead to the salary estimation effect.

We see possibilities for additional research in terms of how a male-wealth stereotype would manifest in other decision-making arenas, both conscious and nonconscious. For example, do men and women apply gender-wealth stereotypes to the self? If so, it would be interesting to investigate the degree to which this tendency could be implicated in gender differences in self-pay (Jost, 1997; Major, McFarlin, & Gagnon, 1984; Pelham & Hetts, 2001). Second, several of the present studies were conducted with college students, who may have relatively little work experience and therefore may be more likely than actual hiring managers to rely on stereotypes in making salary decisions. An important question for future investigation is how these findings might hold in real-world hiring decisions.

Our work makes a novel contribution to the gender stereotyping and pay equity literatures by demonstrating that a male-wealth stereotype, now empirically supported, can be implicated in a social perception task, that of estimating the salary of a target person. Given the highly subjective nature of decisions involving the monetary valuing of labor and of individuals, this association has the potential to affect social reality as well as perception. This male-wealth link may be especially powerful when clear reference points are unavailable, as for example when a small-business owner must generate salary offers for newly created positions in the absence of clear guidelines. In this example, the employer may have explicit goals to create a gender-equitable workplace, to reward employees fairly, and to abide by federal labor laws, but may nonetheless offer a higher salary to a male job candidate without awareness that the candidate's gender influenced her decision. As a consequence of a male-wealth association, otherwise well-intentioned individuals may find themselves unintentionally applying a stereotype and simultaneously perpetuating wage disparities between women and men. But by recognizing and revealing potentially harmful stereotypes such as the belief that money is masculine, we can begin the process of dismantling them.

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