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Representation at Work: Perceived Representation and Belonging Predict Female Representation

Across Occupations

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## **Abstract**

Women remain underrepresented across many fields, and much research has focused on understanding why this may be the case. The field-specific ability beliefs (FAB) hypothesis aims to provide such an account, proposing that women are underrepresented in fields that emphasize brilliance—raw, innate intellect or talent (Leslie, Cimpian, et al., 2015). The present research challenges the FAB hypothesis, however, and suggests that individuals' perception of the gender representation in a field may be a more fundamental and generalizable explanation for real-world gender representation. We find that across a novelly expansive variety of occupations—both layperson and academically-oriented jobs—participants' perceptions of the proportion of women in a job robustly predict actual female representation. We also replicate past research which has suggested that the role of brilliance may be better accounted for by the broader construct of anticipated belonging. These results suggest that valuable interventions to encourage gender equity in the workforce should focus on highlighting women's membership in various domains and fostering conditions that elevate feelings of belonging.

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Representation at Work: Perceived Representation and Belonging Predict Female Representation  
Across Occupations

Women comprise 50.8% of the United States population yet are underrepresented in many crucial sectors. In the three most recent U.S. presidential cabinets, women have held less than 35% of positions (*Women in the U.S. Cabinet* 2021). In computer science and engineering professions, women only constitute 25% and 15% of employees, respectively (Fry et al., 2021). In academia, only 27% of tenured faculty and 32% of college presidents are women (Kelly, 2019; Fuesting, et al., 2022). Not only are these patterns inequitable, but they also have tangible impacts on women's economic power and well-being, the success and productivity of organizations, and societal approaches to large-scale problems (Fine, Sojo, & Smith, 2019).

Given its importance, there have been numerous accounts of the factors that may contribute to women's underrepresentation. Suggestions include differences across genders in motivation (Diekmann & Eagly, 2008), family values (Dicke et al, 2019), and even innate intelligence (Halpern et al., 2007). More recently, it has been suggested that perceived brilliance, over and above other factors, best accounts for differences in gender representation (Leslie, Cimpian et al., 2015). Indeed, to describe these patterns, researchers have put forth the field-specific ability beliefs (FAB) model, which asserts that female representation in a field can be explained by the level of brilliance—the level of raw, innate, intellect or talent—associated with that field. The model proposes that because culturally ambient stereotypes link men, not women, with “brilliance,” women may be considered unfit, or feel unwelcome, in specific fields that emphasize brilliance. Considering academic disciplines, for example, women are underrepresented in disciplines such as physics and philosophy, but overrepresented in others like biology and psychology (National Science Foundation, 2019). The FAB model has gained

empirical support: there is a negative relation between academics' beliefs about the brilliance required to succeed in their field and the percentage of PhDs received by women in that field (Leslie, Cimpian et al., 2015), and exposure to a hypothetical college major, internship (Bian et al., 2018), or job (Vial et al., 2022) that claim to necessitate brilliance leads women, but not men, to feel less interested in pursuing those opportunities.

A challenge for the FAB account, however, is that it is difficult to disentangle brilliance beliefs about a field from the gender representation in that field. This warrants the question: Is female underrepresentation the result of perceived brilliance or perceived representation? In other words, are women less likely to pursue a specific academic field or profession because it values brilliance or, rather, because there are few women in that field or profession? Is it possible that the gender demographics of a field play a fundamental role in sustaining gender representation?

Gender demographics, also termed gender base rates, are the frequency of women and men within in a certain profession.<sup>1</sup> We theorize that individuals' expectations of gender base rates in a context—their perceived gender representation—may work to sustain actual representation for several reasons. First, there are basic homophily effects, which are well-documented across many social contexts and among many identifiers. These effects demonstrate that people prefer to interact with those of the same gender (Holman & Morandin, 2019), a pattern that emerges early in development and persists throughout the lifespan (Martin et al., 2013). These effects may apply to both job holders, who could prefer those of their same gender in the hiring process, and job pursuers, who may feel a reduced interest if they perceive that a potential occupation lacks sufficient members of their gender.

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<sup>1</sup>Gender demographics also include representation of non-binary and genderqueer individuals when this information is available and/or known.



Relatedly, self-to-prototype matching theory suggests that people consider the alignment between their self-concept and a prototypical, or representative, member of a group when assessing preferences or making decisions (Niedenthal et al., 1985). Perceiving a mismatch may elicit feelings of discomfort or lack of belonging within the group under consideration (McPherson et al., 2018). Among undergraduates who were randomly assigned to view videos of conferences with either unequal or balanced gender attendance, women who viewed unequal ratios reported less belonging relative to women who saw balanced groups (Murphy et al., 2007). And research which presented participants with a hypothetical job and varied the proportion of women employees in the job description found that female participants showed greater interest in the job when the sex ratio was balanced (Heilman, 1979).

Yet another reason to emphasize the importance of perceived representation is that it may provide a more generalizable explanation of gender representation. Past research has tried to rule out this possibility, albeit indirectly, by controlling for participants' estimates of female representation, but the results have been mixed. In some cases, perceived representation appears to account for the effects of perceived brilliance and in others, it does not. These discrepancies may be due to different populations or areas under study. Indeed, research advancing the FAB model has only examined academic fields or hypothetical jobs, and it seems plausible that an alternative explanation may better account for gender disparities in layperson jobs. Academic fields are far less familiar to laypeople, so the effects examining academic disciplines with samples of academics are highly specific—it is unclear to what extent the FAB models generalized across professions. Patterns of women's underrepresentation in layperson jobs are, in fact, often inconsistent with the FAB model: women are underrepresented in jobs that are not

normatively associated with brilliance (e.g., security guards, painters, firefighters) and overrepresented in jobs that may be (e.g., veterinarians, judges).

There are several ways in which perceived representation may factor into explanations of gender differences across occupations. One possibility is that, given its importance, perceived representation may supersede the effects accounted for by FAB and could perhaps even serve as the basis for perceived brilliance. Early work on this topic found that current base rates of males and females in a job were the strongest predictor of sex-typing (i.e., participants' expectations concerning the appropriate sex of a job holder), over and above occupation and job content (Krefting et al., 1978). This suggests that base rates could inform assumptions of a job's requirements, such as the level of brilliance possessed by job holders. Past research on FAB itself has also demonstrated a relation between perceptions of gender base rates, brilliance beliefs, and representation. Meyer and colleagues (2015) asked college-exposed and non-college exposed participants to estimate how many women had received American doctoral degrees in a subset of academic fields under investigation. They attempted to rule out the effects of base rates by demonstrating that FAB was still predictive of gender representation when accounting for participants' estimates of female representation. Consistent with this first possibility, however, these estimates were independently predictive of gender representation and, when added to the regression for non-college exposed participants, overrode the effect of FABs. Another possibility, though, is that there are independent effects of perceived representation and perceived brilliance, which, together, contribute to representation.

In addition to brilliance beliefs and base rates, existing research suggests that there may be other potential contributors to gender representation. One such contributor is belonging, which describes a person's sense of membership and acceptance in a setting (Good et al., 2012).

Perceived representation and brilliance beliefs may be grounded in, or connected by, belonging. Indeed, academics' ratings of whether women were suitable for and welcome in a discipline mediated 70.2% of the relation between FAB and gender representation (Leslie, Cimpian et al., 2015). And recent research demonstrates that belonging may mediate the effect of FABs on women participants' interest in a hypothetical college major (Bian et al., 2018).

Another possible contributor is masculinity contest culture, which describes an organizational environment in which individuals feel the "need to aggressively compete and dominate others" (Berdahl et al., 2018; Kupers, 2005, p. 713), resulting in the display of stereotypically masculine behaviors and attitudes such as competitiveness, aggression, and emphasis on independence. Masculinity contest culture is experienced negatively by both men and women, but may be particularly difficult to navigate for women, who are often socialized into contrasting kinds of behavior displays. Recent research suggests that masculinity contest culture may be another potential mediator between a field's perceived brilliance and interest in that field (Vial et al., 2022).

The present study aimed to explore the relationship between variables which have established as informative of female gender representation, particularly to examine the effects of perceived representation. To provide a more rigorous test of this account as well as to ensure its generalizability, this study includes a large sample of laypeople and probes a broader range of occupations. Participants completed an online questionnaire in which they estimated the percentage of women in 60 different occupations, and for each job, responded to measures probing the variables of interest: perceived representation, field-specific ability beliefs, prototype matching, belonging, and masculinity contest culture.

## Method

### Participants

Participants ( $N = 103$ ;  $M_{age} = 30.7$  years; 60 women, 36 men, 5 non-binary/non-conforming, 2 self-described; 70.9% white) were recruited from Prolific, an online research and data collection platform. Only participants who completed the study in a predetermined appropriate amount of time were included. All approved participants were compensated \$10.00 per hour for survey completion; compensation varied depending on time taken to complete the survey. All procedures were approved by the Emory University IRB (#00003388).

### Materials and Procedure

Participants who met qualification criteria (i.e., 18+ years of age, United States residents, fluent in English) received a link to the survey, hosted by Qualtrics. All participants were required to give their informed consent prior to beginning the survey. Participants completed the survey on a device of their choosing in their current environment, a practice necessary given the COVID-19 pandemic, and one that has become common for primarily self-report studies to collect data efficiently and increase sample diversity.

Participants first completed a demographics questionnaire. All response options were alphabetized to avoid priming participants, except for categories which have a natural order (e.g., education level, annual income). Demographic questionnaires often list the most “standard” response option first (e.g., “male,” “white”). Especially given the topic of this study, such ordering could affect participants’ internalization of gender norms. All demographic questions allowed participants to select “Prefer not to answer,” and all subjective questions (e.g., race, gender identity) allowed participants to self-describe.

To avoid participant fatigue, we created two versions of the ensuing survey (as done by Meyer et al., 2015; Vial et al., 2022). Participants were assigned thirty total occupations, a randomly selected half of an overall list curated to represent a wide range of jobs with a diverse distribution of gender representation (see Table S1 for full list of occupations). The two subsets of occupations were consistent in variability and overall average female representation to ensure balance across versions. Each version included 27 non-academic jobs (e.g., paralegals, chief executives, nurses, construction workers) selected from the U.S. Bureau of Labor Statistics database (2020) and three academic jobs, converted from fields into jobs (e.g., “biology” to “biology professor”); fields were selected from the National Science Foundation’s survey of earned doctorates (consistent with Leslie, Cimpian et al., 2015). Three of the academic jobs were categorized as STEM, the other three non-STEM. Approximately equal numbers of participants participated in the two versions (Version 1,  $n = 51$ ; Version 2,  $n = 52$ ).

Occupations were randomly ordered within each version of the survey. Measures were listed in the same order asked below each occupation. Participants first estimated the gender ratio within each occupation using a sliding scale anchored by 0 and 100%. This response type was distinct from past studies which have asked participants to indicate their estimates of the percentage of women in a field to the nearest tenth percentile. This choice aimed to minimize demand characteristics since the percentile response format suggests that the study addresses women’s representation specifically, which may alter participants’ responses (e.g., indicating a higher percentage of women in an occupation to counteract any internalized sexism).

Participants then completed five total questions that measured field-specific ability beliefs (FAB), items that assess what participants believe is necessary for a success in an occupation (e.g., “Being a(n) [occupation] requires a special aptitude that just can’t be taught”; 1

= strongly disagree to 7 = strongly agree). Four out of five items were adapted from Meyer et al., 2015, Study 1. We added a fifth item that aimed to assess brilliance more directly: “Being a(n) [insert occupation] requires extreme intelligence or brilliance.” Internal reliability was sufficient for the five-item measure ( $\alpha = 0.810$ ), but subsequent analyses were conducted with the original four-item composite ( $\alpha = 0.827$ ) to maintain consistency with past research.

Next, they rated the extent to which they agreed with statements measuring belonging and prototype matching, such as, “With the appropriate training and resources, I feel like I would belong in this occupation” (adapted from Bian et al., 2017; 1 = “not at all” to 7 = “very much so”). Finally, participants responded to three items from the Masculinity Contest Culture (MCC) scale, like, “In this occupation, admitting you don’t know the answer looks weak,” using a 5-point Likert scale (1 = “not at all true” to 5 = “entirely true;” see Glick et al., 2018;  $\alpha = 0.644$ ). All scales have been tested for adequate reliability and validity in previous research.<sup>2</sup>

Once they completed the survey, participants were given researchers’ contact information for follow up questions. They received monetary compensation within 48 hours of study completion.

## Results

*Does perceived representation reflect actual representation?* To answer this question, we first examined the correlation between participants’ estimates of female representation and actual female representation in each occupation. We found that participants’ estimates were significantly correlated with actual representation across occupations,  $r(58) = .639, p < .001$  (see Figure 1), with significant correlations for both non-academic and academic occupations (non-academic:  $r[52] = .655, p < .001$ ; academic:  $r[4] = .277, p < .001$ ; see Figures 2A and 2B). The

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<sup>2</sup> See Table S2 for a complete list of questions.

strength of these correlations makes clear that participants are sensitive to the gender composition within a profession across a variety of professions.

*How does perceived representation compare to other potential predictors of actual representation?* Given prior research on the predictive value of FAB, we began by conducting a regression analysis with actual female representation as the dependent variable and FAB as the initial predictor variable.<sup>3</sup> As found in past research, perceived brilliance was significantly predictive of actual representation, at least when considered alone ( $\beta = -0.044, p = .015$ ). In a subsequent analysis, we added participants' estimates of female representation to the regression model. Both perceived representation ( $\beta = 0.639, p < .001$ ) and perceived brilliance ( $\beta = -0.035, p = .013$ ) significantly predicted female representation, suggesting independent effects of these two variables when accounting for actual representation across a variety of professions.

In additional multiple regression analyses, we sequentially added the variables of belonging, prototype matching, and masculinity contest culture. When belonging was also added to the regression, only perceived representation ( $\beta = 0.622, p < .001$ ) and belonging ( $\beta = 0.08, p < .001$ ) were statistically significant predictors. FAB did not predict actual representation ( $\beta = -0.017, p = .237$ ). Analyses of prototype matching and masculinity contest culture revealed that they were not significant predictors of actual representation when considered with other variables (all  $ps > .66$ ; see Table S3 for all zero-order correlations). These results therefore demonstrate the importance of perceived representation and belonging as independently predictive of actual representation and suggest that belonging accounts for the previously suggested effects of FAB (see Table 1 for multiple regression models).<sup>4</sup>

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<sup>3</sup> For all measures besides estimates of gender representation, responses for each item were summed to a composite score for that measure with appropriate items reverse coded.

<sup>4</sup> Tests of model assumptions indicated that multicollinearity was not a concern (Estimates, Tolerance = 0.956, VIF = 1.05; FAB, Tolerance = 0.947, VIF = 1.06; Belonging, Tolerance = 0.906, VIF = 1.10).

Since our research is the first to examine the FAB model across a range of jobs, not just academic fields, we tested whether our model remained consistent across category of occupation. For both academic and non-academic jobs, perceived representation and belonging were the only significant predictors when all variables of interest were entered into the regression (non-academic: perceived representation [ $\beta = 0.638$ ;  $p < .001$ ], belonging [ $\beta = 0.074$ ,  $p < .001$ ]; academic: perceived representation [ $\beta = 0.249$ ,  $p < .001$ ], belonging [ $\beta = 0.183$ ,  $p = .009$ ]). When separated by occupation type, FAB was not a significant predictor in combination with the other variables. Prototype matching and masculinity contest culture were also not significant predictors for either academic or non-academic occupations (non-academic: all  $ps > .737$ ; academic: all  $ps > .350$ ) when considered with all other variables.

Given previous findings of participant gender and educational level as moderators of the model's significant predictors—perceived representation and belonging (Meyer et al., 2015; Bian et al., 2018)—we assessed whether the aforementioned effects varied by these characteristics. Tests of participant gender, entered as an interaction term in the final multiple regression, revealed that gender modulated the effects of perceived representation ( $p = .014$ ) and belonging ( $p = .039$ ), with stronger effects for women compared to men. Similarly, education level modulated the effect of belonging, whereby the effect was stronger for college-educated individuals ( $p = .023$ ).

Overall, our results suggest predictive power of perceived representation and belonging on understanding actual female representation, and suggests that FAB, though salient on its own, may be better accounted for by broader constructs.



## Discussion

We found evidence for the robust importance perceived representation and belonging in accounting for actual female representation across a variety of occupations. These variables remained consistently predictive, regardless of job category and population (i.e., gender identity, education level). Previous research has suggested that field-specific ability beliefs (Leslie, Cimpian et al., 2015; Meyer et al., 2015, Bian et al., 2018, Vial et al., 2022), prototype matching (Bian et al., 2018), and masculinity contest culture (Vial et al., 2022) substantively explain female representation. Although our results showed preliminary evidence of effects of these variables, they were not robust to the influence of perceived representation and belonging. This study adds to and amends the commonly cited FAB model; rather than brilliance as the basis for gender disparities, we show that perceived representation and belonging are enduring predictors of real-world female representation, and that belonging accounts for the previously emphasized role of brilliance in predicting this representation.

In considering perceived gender representation, our research suggests cyclical patterns of gendered inertia such that current gender representation sustains itself. Participants with a range of experiences (type of employment, education level, age, etc.) were highly accurate in estimating the gender breakdowns across our included occupations. It is safe to assume that participants have not had extensive personal experience with all the jobs they assessed, which suggests that (1) cultural messaging portrays different occupations through a gendered lens, and (2) a salient aspect of one's representation for a job includes its gender breakdown. Although this research is correlational in nature, given these results, we theorize that anticipating an absence of one's own gender in a job lessens one's interest in pursuing that job.

Perceived representation may be so robust in predicting actual representation because an initial representation of a job's gender breakdown brings with it further associations about the characteristics of jobholders and work culture. Support for this notion comes from social identity theory, which posits that in organizational contexts, people's attitudes and behaviors are partially determined by their group membership and the importance people attach to these groups. Social identity threat occurs when someone feels devalued or stigmatized based on their group membership (Tajfel & Turner, 1979; Haslam et al., 2014). Perceived representation may elicit an *anticipated* social identity threat for women, such that they assume they will face negative behaviors in male-dominated contexts. Unfortunately, this assumption may be correct in our current conditions: studies of women in male-dominated occupations, compared to women in equal-gender or majority-women occupations, show that these women are more likely to be treated as if they are not competent; to experience repeated, small slights at work; and to experience sexual harassment (Parker & Funk, 2017).

Although this paper focused on female representation, the perceived representation variable may operate similarly for men, for whom job gendering is also harmful. Research has shown that gender-specific social pressures—expectations about stereotypical male attributes—keep men from entering women's occupations, so much so that some would rather endure unemployment than accept a relatively high-paying female-dominated job (Torre, 2018). This finding provides further evidence that there is a relation between gender base rates and gender stereotypes that work to inform interest in job paths. That men and women alike may feel disinclined to pursue jobs dominated by the other gender perpetuates occupational gender segregation.

Our research also emphasizes the role of belonging in predicting female representation. This result aligns with past work from proponents of the FAB model, which found that brilliance may be included in, but not separate from, the wider construct of belonging (Bian et al., 2018). Belonging reflects whether people feel that they are valued, accepted, and legitimate members in a certain domain, and has long been established as one of the most powerful motivators of human behavior, grounded in our evolutionary need for trustworthy social relationships (Baumeister & Leary, 1995). People are highly sensitive to their belonging status in many situations, including academic or vocational settings. Beliefs about one's brilliance would reasonably inform feelings of legitimacy and acceptance, as our results suggest, but there is more contributing to a sense of belonging, as well.

Belonging may reflect appraisals of work culture and interpersonal dynamics. Women may worry about the consequences of a lack of belonging in a male-dominated setting, consequences ranging from social discomfort in a "boy's club" environment to facing emotional or sexual harassment.<sup>5</sup> Pervasive negative stereotypes along with subtle social and environmental cues can signal to members of groups that they do not belong, which may reduce motivation to pursue a certain career path and lead to attrition of women who do pursue male-dominated jobs (Master & Meltzoff, 2020).

Cues affecting belonging can also operate independently of gender representation, as our results suggest. Absent a male-dominated environment, relative power imbalances or a highly salient gendered behaviors even among a lower proportion of men may still impart a reduced sense of belonging. Anticipated belonging is also not solely influenced by identity

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<sup>5</sup> We did not replicate past results which found that field-specific ability beliefs affect belonging through masculinity contest culture (Vial et al., 2022); however, we did find a relation between belonging and masculinity contest culture, which suggests that a competitive work environment corresponds to lesser belonging.

characteristics. Factors such as personal interests, personality differences, and skills training may all influence calculations of belonging. For example, an individual who does not like animals would likely anticipate lower belonging in the veterinarian occupation and an impatient individual may anticipate low belonging as a teacher, and these considerations may be separable from gender identity. Further research is needed to understand the connections between and relative strength of perceived representation and belonging in explaining actual female representation. A follow-up study hopes to parse the influence of these variables to allow us to make more causal inferences.

### *Future Directions*

Our results show that perceived representation and belonging contribute substantially to understanding paths to female representation in occupations. But it is necessary to note that the large-scale question of gender disparities in occupations is complex and multiply determined, affected by a multitude of cultural and individual-level factors. Though this study included variables that have been considered relevant in understanding gender representation, many others have been proposed to contribute to gender disparities. Future work may benefit from considering additional variables across a broader scope of occupations.

Future research should also aim to take a more inclusive and intersectional approach to understanding gender representation. Because of the scope of this project, our analyses employed a binary conception of gender. This method excludes non-binary, genderfluid, and transgender individuals, who are even further disproportionately underrepresented than women in a variety of jobs. This research also does not explore the representation of marginalized racial communities, another critical area which we must understand to improve. Participants in our sample predominantly characterized themselves within the gender binary (man/woman) and were

predominantly white, which poses challenges in assessing how these variables may operate differently for genderqueer individuals and people of color.

And, although we focus on gender, this project lacks a critical intersectionality—it does not consider how additional social and political identities interact with gender to create a unique social existence, affecting pathways to occupational representation (Cho et al., 2013). For example, we could predict that even if women as a group were overrepresented in a certain job or field, if the women were predominantly white, a Black woman either considering entering or existing within this space may experience a lower sense of belonging than a white woman would.

### *Implications*

Although future work holds opportunities to explore many outstanding questions, our study offers several theoretical and practical implications. Compared to the FAB model, which suggests that assessments of brilliance affect women's representation, we assert that people's perceptions of the proportion of women currently in a job and their anticipated belonging in that setting better explain the path to real-world female representation. Distinguishing between these possibilities is critical for informing interventions to support occupational gender equity. If, as previously proposed, brilliance was the main driver, researchers could suggest practices such as boosting women's confidence in their intelligence and emphasizing effort rather than innate ability as necessary for success. But our model necessitates highlighting and increasing female representation by showcasing female role models in male-dominated occupations and creating mentorship opportunities by women, for women. Targeting belonging requires changing adverse workplace conditions through diversity and gender sensitivity training and consequences for gender-based discrimination or harassment, as well as encouraging affinity spaces for women in male-dominated environments. A confluence of factors undoubtedly influences female

representation, and we have pinpointed substantial effects of two: perceived representation and belonging. We must work to target these elements, as well as those that emerge in future work, to make substantive change to gender equity in the workforce.

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Figure 1. The relation between participants' estimates of female representation (perceived representation) and actual female representation for all occupations.

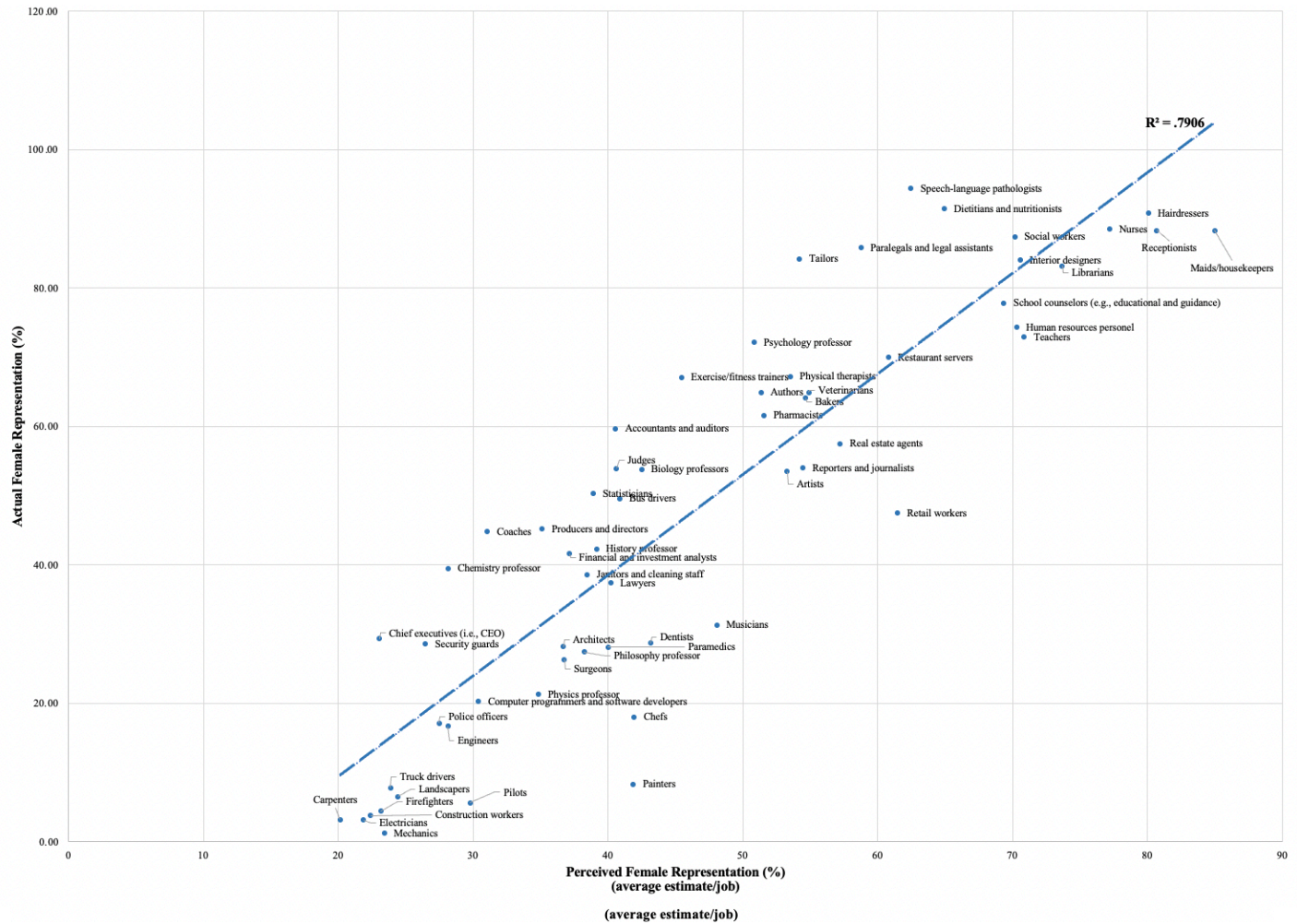


Figure 2A. The relation between participants' estimates of female representation (perceived representation) and actual female representation for non-academic occupations.

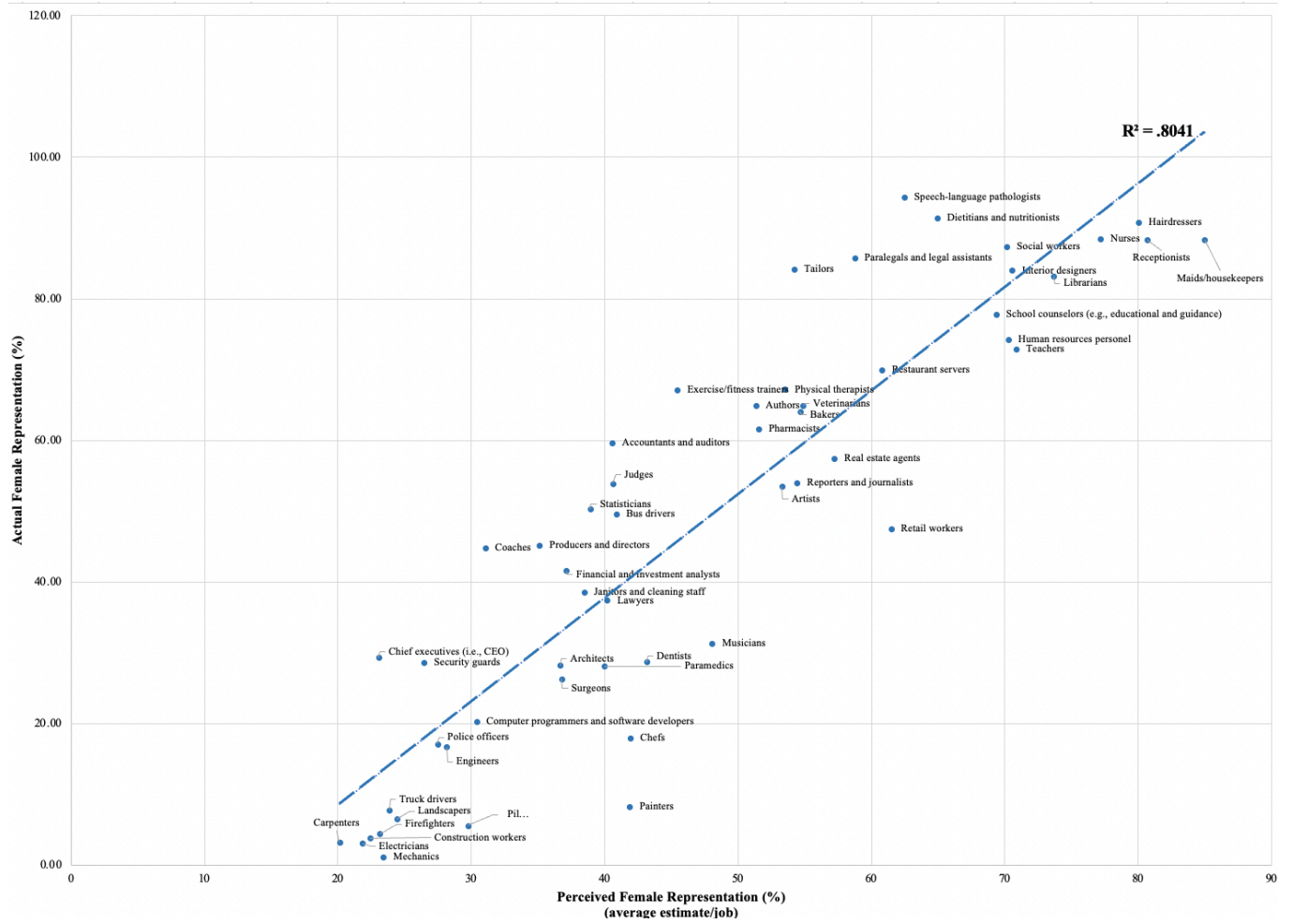


Figure 2B. The relation between participants' estimates of female representation (perceived representation) and actual female representation for academic occupations.

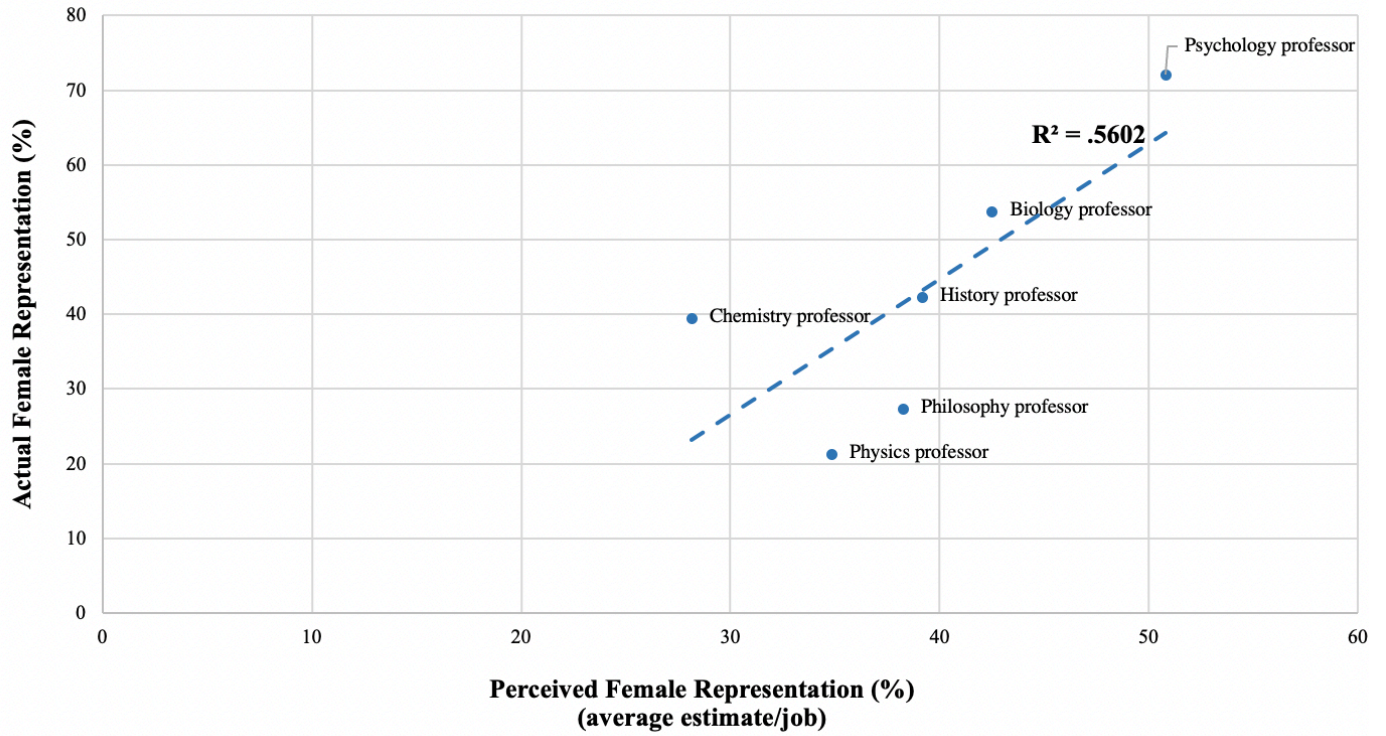


Table 1. Regression models predicting actual female representation.  $N = 60$  occupations. Significant statistics are bolded.

Predictor	Model 1			Model 2			Model 3			Model 4		
	$\beta$	$t$	$P$	$\beta$	$t$	$P$	$\beta$	$t$	$P$	$\beta$	$t$	$P$
FAB	0.0892	-2.43	<b>.015*</b>	-0.035	-2.49	<b>.013</b>	-0.017	-1.18	.237	-0.017	-1.19	.234
Perceived representation				0.639	45.70	<b>&lt;.001**</b>	0.622	43.76	<b>&lt;.001**</b>	0.622	43.38	<b>&lt;.001**</b>
Belonging							0.080	5.46	<b>&lt;.001**</b>	0.077	4.62	<b>&lt;.001**</b>
Prototype matching										0.004	0.235	.815
MCC										-0.007	-0.445	.656

\*\* $p < .001$ , \* $p < .01$

## Supplemental Materials

**Table S1: List of occupations, separated by survey version.**

	Version 1 ( <i>n</i> = 51)	Version 2 ( <i>n</i> = 52)
<b>Occupation</b>	Speech-language pathologists	Dietitians and nutritionists
	Hairdressers, hairstylists, and cosmetologists	Nurses
	Maids and housekeeping cleaners	Receptionists
	Social workers	Paralegals and legal assistants
	Tailors	Interior designers
	Librarians	School counselors (e.g., educational and guidance)
	Human resources personnel	Teachers
	Restaurant servers	Physical therapists
	Exercise/fitness trainers	Authors
	Veterinarians	Bakers
	Pharmacists	Accountants and auditors
	Real estate agents	Reporters and journalists
	Judges	Artists
	Statisticians	Bus drivers
	Retail workers	Producers and directors
	Coaches	Financial and investment analysts
	Janitors and cleaning staff	Lawyers
	Musicians	Chief executives (i.e., CEO)
	Dentists	Security guards
	Architects	Paramedics
	Surgeons	Police officers
	Computer programmers and software developers	Chefs
	Engineers	Painters
	Truck drivers	Landscapers
	Pilots	Firefighters
	Construction workers	Carpenters
	Electricians	Mechanics
	Biology professor*	Chemistry professor*
	Physics professor*	Psychology professor*
	History professor*	Philosophy professor*

*Note.* Academic occupations are starred.



**Table S2: Survey items.**

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**Estimated Female Representation**

Please indicate, using the sliding scale, your estimate of the gender distribution within the occupation listed above (greater blue = more women)

**Field-specific Ability Beliefs<sup>a</sup>**

Being a(n) [occupation] requires a special aptitude that just can't be taught.

If you want to succeed as a(n) [occupation], hard work alone just won't cut it; you need to have an innate gift or talent.

With the right amount of effort and dedication, anyone can become a(n) successful [occupation]. (R)

When it comes to being a(n) [occupation], the most important factors for success are motivation and sustained effort; raw ability is secondary. (R)

Being a(n) [occupation] requires extreme intelligence or brilliance.

**Prototype matching<sup>b</sup>**

How similar do you think you are to the other people who hold this occupation?

**Belonging<sup>a</sup>**

With the appropriate training and resources, I feel like I would belong in this occupation.

With the appropriate training and resources, I would feel like I always have to prove myself in this occupation. (R)

**Masculinity Contest Culture<sup>c</sup>**

In this occupation, admitting you don't know the answer looks weak ("show no weakness" scale)

In this occupation, taking days off is frowned upon ("put work first" scale)

In this occupation, one person's loss is another person's gain ("dog eat dog" scale)

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*Note.* (R) indicates items that were reverse scored.

<sup>a</sup> Responses to these items were given on a 7-point scale (1 = strongly disagree to 7 = strongly agree)

<sup>b</sup> Responses to these items were given on a 7-point scale (1 = not at all similar to 7 = very similar)

<sup>c</sup> Responses to these items were given on a 5-point scale (1 = not at all true to 5 = entirely true)

**Table S3: Pearson zero-order correlations among main variables.**

		Estimate	Actual	FAB	Belonging	Prototype matching	MCC
Perceived representation (estimate)	Pearson's r	–					
	p-value	–					
Actual representation	Pearson's r	<b>.639***</b>	–				
	p-value	< .001	–				
FAB	Pearson's r	-.015	<b>-.044*</b>	–			
	p-value	.419	.015	–			
Belonging	Pearson's r	<b>.207***</b>	<b>.212***</b>	<b>-.228***</b>	–		
	p-value	< .001	< .001	< .001	–		
Prototype matching	Pearson's r	<b>.176***</b>	<b>.144***</b>	.031	<b>.417***</b>	–	
	p-value	< .001	< .001	.092	< .001	–	
MCC	Pearson's r	<b>-.083***</b>	<b>-.073***</b>	<b>.072***</b>	<b>-.190***</b>	<b>.159***</b>	–
	p-value	< .001	< .001	< .001	< .001	< .001	–

Note. MCC: Masculinity Contest Culture

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$