

Stereotype Threat Among Women in Finance: Negative Effects on Identity, Workplace Well-Being, and Recruiting

Psychology of Women Quarterly 2015, Vol. 39(3) 405-414 © The Author(s) 2015 Reprints and permission: sagepub.com/journalsPermissions.nav DOI: 10.1177/0361684315574501 pwq.sagepub.com



Courtney von Hippel¹, Denise Sekaquaptewa², and Matthew McFarlane¹

Abstract

Because women are in the minority in masculine fields like finance and banking, women in these fields may experience stereotype threat or the concern about being negatively stereotyped in their workplace. Research demonstrates that stereotype threat among women in management and accounting leads to negative job attitudes and intentions to quit via its effects on identity separation, or the perception that one's gender identity is incompatible with one's work identity. The current work extends this research to related outcomes among women in finance. In this study, 512 women working in finance completed a survey about their work environment, their well-being at work, and whether they would recommend the field of finance to younger women. Results showed that, to the extent women experienced stereotype threat in their work environment, they reported diminished well-being at work and were less likely to recommend their field to other women, and these outcomes were mediated by identity separation. Recruitment and retention of women into fields where they have been historically underrepresented is key to achieving the "critical mass" of women necessary to reduce perceptions of tokenism as well as stereotyping and devaluing of women. The current work sheds light on psychological factors that affect these outcomes.

Keywords

working women, stereotype threat, stereotyped attitudes, professional identity, self-concept, well-being, role models, working conditions

Despite organizations becoming increasingly diverse, stereotypes concerning gender continue to hinder women's ability to succeed in male-dominated fields (Roberson & Kulik, 2007). Women are stereotyped as weak, emotional, sensitive, and lacking in leadership skills—traits that are inconsistent with success in the workplace (Powell, Butterfield, & Parent, 2002; Schein, 2007). In addition, women are perceived as inferior employees because of perceptions that they are less committed to their careers and more focused on their families (Correll, Benard, & Paik, 2007). It comes as no surprise then that women are less preferred as potential hires in traditionally masculine domains, are presented with fewer promotion opportunities, and continue to earn less than their male counterparts (Australian Government, 2014; Lyness & Heilman, 2006; Schein, 2007).

The successful recruitment and retention of women to traditionally masculine domains is a major focus of diversity and equity programs designed to address gender imbalances in work and school settings. Recruitment and retention of women in science, technology, engineering, and mathematics (STEM) has been the focus of many of these programs (National Academies, 2007), and much social science research on stereotyping and implicit bias has been

applied in developing programs and interventions aimed at broadening participation of women and girls in STEM education (National Science Foundation, 2013). Less attention has been paid to the recruitment and retention of women to traditionally male-dominated non-STEM work sectors such as business and finance, despite the fact that women working in these fields likely experience stereotyping processes similar to those experienced by women in STEM (Catalyst, 2005). In this research, we examine how women working in finance are influenced by stereotyping processes, specifically regarding outcomes that may influence the recruitment (in terms of recommending the field to other women) and retention (in terms of workplace well-being) of women in finance.

Corresponding Author:

Courtney von Hippel, Department of Psychology, University of Queensland, St. Lucia, Queensland 4072, Australia.

Email: c.vonhippel@uq.edu.au

¹ Department of Psychology, University of Queensland, St. Lucia, Queensland, Australia

² Department of Psychology, University of Michigan, Ann Arbor, MI, USA

Women in Finance

Although the gender ratio in banking and finance has changed significantly, with women now composing more than 50% of finance graduates, the proportion of women in the profession declines rapidly with seniority (Pokrajac & Moore, 2013; Soares, Bartkiewicz, Mulligan-Ferry, Fendler, & Kun, 2013). For example, women account for just 9.2% of corporate directorships of Australian Securities Exchange (ASX) 500-listed companies in Australia (Australian Government, 2012) and 17.6% of the executive officers in finance and insurance companies within the U.S. Fortune 500 (Catalyst, 2014). Further, despite the increasing representation of women at the entry level, a survey of Australian finance professionals suggests that gender discrimination still exists, with 50% of men and 84% of women stating gender discrimination targeting women existed in financial services and with 40% of women stating they had personally experienced gender discrimination at work (Mortlock, 2012; Pokrajac & Moore, 2013).

Given the inconsistency between stereotypically female traits and those associated with the ideal worker, along with general stereotypes about women's inferior quantitative abilities compared to men (Eccles, Jacobs, & Harold, 1990; Swim, 1994), it seems likely that women working in finance may be negatively stereotyped by others in the workplace. Such stereotyping may be evidenced by perceptions that one's coworkers believe women are not "cut out" for finance or that women are not as committed to their jobs as men. This workplace stereotyping may be exacerbated in the maledominated field of finance to the extent that standing out in terms of gender promotes the ascription of stereotypic traits and roles to the target. Indeed, a long research tradition shows that group members who are in the local minority tend to be perceived as representative and stereotypic of their group (Abrams, Thomas, & Hogg, 1990; Block, Koch, Liberman, Merriweather, & Roberson, 2011; Taylor, Fiske, Etcoff, & Ruderman, 1978). It is not until women reach a "critical mass" that they are less likely to be perceived and treated as tokens (Kanter, 1977; Torchia, Calabrò, & Huse, 2011). Another benefit of strong representation of one's gender group in the work setting is the presence of role models because women who are well established in the field can provide inspiration and encouragement to other women considering those fields (cf. Young, Rudman, Buettner, & McLean, 2013). When women feel they are stereotyped in their work setting, however, they may be less likely to recommend their field to other women, which may diminish their positive influence on recruitment of other women to the field.

Stereotype Threat in the Workplace

Over the past two decades, a large body of research has accumulated on the consequences of feeling that one is the target of negative stereotypes. According to Steele and his

colleagues (Steele, 1997; Steele, Spencer, & Aronson, 2002), this situation leads to a feeling of *stereotype threat*. As Steele (1997, p. 614) describes it, stereotype threat is:

the social psychological threat that arises when one is in a situation or doing something for which a negative stereotype about one's group applies. This predicament threatens one with being negatively stereotyped, with being judged or treated stereotypically, or with the prospect of conforming to the stereotype ... And for those who identify with the domain to which the stereotype is relevant, this predicament can be self-threatening. (emphasis added)

Most of the research on stereotype threat has focused on the threat posed by the prospect of conforming to the stereotype and the self-fulfilling consequences of this threat for performance (for a meta-analysis, see Nguyen & Ryan, 2008). Nevertheless, as Steele (1997) clearly outlined, stereotype threat is broader than just the fear that one will conform to a stereotype, and indeed theoretical and empirical approaches to stereotype threat have explored other aspects of it, such as consequences for motivation and engagement in the stereotyped domain (Kalokerinos, von Hippel, & Zacher, 2014; Shapiro & Neuberg, 2007; Steele et al., 2002).

In addition to outlining the different components of stereotype threat, Steele (1997) suggested that chronic experiences of stereotype threat can lead to disidentification or disengagement from the stereotyped domain over time. Many workplaces are replete with indications that certain groups are negatively stereotyped and devalued (e.g., underrepresentation of minorities or women, particularly in the upper echelons of the organization). Workplaces that contain many such cues are likely to lead to feelings of stereotype threat among employees who belong to devalued or minority groups, such as women in male-dominated professions (Kalokerinos et al., 2014).

Although there is limited research on the effects of stereotype threat on disengagement in a work context, the studies that do exist support this theorizing. For example, to the degree that they feel stereotype threat, older adults and women in male-dominated fields are less satisfied and committed to their jobs and indicate that they are more likely to quit (von Hippel, Issa, Ma, & Stokes, 2011; von Hippel, Kalokerinos, & Henry, 2013). Other research showed that women reminded of the negative stereotype about being "bad at math" psychologically distanced themselves from feminine traits that were seen as incompatible with math success (Pronin, Steele, & Ross, 2004).

Identity Separation

In the workplace, disengagement may emerge regarding either one's work identity or one's feminine identity because employees who perceive that their job requires characteristics that are inconsistent with feminine aspects of themselves may

feel a need to separate these aspects of their self from their work self. For example, when on the job, a senior manager might maintain in her working self-concept (Markus & Wurf, 1987) traits such as analytical, independent, and assertive because these traits are associated with managerial success, although they are stereotypically masculine. When at home or with family and friends, however, this same manager might maintain in her working self-concept traits such as gentle, warm, and tender—traits that are stereotypically feminine but incongruent with managerial success.

Social role theory (Eagly, Wood, & Diekman, 2000) provides a framework for understanding this conflict that women may experience between their feminine and work identities. According to social role theory, women are expected to fulfill a communal role in society, engaging in nurturing and other interpersonally facilitative behaviors. In contrast, men are expected to fulfill an agentic role, engaging in assertive and other dominant behaviors. These contrasting role expectations also exist in the workforce, with the consequence that men and women are more likely to be valued in professions that require the skills prescribed by their gender role (e.g., women in caring professions such as nursing; men in leadership roles such as manager). Although social roles (such as job requirements) that constrain behavior can weaken the importance of gender roles, gender roles still exert an impact on the expectations of men and women. Indeed gender roles are thought to "spill over" in the workplace, causing people to have differing expectations of men and women who occupy the same role at work (Gutek & Morasch, 1982). As a consequence, women working in male-dominated fields such as finance may experience conflict between their prescribed gender role requiring communal behaviors and the agentic demands of their work role. Thus, women who feel stereotype threat in the field of finance may respond by separating their prescribed feminine and communal identity (e.g., being nurturing, kind, and caring) from their work identity (e.g., being businesslike and rational). In this manner, women who experience stereotype threat may respond by differentiating between their feminine self and work self.

Recent evidence suggests that women working in maledominated fields may indeed adopt this dual approach. Research among female lawyers and managers demonstrates that stereotype threat causes many women to separate their feminine identity from their work identity (von Hippel, Issa, et al., 2011; von Hippel, Walsh, & Zouroudis, 2011). Specifically, women who were led to feel stereotype threat at work (by reminding them of the low percentage of female partners) were less likely to endorse both feminine traits (e.g., gentle, tender) and work-relevant traits (e.g., independent, analytical) simultaneously. In contrast, women who were not led to feel stereotype threat at work showed an integration between these feminine and work traits. These effects also emerged with explicit indicators of identity separation, whereby women who perceived they were being stereotyped at work felt that their work self and feminine self were in

conflict, and they reported that they had to switch back and forth between these two selves when at work versus at home. In contrast, women who did not feel stereotyped at work reported that these two aspects of their identity were integrated with each other (von Hippel, Walsh, et al., 2011).

The Present Study

Such identity separation may have psychological advantages because differentiating between "feminine" and "work" selves can help women emphasize their role as skilled employees in an organization even when such skills are counter-stereotypic for women. Thus, this strategy may enable women to remain identified with their counterstereotypic domain of work and with their stereotyped group membership by making a clear distinction between their identity as a member of the stereotyped group (i.e., women) and their identity as a worker in the counter-stereotypic domain (Pronin et al., 2004). Research suggests, however, that there can be mental health costs for people who feel that their true identity cannot be expressed while enacting another identity (Settles, 2004; Settles, Sellers, & Damas, 2002). For example, research with female science students demonstrated that those who experienced interference between their feminine and science identities reported greater depression and lower life satisfaction and self-esteem than women who did not experience this interference (Settles, 2004). Thus, although it might seem helpful to suppress some aspects of the self in favor of identities that are more valued at work, the data suggest that the chronic demand to do so may be costly. Indeed, to the degree that female lawyers experienced the need to separate their identities, they also experienced negative job attitudes (von Hippel, Issa, et al., 2011). Thus, we predict that identity separation in response to stereotype threat will be associated with poorer well-being at work, an outcome that may ultimately diminish the retention of women in the field of finance.

We also examined whether women in finance who report stereotype threat would feel less inclined to recruit other women to their field. Occupational or career choices are determined by a host of factors, such as self-efficacy, ability, and interests (Lent, Brown, & Hackett, 1994). Other people (e.g., parents, family friends, educators) can also play an important role in the choices women make, particularly in fields where negative stereotypes about women exist (Oswald, 2008). Indeed, the presence of female experts and peers in male-dominated fields increases the participation of other women (Cheryan, Drury, & Vichayapai, 2013; Dasgupta, 2011) and reduces the perceived stereotyped masculinity of the field (Young et al., 2013). To the extent that threatening work environments lead to identity separation for women in finance, however, the stress associated with switching between one's feminine self and one's work identity may reduce the willingness of women to recommend finance as a career to other women. When women in maledominated fields fail to encourage—or even actively discourage other women from joining—the positive influence of these pioneers on recruitment of other women to these fields will likely be offset to some degree.

Finally, as highlighted in the earlier quotation from Steele (1997) describing stereotype threat, the degree to which people identify with the performance domain and their stereotyped group impacts their susceptibility to stereotype threat. For example, students who were identified with math showed greater performance decrements when they felt they were negatively stereotyped compared to students who were not identified with math (Aronson et al., 1999). Similarly, women who strongly identified with their gender performed more poorly on a math test under conditions of stereotype threat compared to women who were less identified with their gender (Schmader, 2002). It is not clear, however, whether gender identification and domain identification will moderate workplace outcomes. Given the financial necessity of employment, work identification may be less important among employees than identification with one's field of study is among students. To examine these competing possibilities, we also explored whether gender and work identification would moderate the impact of stereotype threat on well-being at work and interest in recommending the field of finance to other women.

Method

Participants

Our sample comprised 512 women working in professional and/or senior roles in banking and finance companies in Australia. Participants were recruited via a not-for-profit professional development and networking organization for women in banking and finance. The organization provided a web link to the survey on their website and e-mailed their members inviting them to participate as uncompensated research volunteers. The survey was described as examining women's experiences in banking and finance.

The average age of participants was 36.84 years (SD =7.95, range = 22-63), and they had been working in the industry for an average of 15.05 years (SD = 7.33, range = 2-33) and in their current organization for 7.65 years (SD = 4.65, range = 2-18). Participants occupied positions such as financial services (60\%, n = 290), business analysts (6\%, n = 28), accountants (6\%, n = 28), executive managers (8%, n = 39), economists (2%, n = 6), and a range of other positions not specifically provided in the survey (e.g., bank treasury, portfolio manager, equities analyst, financial markets). Most participants were married or in a common law relationship (66%, n = 333). Fully 60% (n = 304) of the sample had no children under the age of 18 living at home, whereas 17% (n = 86) had one child at home, 18% (n = 90) had two children at home, and 5% (n = 25) had three or more children under the age of 18 living at home. The sample was well educated, with 50% (n=247) of respondents having earned a graduate degree (e.g., masters, PhD) and an additional 42% (n=219) having earned a degree after high school. Race/ethnicity was not collected, but the demographics of Australia suggest that it was likely to be predominantly Caucasian with a substantial Asian minority.

Procedure and Materials

Participants completed an online survey, which they accessed via a web link either provided to them within an e-mail or directly from the participating organization's website. The web link was embedded in a short description about the research and an information page to establish informed consent prior to beginning the survey. The program randomized presentation of the scales, with the exception that the demographic items were presented at the end of the survey. To ensure anonymity of participants, no identifying information was requested.

Chronic feelings of stereotype threat. Stereotype threat was measured using a 10-item scale¹ adapted from von Hippel, Issa, Ma, and Stokes's (2011) measure of stereotype threat among working women, which itself was adapted from Steele and Aronson (1995). Von Hippel, Issa, et al.'s measure was expanded to include items assessing whether women differentiate between stereotyping targeted at themselves as a group member versus at their group as an extension of themselves (e.g., "If I make a mistake at work, my male colleagues will think I am not cut out for this type of job because I'm a woman" vs. "If I make a mistake at work, my male colleagues will think women are not cut out for this type of job"; see Shapiro & Neuberg, 2007). Although our intent was to differentiate between these two types of stereotype threat (self vs. group target), the subscales were highly correlated (r = .89, p < .0001), suggesting that they might be measuring the same phenomenon. We further tested this possibility with an exploratory factor analysis, which revealed that all 10 items loaded most strongly on a single factor that accounted for 56% of the variance. As a consequence, we were unable to empirically disentangle these two possible types of stereotype threat, and thus the analyses are reported with the full 10-item scale ($\alpha = .91$; although the results are identical when the analyses are conducted with each of these subscales in isolation). Participants responded using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher numbers corresponding to increased feelings of stereotype threat. The scale score was created by averaging the items together.

Identity separation. Identity separation ($\alpha = .87$) was measured using a 2-item scale from von Hippel, Issa, et al. (2011) that was modeled on Benet-Martínez and Haritatos' (2005) Bicultural Identity Integration Scale-Version 1. These items were "I am conflicted between the feminine and work ways

Table I. Descriptive	Statistics an	d Correlations	Among Stud	y Variables.
----------------------	---------------	----------------	------------	--------------

Variable	М	SD	I	2	3	4	5	6	7	8	9	10	П
I. Stereotype Threat	3.62	1.35	_										
2. Identity Separation	3.09	1.57	.39***	_									
3. Well-Being at Work	2.56	.70	.36***	.25***									
4. Recommend to Others	5.60	1.26	25***	−.27***	2 9 ***								
5. Gender Identification	5.07	.66	0 9 *	.01	−.20***	.15**	_						
6. Work Identification	2.69	.86	.07	.11*	.11*	−. 09 *	−.16****	_					
7. Age	36.84	7.95	.06	0I	.02	.01	.15**	04	_				
8. Education Level			.08	04	03	0I	.05	04	.01	_			
9. Dependent Children			.04	0I	−. 09 *	.01	.15**	11*	.36**	.11*	_		
10. Marital Status			02	07	04	.14**	.08	08	.21***	.14**	.43***	_	
11. Tenure: Industry	15.05	7.33	.08	0 I	.03	.02	0 I	07	.75***	.01	.25***	.35***	_
12. Tenure: Organisation	7.65	4.65	.07	−.04	.08	.06	.04	−. 09 *	.37***	.04	.27***	.22***	.50***

Note. Spearman's ρ was used for all correlations with categorical variables (i.e., education level, number of dependent children, and marital status). M and SD are not reported for these categorical variables.

of doing things" and "I feel I am continuously switching between my usual feminine-self and my work-self." Participants responded using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher numbers indicating more identity separation. The scale score was created by averaging the 2 items.

Well-being at work and recommendations. Warr's (1990) 12item work mental health and well-being scale ($\alpha = .91$) was used to assess participants' well-being at work. This scale asks respondents to respond to the question: "Thinking of the past few weeks, how much of the time has your job made you feel each of the following: tense, uneasy, worried, calm, contented, relaxed, depressed, moody, gloomy, cheerful, enthusiastic, optimistic." Responses for each of the 12 descriptors are made on a 5-point scale ranging from 1 (all of the time) to 5 (never), with reverse coding such that higher scores indicated poorer well-being at work. The scale score was created by averaging the items together. As for respondents' recommendations to other women, participants answered the item "I would recommend the banking and finance industry to young women who are considering career options," with responses provided on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Moderator variables and demographics. Gender identification was assessed with Henry, Arrow, and Carini's (1999) 12-item measure. Example items are: "I think of being a woman as part of who I am" and "I see myself as quite similar to other women." Identification with work was assessed using 5 items (e.g., "I focus all my efforts on being good at my job"; "I believe that being good at one's job is not everything," reverse scored). Participants responded using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating greater identification with being a woman and greater identification with work. The scale scores were created by averaging the items

together. Participants indicated their age, tenure in their current organization and the field of finance/banking, marital status, number of dependent children, level of education, and their current job/position.

Results

Table 1 presents the means, standard deviations, and correlations among all study measures. Consistent with predictions, at the bivariate level, stereotype threat was associated with a tendency for women to separate their feminine and work identities and with poorer well-being at work. Stereotype threat and identity separation were also associated with the willingness to recommend banking and finance as a field to other women, such that women who experienced stereotype threat and felt greater need to separate their identities were less likely to recommend the field. Identification with being a woman was associated with better well-being at work and increased likelihood of recommending the field to other women. Yet the more participants identified with being a woman, the less they identified with work. Overall, the demographic variables (age, tenure, etc.) had little relationship with the outcome variables.

Our study sought to test the mediating role of identity separation between stereotype threat and the outcomes of well-being at work and recommending banking/finance as a field to other women. These predictions were tested jointly in an SEM using lavaan (an R Package for structural equation modeling; Rosseel, 2012) and following the bootstrapping procedure for testing mediation models described by Hayes (2013). As can be seen in Figure 1, the mediation analyses revealed that stereotype threat had direct effects on identity separation, well-being, and recommending banking/finance as a field to other women. When indirect pathways through identity separation were included in the model, the direct effects of stereotype threat on well-being at work and

p < .05. *p < .01. ***p < .001.

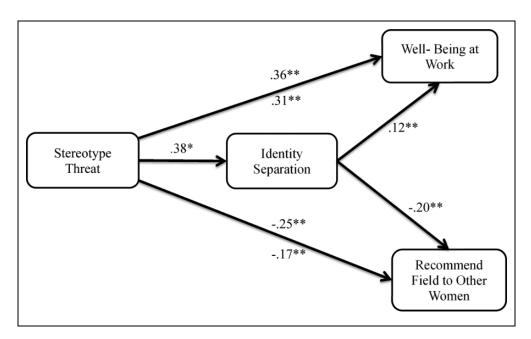


Figure 1. Path diagram of the relationships between stereotype threat, identity separation, work well-being, and willingness to recommend finance as a field to young women. Coefficients are standardized regression weights. The coefficients above the path from stereotype threat to the outcome variables represent the direct effect without the mediator (identity separation) in the model, and the coefficients below the path represent the effect when the mediator is included in the model. **p < .01.

recommending the field to other women were reduced, although stereotype threat remained a significant predictor of both.

The indirect effects of stereotype threat through identity separation on both outcomes were tested using a bootstrapping procedure, following the recommendations of Hayes (2013). To obtain confidence intervals (CIs), indirect effects were computed from unstandardized regression weights with 1,000 bootstrap resamples. When CIs do not include zero, support is provided for the predicted indirect (mediated) effect. This analysis revealed that the indirect effect of stereotype threat through identity separation on well-being at work was significant (indirect effect = .025, standard error [SE] = .01, 95% CI = [.0073, .0475]) as was the indirect effect through identity separation on recommending the field to other women (indirect effect = -.074, SE = .02, 95%CI = [-.116, -.039]). These findings suggest that although identity separation accounts for a significant amount of the effect of stereotype threat on outcomes, there are likely other unmeasured variables that also play a contributing role.

We then investigated gender identification and domain identification as potential moderators of the effect of stereotype threat on the outcome variables. Neither of these identification variables significantly moderated the direct or indirect effects of stereotype threat on the outcome variables (all ps > .20). Next, we assessed whether different mediational models were empirically differentiable by estimating alternative models in SEM. These analyses revealed that we could not empirically differentiate our proposed mediational model from alternative models. Although some alternative models were a poorer fit of the data (e.g., well-being at work mediating the

relationship between identity separation and the outcomes of stereotype threat and decreased likelihood of recommending the field), other alternative models fit the data equally well (e.g., poorer well-being at work leads to identity separation, which in turn leads to stereotype threat).

The control variables were also included in the path analysis as covariates with overall stereotype threat and predicting both the mediator and the outcome variables. All results remained substantially the same, although some relationships were slightly stronger. Specifically, stereotype threat had direct effects on identity separation ($\beta = .40$, p < .001), well-being at work ($\beta = .37$, p < .001), and recommending banking/finance as a field to other women ($\beta = -.27$, p < .001). When indirect pathways through identity separation were included in the model, the direct effects of stereotype threat on well-being at work and recommending the field were reduced, although it remained a significant predictor of both ($\beta = .31$, p < .001 and $\beta = -.19$, p < .001, respectively).

The indirect effects of stereotype threat through identity separation on both outcomes were tested using a bootstrapping procedure, following the recommendations of Hayes (2013). To obtain confidence limits, indirect effects were computed from unstandardized regression weights with 1000 bootstrap resamples. This analysis revealed that the indirect effect of stereotype threat through identity separation on well-being at work was significant, (indirect effect = .027, SE = .01, 95% CI = [.008, .046]) as was the indirect effect through identity separation on recommending the field to other women (indirect effect = -.075, SE = .02, 95% CI = [-.113, -.036]).

Discussion

The results of this study revealed that women in finance who experience stereotype threat separate their feminine and work identities, have reduced well-being at work, and are less willing to recommend banking and finance to other women. Identity separation, in turn, partially mediated the effect of stereotype threat on reduced well-being and reduced willingness to recommend banking/finance as a field to young women. This pattern of relationships was unchanged as a function of participants' identification with being a woman and identification with work.

It is important to note that these effects emerged in a sample that did not report high levels of stereotype threat, identity separation, or lack of well-being at work and was generally happy to recommend their field to young women. On one hand, these overall positive outcomes suggest that stereotype threat may not be a major cause for concern. On the other hand, despite the fact that most of these women in finance appeared relatively content with their work setting, stereotype threat was still associated with negative consequences in this environment, suggesting that the effects of stereotype threat are not limited to seriously unhappy employees. Thus, our findings add to the growing body of evidence that stereotype threat is consequential outside the laboratory.

These results contribute to and extend prior findings on identity separation and stereotype threat by demonstrating that identity separation is associated with reduced wellbeing at work. Prior research has demonstrated that stereotype threat leads to more negative job attitudes and greater intentions to quit via its effects on identity separation (von Hippel, Issa, et al., 2011), but our research is the first known to show that identity separation also makes working women feel more tense and depressed. Our data provide further evidence that as a strategy for coping with workplace stereotype threat, identity separation has clear costs for the women who use it.

Our results also provide evidence that stereotype threat can have a negative effect on the recruitment of women to finance and banking. Women who felt higher levels of stereotype threat reported being less likely to recommend finance and banking to young women who are choosing a career. Powerful female role models have the potential to bring more young women to their fields (Beaman, Duflo, Pande, & Topalova, 2012), but the current findings suggest that stereotype threat might diminish this positive influence by causing potential female role models to discourage young women from entering their profession.

Limitations

There are important limitations to this study that should be addressed. First, although the mediation models showed that stereotype threat was associated with negative outcomes for women via increased identity separation, our results indicated only partial mediation. This finding shows that identity separation is not the only mediator of stereotype threat effects on well-being at work and willingness to recommend banking and finance as a field. Although the current research cannot address what might account for the unmediated effects, they are consistent with other research showing that stereotype threat can lead to anxiety (Blascovich, Spencer, Quinn, & Steele, 2001; Bosson, Haymovitz, & Pinel, 2004; Inzlicht & Ben-Zeev, 2003) and cognitive overload (Schmader & Johns, 2003), both of which could result in poorer well-being at work and reduced willingness to recommend finance and banking to young women.

Second, the use of a correlational and cross-sectional design in this study meant that we could not directly address questions of causality. Furthermore, some of the alternative mediational models also fit the data, although Kenny (2014) explains that the direction of causation cannot be determined by statistical analyses. Thus, it is not clear from the current results whether stereotype threat is the causal variable and identity separation the mediator. For example, employees who have poorer work well-being might be more likely to experience stereotype threat. Indeed, it seems possible that such feelings can create a vicious cycle, whereby the experience of stereotype threat causes well-being at work to suffer, which in turn leads people to interpret more situations through the lens of stereotype threat. Consistent with the current approach to treat identity separation as a mediator, manipulations of stereotype threat at work have shown that it increases identity separation (von Hippel, Walsh, et al., 2011). Nevertheless, that finding does not preclude the alternative causal order. Longitudinal research will thus be necessary to tease apart these mediated and causal relationships and to identify points at which interventions might be maximally effective.

Finally, the issue of selection effects must be acknowledged. Potential participants were members of an organization composed of women working in the field of finance. The primary objectives of this non-profit organization are to provide a forum for professional women in this maledominated industry and facilitate connections with other professionals (both male and female) within the industry. It is possible that women join such an organization because they are more identified with being female or with their jobs. Alternatively, perhaps their motivation to join such an organization is driven by greater perceptions of stereotype threat in the workplace. Despite these potential selfselection concerns that might limit the generalizability of the current findings, it should be noted that this organization also has corporate memberships with many of the large employers in the finance sector, resulting in automatic membership for many female professionals in the field. As a consequence, self-selection is not a concern for many of the women in this organization. Of course, this membership structure does not rule out the possibility of selection effects

when participants made the decision whether to complete the online survey.

Practice Implications

Recruitment and retention of women into fields where they have been historically underrepresented is key to achieving the "critical mass" of women necessary to reduce perceptions of tokenism as well as stereotyping and devaluing of women. The current work sheds light on psychological factors that affect these outcomes. When the paucity of women in a work setting such as finance promotes stereotyping of women as poor performers, women's feelings of stereotype threat may lead them to psychologically separate their negatively stereotyped feminine identity from their identity as a worker in finance. The stress associated with this psychological separation appears to reduce the likelihood that women will encourage other women to enter their field, negatively affecting the recruitment of new women into finance. This stress also appears to make women more tense and depressed about their work, negatively affecting the retention of women currently working in finance. Failures to recruit and retain women can maintain gender imbalances and support stereotypes that women do not belong in finance; therefore, our research demonstrates the important roles of stereotype threat and identity separation in maintaining a cycle in which stereotyping is both a cause and consequence of women's underrepresentation in a traditionally male-dominated field. Our findings highlight not only the difficulties inherent in being female in male-dominated fields but also the promise for the integration of such fields once a critical mass of women has been reached. Indeed, there may well be a tipping point in male-dominated fields, and rapid integration could occur after many years of slow progress.

Gender stereotypes have persisted in spite of increased participation of women in the workforce and the call for diversity in management (Powell et al., 2002). Thus, stereotype threat in the workplace is unlikely to disappear in the near future. Given the negative consequences of stereotype threat, future research should consider strategies for buffering women from such consequences. Two avenues seem particularly relevant in light of this study. First, previous research hints to the potential of female role models to help alleviate stereotype threat for working women (von Hippel, Walsh, et al., 2011). Specifically, von Hippel, Walsh, and Zouroudis (2011) found that female accountants who read about a successful male partner in their firm showed identity separation, whereas female accountants who read about a successful female partner showed integration between their work and feminine selves. Perhaps celebrating the success of women leaders within organizations and providing female mentors will lessen the threat of gender stereotypes for women working in male-dominated fields. If senior women are placed primarily in stereotypically female roles (e.g., human resources), however, this strategy may be ineffective (cf. Brewer, von Hippel, & Gooden, 1999).

Second, social support has been shown to buffer the negative consequences of many types of stress. Although there is little research directly examining the role of social support in buffering women from stereotype threat, the research that does exist suggests that social support is beneficial (Cole, Matheson, & Anisman, 2007). Coupled with the fact that there is unequivocal support for the benefits of social support in the workplace (for a recent meta-analysis, see Ng & Sorenson, 2008), social support would seem to be a likely candidate for helping women experiencing stereotype threat. Certain types of social support are likely to be more efficacious than others, however. If the social support comprises reassurances that the stereotyping is unintended or not worth worrying about, it is unlikely to be beneficial for women who are experiencing stereotype threat.

Conclusion

In conclusion, the current research demonstrates that stereotype threat among women in finance is associated with identity separation, poorer well-being at work, and a decreased willingness to recommend banking and finance as a career option to young women. These findings provide further evidence that stereotype threat may lead to disengagement in the workplace and impair the recruitment and retention of women in finance and thus is a concern for organizations and for the women who work in them.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Note

1. The 10 items we used to measure stereotype threat proceed through two opening stems: (a) Some of my *male colleagues* believe...I have less ability because I'm a woman,... women have less ability than men,...I'm not as committed to my career because I'm a woman,... women are not as committed to their careers as men,...I'm limited in my career because I'm a woman, and... women are limited in their careers and (b) Sometimes *I worry* that... my behavior at work will cause my male colleagues to think that stereotypes about women apply to me,... my behavior at work will cause my male colleagues to think that stereotypes about women are true,... if I make a mistake at work, my male colleagues will think that I'm not cut out for this type of job because I'm a woman, and... if I make a mistake at work my male colleagues will think that women are not cut out for this type of job.

References

- Australian Government. (2012). Australian census of women in leadership: Summary of key findings. Retreived from http://www.anz. com/resources/7/c/7cf7aa004dc1aa3aaff2afa9c81383e0/2012Census.pdf?CACHEID=7cf7aa004dc1aa3aaff2afa9c81383e0
- Australian Government. (2014). Australia's gender equality scorecard: Key results from the Workplace Gender Equality Agency's 2013-2014 reporting data. Retrieved from https://s3.amazonaws. com/s3.documentcloud.org/documents/1370077/20141121-datasummary-report-final-version.pdf
- Abrams, D., Thomas, J., & Hogg, M. A. (1990). Numerical distinctiveness, social identity and gender salience. *British Journal of Social Psychology*, *29*, 87–92. doi:10.1111/j.2044-8309.1990. tb00889.x
- Aronson, J., Lustina, M. J., Good, C., Keough, K., Steele, C. M., & Brown, J. (1999). When White men can't do math: Necessary and sufficient factors in stereotype threat. *Journal of Experimen*tal Social Psychology, 35, 29–46.
- Beaman, L., Duflo, E., Pande, R., & Topalova, P. (2012). Female leadership raises aspirations and educational attainment for girls:
 A policy experiment in India. *Science*, *335*, 582–586. doi:10. 1126/science.1212382
- Benet-Martínez, V., & Haritatos, J. (2005). Bicultural Identity Integration (BII): Components and psychosocial antecedents. *Journal of Personality*, 73, 1015–1050. doi:10.1111/j.1467-6494. 2005.00337.x
- Blascovich, J., Spencer, S. J., Quinn, D. M., & Steele, C. (2001). African Americans and high blood pressure: The role of stereotype threat. *Psychological Science*, 12, 225–229.
- Block, C. J., Koch, S. M., Liberman, B. E., Merriweather, T. J., & Roberson, L. (2011). Contending with stereotype threat at work: A model of long-term responses. *The Counseling Psychologist*, 39, 570–600. doi:10.1177/0011000010382459
- Bosson, J. K., Haymovitz, E. L., & Pinel, E. C. (2004). When saying and doing diverge: The effects of stereotype threat on self-reported versus non-verbal anxiety. *Journal of Experimental Social Psychology*, 40, 247–255. doi:10.1016/S0022-1031(03)00099-4
- Brewer, M. B., von Hippel, W., & Gooden, M. P. (1999). Diversity and organizational identity: The problem of entree after entry. In D. Prentice & D. Miller (Eds.), *Cultural divides: The social psychology of intergroup contact*. (pp. 337–363). New York, NY: Russell Sage Foundation.
- Catalyst. (2005, October 19). Women "take care," men "take charge:" Stereotyping of U.S. business leaders exposed. New York, NY: Author.
- Catalyst. (2014, March 3). *Quick take: Women in financial services*. New York, NY: Author.
- Cheryan, S., Drury, B. J., & Vichayapai, M. (2013). Enduring influence of stereotypical computer science role models on women's academic aspirations. *Psychology of Women Quarterly*, *37*, 72–79.
- Cole, B., Matheson, K., & Anisman, H. (2007). The moderating role of ethnic identity and social support on relations between wellbeing and academic performance. *Journal of Applied Social Psychology*, 37, 592–615.

- Correll, S. J., Benard, S., & Paik, I. (2007). Gettting a job: Is there a motherhood penalty? *American Journal of Sociology*, 112, 1297–1339.
- Dasgupta, N. (2011). Ingroup expert and peers as social vaccines who inoculate the self-concept: The stereotype inoculation model. *Psychological Inquiry*, 22, 231–246.
- Eagly, A. H., Wood, W., & Diekman, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal.
 In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123–174). Mahwah, NJ: Lawrence Erlbaum.
- Eccles, J. S., Jacobs, J. E., & Harold, R. E. (1990). Gender role stereotypes, expectancy effects, and parents' socialization of gender differences. *Journal of Social Issues*, 46, 183–201.
- Gutek, B. A., & Morasch, B. (1982). Sex-ratios, sex-role spillover, and sexual harassment of women at work. *Journal of Social Issues*, *38*, 55–74.
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. New York, NY: The Guilford Press.
- Henry, K. B., Arrow, H., & Carini, B. (1999). A tripartite model of group identification theory and measurement. *Small Group Research*, 30, 558–581.
- Inzlicht, M., & Ben-Zeev, T. (2003). Do high achieving female students underperform in private? The implications of threatening environments on intellectual processing. *Journal of Educational Psychology*, 95, 796–805. doi:10.1037/0022-0663.95.4.796
- Kalokerinos, E. K., von Hippel, C., & Zacher, H. (2014). Is stereotype threat a useful construct for organizational psychology research and practice? *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 7, 381–402.
- Kanter, R. M. (1977). Men and women of the corporation. New York, NY: Basic Books.
- Kenny, D. A. (2014, October 29). *Mediation*. Retrieved from http://davidakenny.net/cm/mediate.htm
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45, 79–122.
- Lyness, K. S., & Heilman, M. E. (2006). When fit is fundamental: Performance evaluations and promotions of upper-level female and male managers. *Journal of Applied Psychology*, 91, 777–785
- Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology*, *38*, 299–337.
- Mortlock, S. (2012). *Diversity Survey 2012: The gender agenda: Promoting more women into top jobs* (pp. 1–11). Sydney, Australia: eFinancialCareers.
- National Academies. (2007). Beyond bias and barriers: Fulfilling the potential of women in academic science and engineering. Washington, DC: National Academies Press.
- National Science Foundation, National Center for Science and Engineering Statistics. (2013). Women, minorities, and persons with disabilities in science and engineering: 2013 (Special Report

- NSF 13-304). Arlington, VA. Retrieved from http://www.nsf.gov/statistics/wmpd/
- Ng, T. W. H., & Sorenson, K. L. (2008). Toward a further understanding of the relationships between perceptions of support and work attitudes. *Group and Organization Management*, 33, 243–268.
- Nguyen, H.-H. D., & Ryan, A. M. (2008). Does stereotype threat affect test performance of minorities and women? A metaanalysis of experimental evidence. *Journal of Applied Psychol*ogy, 93, 1314–1334. doi:10.1037/a0012702
- Oswald, D. L. (2008). Gender stereotypes and women's reports of liking and ability in traditionally masculine and feminine occupations. *Psychology of Women Quarterly*, *32*, 196–203. doi:10. 1111/j.1471-6402.2008.00424.x
- Pokrajac, M., & Moore, B. (2013, April 8). Women in finance breaking down barriers and stereotypes. *Money Management*. http://www.moneymanagement.com.au/analysis/financial-services/2013/gender-equality-in-the-financial-services-sector
- Powell, G. N., Butterfield, A. D., & Parent, J. D. (2002). Gender and managerial stereotypes: Have the times changed? *Journal of Management*, 28, 177–193.
- Pronin, E., Steele, C. M., & Ross, L. (2004). Identity bifurcation in response to stereotype threat: Women and mathematics. *Journal* of Experimental Social Psychology, 40, 152–168. doi:10.1016/ S0022-1031(03)00088-X
- Roberson, L., & Kulik, C. T. (2007). Stereotype threat at work. *Academy of Management Perspectives*, 21, 24–40.
- Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48, 1–36. Retrieved from http://www.jstatsoft.org/v48/i02/
- Schein, V. E. (2007). Women in management: Reflections and projections. *Women in Management Review*, 22, 6–18.
- Schmader, T. (2002). Gender identification moderates stereotype threat effects on women's math performance. *Journal of Experi*mental Social Psychology, 38, 194–201.
- Schmader, T., & Johns, M. (2003). Converging evidence that stereotype threat reduces working memory capacity. *Journal of Personality and Social Psychology*, 85, 440–452. doi:10.1037/0022-3514.85.3.440
- Settles, I. H. (2004). When multiple identities interfere: The role of identity centrality. *Personality and Social Psychology Bulletin*, 30, 487–500. doi:10.1177/0146167203261885
- Settles, I. H., Sellers, R. M., & Damas, A. (2002). One role or two? The function of psychological separation in role conflict? *Journal of Applied Psychology*, 87, 574–582.

- Shapiro, J. R., & Neuberg, S. L. (2007). From stereotype threat to stereotype threats: Implications of a multi-threat framework for causes, moderators, mediators, consequences, and interventions. *Personality and Social Psychology Review*, 11, 107–130. doi:10. 1177/1088868306294790
- Soares, R., Bartkiewicz, M. J., Mulligan-Ferry, L., Fendler, E., & Kun, E. W. C. (2013). 2013 catalyst census: Fortune 500 women executive officers and top earners (pp. 1–2). New York, NY: Catalyst.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613–629. doi:10.1037//0003-066X.52.6.613
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69, 797–811.
- Steele, C. M., Spencer, S., & Aronson, J. (2002). Contending with group image: The psychology of stereotype and social identity threat. In M. P. Zanna (Ed.), *Advances in experimental social* psychology (Vol. 34, pp. 379–440). San Diego, CA: Academic Press.
- Swim, J. K. (1994). Perceived versus meta-analytic effect sizes: An assessment of the accuracy of gender stereotypes. *Journal of Personality and Social Psychology*, 66, 21–36.
- Taylor, S., Fiske, S., Etcoff, N., & Ruderman, A. (1978). Categorical and contextual bases of person memory and stereotyping *Journal* of *Personality and Social Psychology*, 36, 778–793. doi:10.1037/ 0022-3514.36.7.778
- Torchia, M., Calabrò, A., & Huse, M. (2011). Women directors on corporate boards: From tokenism to critical mass. *Journal of Business Ethics*, 102, 299–317. doi:10.1007/s10551-011-0815-z
- von Hippel, C., Issa, M., Ma, R., & Stokes, A. (2011). Stereotype threat: Antecedents and consequences for working women. *European Journal of Social Psychology*, 41, 151–161.
- von Hippel, C., Kalokerinos, E. K., & Henry, J. D. (2013). Stereotype threat among older employees: Relationship with job attitudes and turnover intentions. *Psychology and Aging*, 28, 17–27.
- von Hippel, C., Walsh, A. M., & Zouroudis, A. (2011). Identity separation in response to stereotype threat. *Social Psychological and Personality Science*, *2*, 317–324. doi:10.1177/1948550610390391
- Warr, P. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational Psychology*, 63, 193–210
- Young, D. M., Rudman, L. A., Buettner, H. M., & McLean, M. C. (2013). The influence of female role models on women's implicit science cognitions. *Psychology of Women Quarterly*, 37, 283–292.