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Surprising Smiles and Unanticipated Frowns: How Emotion and Status Influence Gender Categorization

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Abstract Beliefs about who typically expresses which emotions are deeply ingrained and likely affect how people perceive and respond to emotional displays by others. We examined how emotional expressions and social status separately and in combination affect how quickly participants can categorize faces by their gender. The speed with which people categorize targets is informative about what combinations are expected or not. In Study 1, participants categorized the gender of targets displaying angry, happy, and neutral expressions. Response times were slower to incongruent gender-emotion pairs (angry female faces, happy male faces) relative to both neutral and congruent expressions. In Study 2, participants again categorized the gender of targets, this time presented as having high or low status. Target status affected response times to female targets only. Female targets were categorized more slowly when they both had high status and expressed anger (vs. happiness or no emotion). No differences by emotion were found for low-status female targets. In sum, anger was incongruent with women at an automatic level both when they had high status and when their status was unmarked, whereas explicit low-status information eliminated this incongruity. These data confirm the existence of deeply-ingrained associations linking status, gender, and emotion and underscore the importance of emotional expression and status in how women are perceived.

Keywords Gender · Emotion · Status · Facial expressions · Stereotypes

Beliefs about who expresses which emotions are important to our understanding of how emotion functions in social interactions. Gender and social status are two key aspects of a

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person that inform such beliefs. An individual's gender and status are lenses through which that person's emotional displays are seen as familiar or unexpected. The present research explores the deeply ingrained links between emotion and a person's multiple social identities.

Many emotions (e.g., happiness, sadness, fear) are more strongly associated with women than they are with men (e.g., Brody et al. 1995; Condry and Condry 1976; Hess et al. 2000; LaFrance and Banaji 1992). Anger, however, is associated more with men than with women (Fabes and Martin 1991; Plant et al. 2000) and is more readily perceived when expressed by men (Plant et al. 2004; Rotter and Rotter 1988). For example, when viewing angry displays of equal intensity on a man or woman's face, participants perceived more anger and less fear in a man's expression than in a woman's expression (Algoe et al. 2000).

Gender differences in actual frequency of various emotional states have also been demonstrated. In their meta-analysis, LaFrance et al. (2003) found that women reliably smile more than men, even though several factors moderated the size of the overall effect. The data on gender differences in anger expression are more mixed. One review reported that although men express more facial and verbal anger than women, self-report measures of gender differences in anger frequency are not consistent (Brody and Hall 2008). Another review confirmed that people believe men express anger more than women, although actual differences in the frequency and duration of anger expression depend on many other variables (Kring 2000). In sum, the data converge on two *expected* gender-emotion combinations: angry men and happy women.

Expectations for emotional expression also vary as a function of a target's social status. High-status individuals are expected to feel anger when events turn out badly, whereas people with lower status are thought to feel sadness and guilt in the same circumstances (Tiedens et al. 2000). Observers even infer higher status when they see a man expressing anger (Tiedens et al. 2000). Anger is also more readily perceived on high-status compared to low-status faces (Ratcliff et al. 2012).

Gender and status stereotypes would seem to lead to similar expectations about anger because men are assumed, all else being equal, to have higher status than women (Eagly and Steffen 1984). That is, anger should be more strongly associated with male targets and with high-status targets. However, it is less clear what expectations are activated when gender and status stereotypes lead to opposing predictions.

Studies examining the association of anger with high status tend to include male targets only (Ratcliff et al. 2012; Tiedens et al. 2000). Thus, it is unclear whether this association extends to women in high-status roles. The fact that women in high-status positions tend to be penalized for expressing anger suggests that anger may be incongruent with women even when they have high status. Brescoll and Uhlmann (2008) found that participants conferred lower status on women who expressed anger rather than sadness or no emotion—regardless of the woman's actual status as CEO or trainee. In another study, female leaders were judged as less effective when their tone was angry compared to neutral, whereas male leaders were perceived to be equally effective when they expressed anger or no emotion (Lewis 2000). In contrast, Maybury (1997) found that status sometimes overrides gender information. Specifically, anger displays were judged as more appropriate when shown by high-status than by low-status employees, regardless of the employee's gender. In sum, the combination of gender and status stereotypes regarding the expression of anger is complex, with some studies suggesting that target status overrides gender in evaluations of anger displays, while others suggest that target gender is paramount. Notably, how target gender and status combine to influence what emotions are more or less expected has not been examined.

The interrelationships among low status, smiling, and gender are also complex. Hecht and LaFrance (1998) found that smiling was uncorrelated with positive affect for low-power individuals, suggesting that people with less power may feel obligated to smile regardless of their actual feelings. One meta-analysis documented a general belief that a greater amount of smiling is indicative of lower status, though a subset of studies showed the opposite effect (Hall et al. 2005). Other work has shown no differences in beliefs about amount of smiling for high-status and low-status targets (Carney et al. 2005). Thus, smiling seems to be linked with low status in some cases and not others, but no research has examined whether this link is influential at an implicit level.

In the present studies, we examined the influence of different emotions and different status levels on response times to categorize targets by gender. The speed with which people categorize targets has been used to assess how easily people process information (Hugenberg 2005; Johnson et al. 2011) and is informative about what combinations are more or less expected. To date, studies using response latency measures have shown that men and women are linked with different emotion states. In studies examining emotion categorization, stereotype-congruent emotions tended to be categorized faster than incongruent emotions, although findings were more consistent for female targets. Specifically, happy and sad expressions were categorized faster than anger on female faces (Becker et al. 2007, Study 2; Bijlstra et al. 2010; Hugenberg and Sczesny 2006). Angry expressions were categorized faster than happiness or sadness on male faces in some cases (Becker et al. 2007, Study 2; Bijlstra et al. 2010), but not others (Hugenberg and Sczesny 2006). One study examining gender categorization found that female faces were categorized faster when happy and male faces were categorized faster when angry (Becker et al. 2007, Study 3). However, another study found that emotional expression moderated categorization of female faces only (Hess et al. 2009).

Response time as a measure of the strength of expectations for particular combinations of gender, status, and emotion is not without issues of interpretation. Specifically, both facilitation and inhibition of responses can occur in response time tasks (Fazio et al. 1995; MacLeod 1991), and we do not typically know whether congruent combinations facilitate faster responses, or whether incongruent combinations produce interference and slow recognition time. That is, it is unclear whether response time differences are driven by the strong associations between gender and congruent emotions, or by the incongruity of other emotions with either gender. Because differences are likely indicative of underlying expectations for the emotional expressions of men and women, it is important to understand whether congruent emotions are simply more expected and facilitate responses, or whether incongruent emotions are particularly unexpected and inhibit responses. These two possibilities of course are not mutually exclusive.

To address these issues, in the studies reported here we included baseline trials of neutral facial expressions, which allowed us to assess whether response time differences are driven primarily by interference of incongruent expressions or facilitation of congruent expressions, or both. To date, this distinction has received little attention. Some previous research has suggested that there is a perceptual overlap in the facial structures of female faces and happy expressions and of male faces and angry expressions (e.g., lowering the brow ridge makes faces look both angrier and more masculine) that may account for the faster response times to these gender-emotion combinations (Becker et al. 2007). That is, male faces actually look angrier and female faces look happier. This interpretation would predict a facilitation effect of congruent emotions, but this possibility has not been directly tested. To our knowledge, only one previous study measuring response latencies has included neutral expressions (Hess et al. 2009). However, although female targets were categorized faster when displaying happiness and fear

compared to anger, this study found no significant differences between neutral expressions and either congruent or incongruent expressions and thus does not address whether either facilitation or interference occurred. By examining responses to both neutral and emotional expressions in our studies, our aim was to add precision to our methodology in order to gauge the relative strength of gender-emotion associations and advance understanding of how emotion stereotypes may influence gender categorization.

In the present studies, we examined stereotypes linking gender with particular emotions and, in Study 2, whether status moderates these links. In our first study, our goal was twofold: to replicate gender-emotion associations using response latency and to establish whether interference or facilitation best explained differences in speed of categorization. In our second study, we examined whether status information altered these associations. Beliefs about men and masculinity overlap with beliefs about anger and beliefs about people with high status, and these are mutually reinforcing (Tiedens et al. 2000). Beliefs about women, low status, and smiling are also interrelated, although not always consistently (Hall et al. 2005; Hecht and LaFrance 1998). Nonetheless, both men and women may hold high-status or low-status positions, and thus in some cases expectations based on a person's status may be inconsistent with expectations based on that person's gender. The present research explores the cases where a person's explicit social status is at odds with their ascribed gender status.

Study 1

Study 1 used a response latency measure to assess which emotions are more strongly associated with women and which with men. Studies employing either implicit or explicit measures of gender-emotion associations have tended to produce consistent findings (Becker et al. 2007; Plant et al. 2000). We adopted an implicit paradigm in order to reduce the influence of social desirability (Dovidio and Fazio 1992). We also aimed to improve on previous work by including neutral expressions as a baseline comparison to the congruent and incongruent expressions. This allowed us to establish in what direction gender-emotion congruity affects the time to categorize a target's gender.

Participants saw brief presentations of male and female faces displaying stereotype-congruent emotion (e.g., female face with happy expression), incongruent emotion (e.g., female face with angry expression), or a neutral expression. Their task was to categorize the faces as male or female as quickly as possible. We made two predictions. First, we expected the gender of faces displaying stereotype-congruent expressions to be identified more quickly than the gender of faces showing incongruent expressions. Specifically, we predicted that happy female faces would be identified as female more quickly than angry female faces and that angry male faces would be identified more quickly than happy male faces.

Our second hypothesis concerned response times to the neutral expressions. We predicted that incongruent gender-emotion combinations would slow gender categorization relative to neutral expressions, whereas congruent combinations would speed up gender categorization and elicit faster response times compared to neutral expressions.

Method

Participants

Eighty-six undergraduate students (65 % female, $M_{age} = 19.0$, $SD = 1.2$) at a predominately White liberal arts college in the Midwest received course credit for participation.

Materials

Thirty-one White faces were selected from Ekman and Friesen's (1976) Pictures of Facial Affect based on the criterion of being consistently judged as showing only the desired emotion in a minimum of 95 % of participants' judgments. Fourteen male (4 angry, 5 happy, 5 neutral) and seventeen female (6 angry, 6 happy, 5 neutral) faces met this criterion and were included in the study. There were no differences on average between male and female faces for the percentage of times that they were correctly identified as showing the specific emotion. Each face was cropped to the same dimensions, 5.19 inches by 6.56 inches, in order to remove extraneous gender-related features (e.g., hair, earrings). The faces were presented using SuperLab™ stimulus display software, and response times were recorded by the SuperLab program and saved in a data file for later analysis.

Procedure

Participants completed 180 trials in which a single face was presented in the center of a black screen. Faces were displayed in six 30-trial blocks. Because there were uneven numbers for each gender-emotion combination using the 95 % criterion, five faces for each gender-emotion combination were randomly selected from the set of faces for that combination and included in each block (i.e., 5 angry-male faces, 5 happy-female faces, etc.) so that each combination was presented an equal number of times. Participants were told that the purpose of the study was to examine face recognition. They were instructed to categorize each face as male or female as quickly and accurately as possible and told that their response time would be recorded. To avoid a speed-accuracy tradeoff for participants' responses (Ratcliff 1993), the instructions stressed both accuracy and speed. Participants pressed the "B" key to indicate a male face and the "N" key to indicate a female face, using two fingers of the same hand and alternating hands between each block. Each face was presented for a maximum of 1,000 ms, with participant responses ending the presentation. Each trial screen advanced to a black screen immediately after a response. The inter-stimulus interval varied randomly between 250 and 750 ms to reduce anticipatory responding. Response times shorter than 200 ms prompted the message "Please wait for the stimulus" and were excluded from analysis.

Response times were determined for correct responses, and the number of incorrect responses made by each participant was also recorded. Because response times typically have a positively skewed distribution (Ratcliff 1979), we log transformed the response times to reduce the impact of deviant scores. However, results did not differ for transformed and untransformed response times, so results for the untransformed data are reported.

Results

Response times to correctly identified faces were analyzed using a 2 (participant gender: male, female) × 2 (target gender: male, female) × 3 (emotion: angry, happy, neutral) mixed-model ANOVA, where participant gender was a between-subjects factor and target gender and emotion were within-subjects factors. Response times were slower overall to male faces ($M = 550.07$ ms, $SE = 6.70$) than to female faces ($M = 525.20$ ms, $SE = 6.20$), $F(1, 84) = 90.53$, $p < .001$, $\eta_p^2 = .52$. The main effect of emotion was also significant, $F(2, 168) = 4.03$, $p = .020$, $\eta_p^2 = .05$, with slower response times to angry

($M = 541.05$ ms, $SE = 6.77$) and happy faces ($M = 538.04$ ms, $SE = 6.37$) compared to neutral faces ($M = 533.80$ ms, $SE = 6.33$).

As predicted, the target gender by emotion interaction was significant, $F(2, 168) = 11.45$, $p < .001$, $\eta_p^2 = .12$ (see Fig. 1). We conducted three theoretically-relevant pairwise comparisons for each target gender in order to examine our main predictions. First, we compared responses to gender-congruent and incongruent expressions. As expected, response times to angry female faces were significantly slower than to happy female faces, $F(1, 84) = 17.96$, $p < .001$. In contrast, response times to happy male faces were significantly slower than to angry male faces, $F(1, 84) = 4.76$, $p = .032$. Next, we compared responses to neutral expressions with responses to both congruent and incongruent expressions to test the prediction that congruent expressions would facilitate and incongruent expressions would inhibit responses relative to neutral expressions. As predicted, response times to angry female faces were significantly slower than to neutral female faces, $F(1, 84) = 23.60$, $p < .001$, but response times to happy and neutral faces did not differ from each other, $F(1, 84) = .02$, $p = .887$. Similarly, response times to happy male faces were marginally slower than to neutral male faces, $F(1, 84) = 3.73$, $p = .057$, but response times to angry and neutral faces did not differ, $F(1, 84) = .07$, $p = .794$. In sum, incongruent combinations of gender and emotion elicited slower response times relative to both neutral and gender-congruent expressions, and response times to gender-congruent and neutral expressions did not differ.

An interaction between participant gender and target gender was also obtained, $F(1, 84) = 3.87$, $p = .052$, $\eta_p^2 = .04$. Whereas response times to female faces did not differ by participant gender ($M = 525.17$ ms, $SE = 7.33$, for female participants; $M = 525.23$, $SE = 10.01$ for male participants), male participants identified male faces more slowly ($M = 555.24$ ms, $SE = 10.81$) than did female participants ($M = 544.89$ ms, $SE = 7.91$). Neither the two-way interaction between participant gender and emotion nor the three-way interaction was significant, $ps > .25$.

Because longer response times reflect greater difficulty in processing information (MacLeod 1991), longer response times are commonly associated with worse accuracy. Thus, incorrect responses are removed from analyses of response times to un-confound type of response (correct or incorrect) from speed of response (e.g., Hugenberg and Sczesny 2006). However, because both longer response times and incorrect responses represent different facets of difficulty in processing information, even when incorrect responses are removed from the analysis of response times, analyses of response times and error rates commonly yield similar results (e.g., Becker et al. 2007). Thus, incorrect responses were analyzed using an analogous 2 (participant gender: male, female) × 2 (target gender: male, female) × 3 (emotion: angry, happy, neutral) mixed-model ANOVA. The overall error rate was very low ($M = 6.9$ %, $SE = 0.6$). Two main effects were significant and were consistent with the main effects for response time. Error rates were higher for male faces ($M = 7.6$ %, $SE = 0.6$) than for female faces ($M = 6.2$ %, $SE = 0.7$), $F(1, 84) = 5.57$, $p = .021$, $\eta_p^2 = .06$, and mean error rates for angry faces (7.8 %, $SE = 0.6$) were higher than for happy (6.4 %, $SE = 0.6$) and neutral faces (6.5 %, $SE = 0.7$), $F(2, 168) = 4.66$, $p = .011$, $\eta_p^2 = .05$. In other words, male faces and angry faces elicited slower response times and more errors overall. Indeed, correlations between response times and incorrect responses in each condition were all positive except for neutral female targets, for which the correlation was weak and not significant, $r = -.096$, $p = .378$. This pattern of results suggests no speed-accuracy tradeoff. No other main effects or interactions were significant, $ps > .18$.

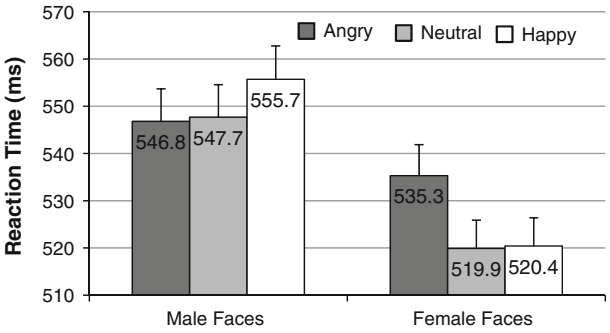

Fig. 1 Mean RTs (and standard errors) for the target gender by emotion interaction, Study 1. For within-subjects data, overlapping standard *error bars* do not necessarily indicate non-significance

Discussion

Study 1 confirmed that some gender-emotion combinations are more readily processed than other combinations. The time needed to categorize the gender of angry female faces was significantly slower than the time needed to categorize the gender of happy female faces. Likewise, the time required to categorize the gender of happy male faces was significantly longer than the time required to categorize angry male faces. The faster response times and higher percent correct responding to happy faces are consistent with previous reports of faster and more accurate responses to happy faces in emotion categorization tasks (Becker et al. 2007, Study 2; Everhart and Harrison 2000; Hugenberg and Sczesny 2006; Moretti et al. 1996), although these main effects of happiness have not been found previously in gender categorization tasks (Becker et al. 2007, Study 3; Hess et al. 2009). The faster and more accurate responses to female faces were somewhat unexpected. Previous studies have reported mixed findings. One study showed no main effect of target gender (Becker et al. 2007), and another reported faster responses to male faces (Hess et al. 2009). Consistent with our results, Thomas et al. (2014) showed that a primarily non-Black sample of undergraduates categorized White women faster by gender than White men.

Whereas previous studies have demonstrated slower response times to stereotype-incongruent emotions relative to congruent emotions (Becker et al. 2007; Hess et al. 2009), this is the first study to our knowledge to demonstrate that stereotype-incongruent emotions interfere with gender recognition for both male and female targets relative to neutral expressions. Because slower response times suggest increased cognitive difficulty (MacLeod 1991), these results argue for an automatic "intrusion" of gender-incongruent emotions on response times to categorize gender. In other words, these response time differences appear to be driven by the incongruity of certain emotions with each gender, rather than by the congruity of gender-stereotypical emotions. It may be the case that the incongruity actually slows down the time it takes to recognize targets as male and female. Alternatively, the incongruent emotions, because they are unexpected, may be a distraction that interferes with participants' speed in completing the gender categorization task.

Some researchers have suggested that similarities in facial structure between male faces and angry expressions and female faces and happy expressions may account for the faster response times to these gender-emotion combinations (Becker et al. 2007; Hess et al. 2009), although they acknowledge that social learning processes (e.g., stereotypes) may also play a role. Nevertheless, such an interpretation would predict a significant facilitation effect for congruent emotions, but we did not find evidence for such an effect. That is, the response times to congruent gender-emotion combinations were not significantly faster

than response times to neutral expressions. The fact that neutral faces elicited response times equivalent to the congruent expressions suggests that neutral expressions and gender-associated expressions are equally congruent with each gender. In contrast, anger expressed by a woman and happiness expressed by a man are clearly unexpected.

These findings add to the growing body of research demonstrating that gender-emotion congruity operates automatically and reflects deeply ingrained schemas about which gender is more likely to express which emotion. Importantly, this study clarifies how gender-emotion congruity influences expectations by distinguishing between congruent and neutral expressions and demonstrating that stereotype-incongruent emotional expressions are unexpected and slow down response time to categorize by gender.

Study 2

In real-world contexts, a perceiver is likely to know more about a person than simply his or her gender. In Study 2, we examined how gender-emotion congruity interacts with status. High status is a critical social cue (Dépret and Fiske 1999; Maner et al. 2008) that is tightly linked with beliefs about anger (Ratcliff et al. 2012; Tiedens et al. 2000). Although status is confounded with gender, with men ascribed higher status, men and women may both hold high-status or low-status positions. Thus, gender and status stereotypes at times may lead to opposing predictions about what emotions are more expected for men and women. Our goal was to disentangle the relationships among status, gender, and emotion at an automatic level.

The influence of status, gender, and emotion on expectations has not been examined using either implicit or explicit measures. In this initial investigation, we employed the same implicit paradigm as in Study 1 to examine how responses differed when the status of targets was made explicit. Given the implicit links between anger and high status, it was possible that the incongruity of anger with female targets would disappear when they have high status. However, the robust links between gender and emotion may lead to different underlying expectations for the emotions of men and women in roles of the same status. Examining how both status and emotion influence gender categorization would allow us to tap the implicit relationships among gender, status, and emotion that likely inform such expectations.

We examined the following alternative hypotheses. If high-status individuals are given greater leeway to be angry in general (as suggested by Maybury 1997), then the expression of anger by a low-status target would be unexpected regardless of gender. If, however, gender stereotypes about emotion are paramount, then we would expect slower response times to angry women and happy men, regardless of their status. It seemed more likely that status would affect the time needed to categorize a person's gender depending on what emotion was being expressed. Whether high-status information would counter or reinforce the incongruity of anger with women was not clear.

Method

Participants

Seventy-three undergraduate students (62 % female, $M_{age} = 19.4$, $SD = 1.3$) at a predominately White university in the Northeastern U.S. completed the study for course credit.

Materials

Although the target faces in Study 1 were selected using a strict criterion of perceived emotional expression in pretest ratings, this had the effect that not all emotional expressions were represented for each target person and some targets appeared more than others. In addition, a greater number of faces was needed so that unique targets could be presented in the low-status and high-status trials. To address these issues, we included happy, angry, and neutral expressions from Ekman and Friesen's (1976) stimulus set for each of the 6 male and 8 female targets included in Study 1, increasing the total number of faces from 31 to 47. For two male and three female targets, more than one photograph of the same expression had previously met the 95 % accuracy minimum, so we included both photographs but counterbalanced their presentation such that each expression type was presented an equal number of times for each target. This new set of expressions was recognized at an average accuracy level of 93.86 % ($SD = 8.9$ %), and the accuracy level did not differ by target gender, $p = .335$. Average pretest ratings of status, dominance, and likability for the neutral faces of each target were all within one standard deviation of the mean for that rating. The faces were cropped using the same criteria as in Study 1 and presented using DirectRT^{TM} stimulus display software. Response times were recorded by the DirectRT program and saved in a data file for later analysis.

Procedure

Whereas Study 1 did not require a cover story because the primary variables of interest (gender, emotion) were inherent in the target faces, in Study 2 we employed a cover story in order to manipulate the status of the target faces and to ensure that participants believed the targets actually had high or low status. Participants were told that the researchers were studying first impressions and that they would be shown pictures of different people, some of whom were high-status employees and some who were low-status employees. They were told that they would rate each person on how competent and warm they appeared to them (bogus task), but first they would complete a task that would allow them to form a first impression of each person. As in Study 1, they were instructed to categorize each face as male or female as quickly and accurately as possible. Participants were not told that response times would be recorded in order to maintain the cover story.

The procedure for presenting the faces in Study 2 was the same as in Study 1, with minor modifications. The faces were divided into two sets containing 3 male and 4 female targets each, and information in the instructions before each set described the subsequent pictures as either assistants or executives in a large corporation.[1] Each set was presented in three blocks of 30 trials, for a total of six blocks and 180 trials, again with 5 faces randomly selected from the set for each gender-emotion combination. The order in which the two sets were presented and the status information assigned to each set of faces were counterbalanced across participants. To ensure that the status distinctions remained salient throughout all trials, the presentation of each face was preceded by the word "Assistant" or

[1] Although the gender-status congruent trials (i.e., high-status male and low-status female) arguably could be considered replications of the no-status trials in Study 1, we recognized that contextually-specific status information should be distinguished from assumed status based on gender and might differentially influence responses to the targets. Therefore, an additional 34 participants completed a revised version of the experiment in which a set of targets with no status information was presented first, followed by the high- and low-status sets. As expected, analyses of the no-status information trials replicated the patterns found in Study 1.

"Executive" presented in the center of a black screen for 500 ms. To maintain the cover story, following each set, participants were presented with each neutral face from the set and asked to rate how competent and how warm each person appeared to them, on a scale of 1–7.

As in Study 1, results did not differ for transformed and untransformed response times, so results for the untransformed data are reported.

Results

Because initial analyses showed no significant main effects or interactions with participant gender, the data were collapsed across participant gender for subsequent analyses. Response times to correctly identified stimuli were analyzed using a 2 (status: high, low) × 2 (target gender: male, female) × 3 (emotion: angry, happy, neutral) repeated-measures ANOVA. None of the main effects reached significance, $ps > .09$.[2]

As in Study 1, the two-way interaction between target gender and emotion was significant, $F(2, 144) = 6.31$, $p = .002$, $\eta_p^2 = .08$. We again conducted three theoretically-relevant pairwise comparisons for each target gender, and the results revealed the same pattern as in Study 1. Specifically, response times to angry female faces were slower than to happy female faces, $F(1, 72) = 6.34$, $p = .014$, and response times to happy male faces were slower than to angry male faces, $F(1, 72) = 7.45$, $p = .008$. In addition, response times to angry female faces were significantly slower than to neutral female faces, $F(1, 72) = 3.97$, $p = .050$, and happy and neutral female faces did not differ, $F(1, 72) = .38$, $p = .539$. Similarly, response times to happy male faces were significantly slower than to neutral male faces, $F(1, 72) = 6.91$, $p = .010$, and response times to angry and neutral male faces did not differ, $F(1, 72) = .06$, $p = .801$. As was the case in Study 1, response times were slower to gender-incongruent expressions compared to both gender-congruent and neutral expressions, and response times to gender-congruent and neutral expressions did not differ. These effects, however, were moderated by target status.

The three-way interaction of status, gender, and emotion was significant, $F(2, 144) = 3.08$, $p = .049$, $\eta_p^2 = .04$. Consequently, we examined the status by emotion interaction for each target gender to determine whether high- and low-status information differentially influenced the time to categorize female and male faces. The interaction between status and emotion was significant for female targets, $F(2, 144) = 4.60$, $p = .012$, $\eta_p^2 = .06$, but not for male targets, $p = .764$ (see Figs. 2, 3, respectively). Planned comparisons revealed different patterns in the high- and low-status trials for female targets. In the high-status trials, response times to angry female faces were significantly slower than response times to both happy and neutral female faces, $F(1, 72) = 13.24$, $p = .001$, $\eta_p^2 = .16$, and $F(1, 72) = 8.98$, $p = .004$, $\eta_p^2 = .11$, respectively, and response times to happy and neutral female faces did not differ, $F(1, 72) = 1.01$, $p = .319$. In the low-status trials, however, no difference in response times to the different emotions was found, $p = .908$. In sum, status moderated responses to female faces only, with anger slowing responses to high-status women and no differences by emotion in responses to low-status women.

Incorrect responses were analyzed using a 2 (participant gender: male, female) × 2 (status: high, low) × 2 (target gender: male, female) × 3 (emotion: angry, happy, neutral) ANOVA, with repeated measures on the last three variables. The overall error rate was

[2] The main effect of status was marginally significant, $F(1, 72) = 2.88$, $p = .094$, with faster response times to high-status ($M = 577.2$, $SE = 6.6$) than to low-status faces ($M = 571.0$, $SE = 6.5$).

again very low ($M = 5.7$ %, $SE = 0.4$), and no significant main effects or interactions were found, $ps > .26$.

Discussion

The time needed to categorize gender was slower when the emotional expression was stereotypically incongruent with the gender of the target. These findings are convergent with those of Study 1, in which a number of different faces displaying different expressions were used. In Study 2, the same targets were used across all expressions, and the same pattern of results emerged. Although the main effect of emotion was not significant in Study 2, angry and happy expressions were categorized more slowly than neutral expressions, as in Study 1. We did not find that female faces were categorized faster than male faces, as was the case in Study 1, but as previously noted, gender categorization tasks have not always produced gender main effects (Becker et al. 2007). Similarly, previous studies have not found participant gender to play a significant role in gender categorization speed (Becker et al. 2007; Hess et al. 2009; Stroessner 1996), and we did not replicate the marginal participant gender by target gender interaction found in Study 1 ($p = .810$ in Study 2). Thus, this result should be interpreted cautiously.

Of primary interest, Study 2 demonstrated that status affects expectations for the emotional expressions of women but not men. Whereas happy expressions slowed response times to male faces regardless of their status, angry expressions slowed response times to female faces when they were described as executives. That is, anger was incongruent with female targets when they had high status, and when female targets were unmarked in terms of status as we found in Study 1. However, when explicit information indicated that a woman had low status (i.e., that she was an assistant), the incongruity of the combination of anger and female appeared to be eliminated and no distinctions were made in response to her emotional expressions. The fact that response times to angry and neutral expressions did not differ for low-status women demonstrates that anger has not necessarily become *expected* in this case but it is no longer incongruent when expressed by a female target. These findings were surprising, given that anger has been shown to be congruent with high status and incongruent with low status (Ratcliff et al. 2012; Tiedens et al. 2000). However, these studies did not include female targets.

The lack of incongruity of anger with low-status women in our study may be due to the fact that lower status in general and being an assistant in particular are congruent with being a woman. Anger may be generally unexpected if expressed by a woman, especially a high-status one, but may not elicit the same incongruity when a woman occupies a stereotypically feminine role. It may also be the case that the emotional expressions of a low-status woman are simply less consequential, and thus less attention is paid to her emotional states, given that no differences were observed in response to the different emotional expressions. Finally, it is also possible that stereotypes about low-status women and emotion differ from those for high-status women and women in general. The novelty of these findings calls for replication, and future work could empirically test these alternative explanations.

The findings of Study 2 suggest that, at an automatic level, anger is congruent with high status for men only. These results are consistent with previous work showing that anger is more expected when expressed by male targets with high status (Ratcliff et al. 2012; Tiedens et al. 2000) and studies showing that the same standards that apply to high-status men do not apply to women in positions of high social status (Brescoll and Uhlmann 2008; Lewis 2000; Ridgeway 2001). Anger expressed by high-status women tends to be negatively evaluated

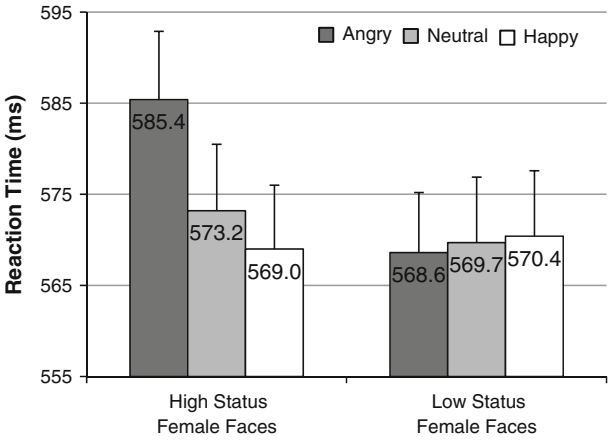

Fig. 2 Mean RTs (and standard errors) for the status by emotion interaction for female targets, Study 2

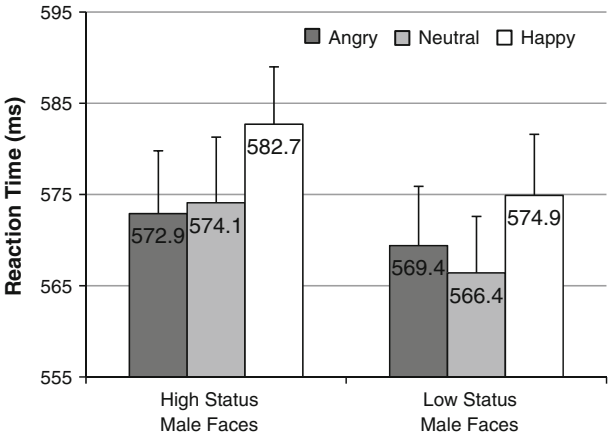

Fig. 3 Mean RTs (and standard errors) for the status by emotion interaction for male targets, Study 2

(Brescoll and Uhlmann 2008; Lewis 2000), and the present research shows that at an implicit level, anger is incongruent with women when they have high status.

The incongruity of happy expressions and male faces was not influenced by status information, perhaps because higher status is typically part of the male schema. In fact, expectations for men and for leaders and people with high status are clearly conflated (Eagly and Carli 2007): The way people with high status are expected to behave is the way that men are expected to behave, so less potential for conflict exists when men hold different contextual status positions. Even when a man occupies a low-status position, the perception of status seems to be so tightly linked with the perception of a person as male that contextual information does not interfere with these expectations. Contextual status information seems to matter for women's emotional displays, but not for men's.

General Discussion

The present research demonstrated that associations between gender and emotion are automatically elicited, with the result that stereotype-incongruent expressions slow gender

categorization relative to both neutral and congruent expressions. Study 1 is noteworthy in replicating and extending previous studies of gender-emotion associations by making a critical distinction between interference and facilitation effects. Study 2 added a realistic, workplace-related context with the inclusion of status information that has been linked with gender. The results of Study 2 underscore the significance of both emotion and status in how women in particular are perceived. Anger slowed response times to women when they held high-status positions, whereas low-status information eliminated the incongruity of anger with women.

By including neutral expressions, the present studies provide necessary contrasts. In both Study 1 and Study 2, the neutral expressions provided a baseline and demonstrated that stereotype-congruent expressions and neutral expressions are equally congruent with either gender. Whereas previous studies have suggested that congruent emotions should facilitate response times due to the perceptual overlap between male faces and angry expressions and female faces and happy expressions (Becker et al. 2007; Hess et al. 2009), we did not find evidence for facilitation. Rather, our data suggest that the interference of stereotype-*incongruent* emotions is driving the faster response times to congruent combinations of gender and emotion found in our studies and those of others. Thus, our studies not only replicate previous work examining the effect of emotion on gender categorization speed; by including neutral expressions, our results also provide important input into the theoretical issue of what is responsible for these response time differences. In short, deeply-ingrained stereotypes, and not just facial structure, are likely influencing these automatic responses. Previous researchers (Becker et al. 2007; Hess et al. 2009) have acknowledged this possibility, but it has not before been supported by empirical evidence.

At an automatic level, anger is incongruent with women and high-status women in particular. Women in high-status and leadership positions tend to be evaluated negatively when they display stereotypically masculine behaviors (Eagly et al. 1992; Rudman et al. 2012) and express anger (Brescoll and Uhlmann 2008; Lewis 2000). Future work could examine whether slowed responses to angry women mediate these negative evaluations. That is, the unexpectedness of these behaviors may drive participants' negative reactions, or the negative reactions themselves may be slowing down response times in the gender categorization task.

In some cases, emotion categorization and gender categorization tasks produce symmetrical results (Becker et al. 2007), but different cognitive processes are likely involved in judging an emotion compared to judging a target's gender. Thus, future work should examine whether status also moderates emotion categorization on male and female faces. Furthermore, although implicit and self-report measures of gender-emotion associations tend to be consistent (Becker et al. 2007; Plant et al. 2000), it remains an empirical question as to whether people have insight into their implicit expectations for targets with multiple social identities. Thus, future work could measure expectations using self-report measures and shed light on the extent to which people's explicit expectations do or do not align with their unconscious expectations.

The fact that the incongruity of smiling and maleness was consistent across both studies and all status conditions may be due to the intense smiles in the facial photographs, which may be especially incongruent with men, compared to smiles of lesser intensity. This raises an interesting question for future research: Would the effect of incongruent information in these studies change or be diminished if the intensity of the emotional expressions were decreased? Future work could also examine the generalizability of these effects to different targets and different populations, given that both studies used White targets and examined undergraduate participants. Race, among other social categories, likely also interacts with

gender to influence expectations for emotion. In addition, older participants, and in particular, those with experience in traditional workplaces, may be influenced by their experience with people of different genders and status levels in the workplace in addition to being influenced by stereotypes about gender and status.

It is important to note that although the terms status, power, and dominance are often used interchangeably, the status manipulation in this study used a particular type of status, that of hierarchical status in a workplace context. The use of different types of status (e.g., socioeconomic, legitimate) and different contexts (e.g., political, intergroup) requires examination.

Stereotypes about gender, status, and emotion are especially persistent and apparently deeply embedded. The present studies demonstrate that gender- and status-based expectations for who will express which emotions are activated automatically; thus, reactions to women and men whose emotions are at odds with these expectations may be elicited outside of awareness.

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Conflict of interest The authors declare that they have no conflict of interest.

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