

The Influence of Gender and Social Role on the Interpretation of Facial Expressions

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The current studies were designed to examine the influence of apparent gender on the interpretation of ambiguous emotional expressions. Participants rated the intensity of emotions that were expressed in two versions of the same emotional expression, in which hair style and clothing were altered to manipulate gender. The emotional expression in each of the photos was a combination of anger and sadness. Of interest was the effect of the apparent gender of the poser on the interpretation of the blended emotional expression. In Study 2 we also examined whether the social role (i.e., occupation) of the poser influenced the interpretation. Although the occupation of the poser did not influence emotion ratings, the apparent gender of the poser influenced the interpretation of ambiguous emotional expressions in a stereotype-consistent manner in both Studies 1 and 2.

KEY WORDS: gender; emotion; facial expression; nonverbal display.

The belief that women are more emotional than men is one of the strongest and most consistent gender stereotypes in Western cultures (Fischer & Manstead, 2000; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968; Ruble, 1983; Williams & Best, 1990). However, this stereotype, of women's greater emotionality, is not equally applicable to all emotions. Recent work has focused on identifying the specific emotions that are perceived as being differentially expressed by men and women (e.g., Brody & Hall, 1993; Fabes & Martin, 1991; Grossman & Wood, 1993; Hess et al., 2000; Johnson & Shulman, 1988; Plant, Hyde, Keltner, & Devine, 2000; Shields, 1987, 2002). Women are believed to experience and express emotions such as embarrassment, fear, happiness, guilt, sympathy, sadness, and love more frequently than men, whereas men are believed to experience and express anger and pride more frequently than women (e.g., Plant et al., 2000).

Thus, although women are viewed as more emotional than men overall, there are specific emotions (e.g., anger) that men are expected to express more often than women (also see Fabes & Martin, 1991; Hess et al., 2000; Johnson & Shulman, 1988; Shields, 2002).

There is some evidence that the gender stereotypes regarding how frequently men and women express specific emotions can influence the interpretation of emotional expressions (e.g., Algoe, Buswell, & DeLamater, 2000; Condry & Condry, 1976; Plant et al., 2000; Robinson, Johnson, & Shields, 1998; Widen & Russell, 2002). Specifically, women tend to be rated as expressing feminine stereotypic emotions to a greater degree (i.e., stronger intensity, identified emotion) than men do, and men tend to be rated as expressing masculine stereotypic emotions to a greater degree than women do. For example, in their classic study, Condry and Condry (1976) examined the influence of gender on the interpretation of infants' emotional expressions. Participants viewed a videotape of an infant responding to different stimuli and evaluated the infant's emotional response to each stimulus. All participants were exposed to the identical videotape, and the gender of the infant was manipulated by telling half of the participants that

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the infant was a girl and the other half that the infant was a boy. Participants who thought that they were viewing a girl rated the infant's reaction to a jack-in-the-box as more fearful and less angry than did those who thought they were viewing a boy. The authors suggested that gender stereotypes of emotion affected the perceivers' interpretation in a way that resulted in stereotype-consistent interpretations.

Recent work indicates that similar processes may occur when individuals interpret the intensity of emotional expressions of adults. Unlike infants, however, it is difficult to manipulate the apparent gender of adults. Therefore, in order to examine how gender influences the interpretation of adults' emotional expressions, researchers have matched the expressions of male and female posers as closely as possible using Ekman and Friesen's Facial Action Coding System (FACS; Ekman & Friesen, 1978). By using FACS, male and female posers can be trained to form facial expressions that are matched with respect to both the specific facial muscles that are moved and the intensity of the muscle movement. Plant et al. (2000) used this approach and found that the gender of the poser influenced the interpretation of facial expressions of emotion. For example, when the male and female posers made expressions that were FACS-equivalent blends of anger and sadness, the raters evaluated the expressions in a gender-consistent manner, such that female posers were rated as sadder and less angry than the male posers. In addition, when participants saw FACS-equivalent angry faces, they interpreted the anger expressions as angrier when the poser was male than when the poser was female (see Widen & Russell, 2002, for data regarding children's interpretations).

Stereotype-consistent interpretations of emotional expressions are troubling for a variety of reasons (Brody, 1999; Fischer, 2000). First, the interpretation of emotional expressions in a stereotype-consistent manner may strengthen gender stereotypes of emotion. For example, if people interpret ambiguous expressions of anger and sadness by men as more intensely angry than sad but interpret women as more intensely sad than angry, then their impressions of the person's primary emotional experience will confirm their previously held stereotypes. Second, the reactions of others based on stereotype-consistent interpretations (e.g., responding to men as if they are primarily angry) may influence how the expressers interpret their own emotional experience. This influence may be particularly strong for children as they learn to label their own emotional

experience, which could have implications for the socialization of emotion (e.g., Brody, 1999). Third, others' reactions may also influence people's actual emotional responses. For example, in an interpersonal situation, if people misinterpret the emotions of others in a stereotype-consistent manner, their behavior toward the expresser may elicit the very emotional response they expected, and thus result in a self-fulfilling prophecy (e.g., Darley & Fazio, 1980).

In conforming to these gender-specific expectations, men and women may, over time, come to view their own emotional experience as stereotypical and may come to expect that their future emotional reactions will also be stereotypical. Such responses could have negative implications for people's psychological well-being (Fischer, 2000). For example, if women come to view their own emotional experiences as suffused with sadness, a low status emotion, it may have implications for their sense of power and self-efficacy (Algoe et al., 2000; Conway, Di Fazio, & Mayman, 1999; Roseman, Wiest, & Swartz, 1994; Tiedens, Ellsworth, & Mesquita, 2000). Further, if men come to view their own emotional experiences as suffused with anger, it may increase their aggressive tendencies, which could have negative repercussions for men themselves as well as for the potential targets of their aggression.

In the current work we examined how gender influences the interpretation of adults' emotional expressions using a different approach to manipulating gender. In the Plant et al. (2000) study, the emotional expressions in the photos were held constant using FACS and the actual gender of the poser was used as the manipulation of gender. An alternative strategy, and the one used by Condry and Condry (1976), is to keep the emotional expression constant and manipulate perceived gender. Condry and Condry were able to manipulate the gender of the infant by labeling the target as a boy or a girl because male and female infants have similar faces. However, in adulthood various physical cues typically indicate the gender of the person (e.g., hair style, face shape, chin size). Thus, in contrast to Condry and Condry, in the current work we used a strategy of digitally manipulating pictures to make two versions of the same emotional expression. Following an approach described by Widen and Russell (2002), a computer-morphing program was used to synthesize the face of a man with the face of a woman making the same expression on one androgynous face. The hair and clothing were altered to create two versions of the facial expression. An advantage of this approach is that the man's and woman's

facial expressions are actually identical. With these morphed facial expressions, we sought to replicate Plant et al.'s findings using faces that differ only in apparent gender. In comparison to the manipulation in the Plant et al. study, this approach provides a stronger test of whether gender of the poser influenced the ratings of the participants.

A second goal of the current work was to examine the factors that contribute to biased interpretations of emotional expressions. Specifically, in the second study we explored whether social roles would influence the interpretation of men's and women's emotional expressions (Eagly & Steffen, 1984; Eagly & Wood, 1999). According to the social-role theory, gender roles emerge from the work of men and women (Eagly & Steffen, 1984; Eagly & Wood, 1999). The characteristics associated with the roles that men and women typically fill in society come to be applied to men and women, which result in the gender stereotypes. In general, the positions that men tend to hold in our society are viewed as more powerful and agentic than the positions held by women (e.g., Eagly & Steffen, 1984; Eagly & Wood, 1999; Fiske, 1993). Further, there are differences in the status associated with different emotional expressions. For example, anger is a high status emotion that is associated with the assertion of authority (Algoe et al., 2000; Conway et al., 1999; Roseman et al., 1994; Shields, 2002; Tiedens et al., 2000). Sadness, in contrast, is a low status emotion associated with passivity (Conway et al., 1999; Roseman et al., 1994; Tiedens et al., 2000).

Thus, it is possible that expectations about the social roles that men and women tend to hold in our society influence people's expectations about men's and women's emotional expression and, hence, how people tend to interpret men's and women's emotional expressions. For example, people may be more likely to view men as angrier than women because men are expected to hold roles in society that are perceived as requiring more aggressive, angry responses. In contrast, people may view women as sadder than men because women are expected to hold roles that are perceived as requiring more sensitivity. In Study 2 we explored this possibility by examining the independent and joint influences of social role and gender on the interpretation of emotional expressions.

If gender influences the interpretation of emotional expressions because of beliefs about the roles that men and women hold, then these effects should be mitigated or eliminated when the social roles of the posers are manipulated. That is, men and women

who are portrayed as having masculine social roles should be viewed as angrier and less sad than men and women who are portrayed as having feminine social roles. Consistent with this basic argument, Snodgrass (1985, 1992) demonstrated that the well-established gender difference in interpersonal sensitivity (women are typically more interpersonally sensitive than men) was eliminated when women and men were assigned to leader or subordinate roles. That is, regardless of sex, people placed in a subordinate role were more sensitive to how others felt about them than were those who were placed in a leadership role.

STUDY 1

Participants in Study 1 rated facial expressions that were blends of anger and sadness. For each pose, hair and clothing were added to create two versions: a man and a woman. Of interest was whether participants' interpretation of the facial expression would vary as a function of the apparent gender of the poser. On the basis of the findings from Plant et al. (2000), we anticipated that the expressions would be rated as expressing more intense sadness and less intense anger when the posers were female than when the posers were male.

Method

Participants and Design

Participants were 69 undergraduate students (56 women, 13 men) at a medium-sized midwestern university who volunteered to participate as part of a psychology class in research methods. The design of the study was a 2 (poser gender: man vs. woman) \times 2 (pose: upper anger/lower sadness vs. upper sadness/lower anger) \times 2 (rated emotion: anger vs. sadness) within-subjects design.

Materials and Procedure

We used pictures, from the Plant et al. (2000) study, of two men and two women making ambiguous posed expressions that were blends of anger and sadness. The poses from Plant et al. were based on Ekman's analysis of the muscles involved in facial expressions, (i.e., the Action Units or AU's from Ekman and Friesen's FACS; Ekman & Friesen,

1978). One-half of the blends consisted of an upper anger (AU 4 & AU 5—eyebrows drawn together and down with upper eyelids raised) and lower sadness (AU 15 & AU 17—lip corners pulled downward and chin boss upraised) expression. The other half of the expressions consisted of an upper sadness (AU 1 & 4—inside corners of the eyebrows raised upward and together) and lower anger (AU 23, 24, & 17—mouth tightened and lips pressed together) expression. All of the posers were in their early- to mid-20s, and all were White.

On the basis of the approach described by Widen and Russell (2002), the face of a man and the face of a woman making the same blended angry/sadness expression were combined by the computer program Morph 5.1 to form one face. Cosmopolitan virtual makeover was then used to add masculine or feminine hairstyles and clothing to make two versions of the face, one a woman and one a man. Four such faces (two of each blend type) were created with a man and a woman version of each (see Appendix A for example). Pilot testing was conducted with 40 undergraduates who were asked to rate each face on a variety of factors (e.g., age, ethnicity, education) including gender. Participants' responses confirmed that the woman versions of the morphed faces were judged to be female and the man versions were judged to be male.

Participants in the main study viewed a total of 32 color pictures, which were projected onto a screen in the front of the classroom. Before each picture, a sentence setting a neutral situation was presented (e.g., "You and a coworker are going to have a meeting in your office. You glance out of your office and see your coworker making the following face."). These sentences were included to prevent the participants from making direct comparisons between the pictures when making their ratings and to reduce any suspicion regarding the purpose of the study. Three different versions of the presentation were created to match different neutral sentences with different slides. Each participant saw only one of the three versions of the presentations.

There were eight target faces (i.e., four man/woman pairs of the same ambiguous expression), and these target faces were interspersed with 24 other faces. Participants viewed both the man and woman version of the target faces. However, the two versions of the same pose were always separated by many other faces, and none of the participants expressed suspicion that they were seeing the same faces multiple times. Consistent with the measures

used in Plant et al. (2000), for each target picture the participants rated the intensity of two feminine stereotypic emotions (sadness and sympathy) and two masculine stereotypic emotions (anger and contempt) on a scale of 1 (*no emotion*) to 7 (*extreme emotion*). The nontarget faces were unambiguous facial expressions of unmorphed men and women that included neutral, angry, sad, amused, and embarrassed expressions. The neutral, angry, and sad expressions were rated on the same emotions as were the ambiguous expressions. The amused and embarrassed expressions were rated on amusement, shame, embarrassment, and pride on the same 1 to 7 scale as the other emotions.

Results

Participants' anger and sadness ratings were each averaged for the two upper anger, lower sadness and the two upper sadness, lower anger poses separately for the man's and woman's faces. These scores were submitted to a 2 (poser gender: man vs. woman) \times 2 (pose: upper anger, lower sadness vs. upper sadness, lower anger) \times 2 (rated emotion: anger vs. sadness) within-subject analysis of variance (ANOVA).⁴ The analysis revealed several main effects and lower order interactions. However, these lower-order effects were qualified by a poser gender by pose by rated emotion interaction, $F(1, 68) = 34.19, p < .001$ (see Table I for all means and standard deviations).

In order to examine the nature of this three-way interaction, the sadness and anger ratings were examined in separate 2 (poser gender: man vs. woman) \times 2 (pose: upper anger, lower sadness vs. upper sadness, lower anger) within-subject ANOVAs. The analysis of the sadness ratings revealed a main effect of poser gender, $F(1, 68) = 40.51, p < .001$, such that the female posers' expressions were rated sadder ($M = 4.44, SD = 1.29$) than the male posers' expressions ($M = 3.70, SD = 1.48$). In addition, there was a poser gender by pose interaction, $F(1, 68) = 8.25, p < .006$. Paired samples t tests indicated that the gender difference for sadness ratings was larger for the upper sadness, lower anger pose, $t(68) = -7.08,$

⁴In the current study, there were too few male participants to include participant gender as a factor. However, participant gender was included in Study 2, and there were no main effects or interactions associated with it. Similarly, Plant et al. (2000, Study 2) did not find significant differences as a function of gender.

$p < .001$, than for the upper anger, lower sadness pose, $t(68) = -1.99, p = .05$.

The analysis of the anger ratings revealed a main effect of poser gender such that the male posers' expressions were rated angrier ($M = 4.01, SD = 1.23$) than the female posers' expressions ($M = 3.69, SD = 1.24$), $F(1, 68) = 6.83, p < .02$. There was also a main effect of pose, such that the upper anger, lower sadness poses were rated more angry ($M = 4.63, SD = 1.24$) than the upper sadness, lower anger poses ($M = 3.07, SD = 1.24$), $F(1, 68) = 96.60, p < .001$. In addition, there was a poser gender by pose interaction, $F(1, 68) = 46.87, p < .001$. Paired samples t tests indicated that the gender difference for anger ratings was significant for the upper sadness, lower anger pose, $t(68) = 5.74, p < .001$, but did not reach significance for the upper anger, lower sadness pose, $t(68) = -1.54, p = .13$.

The analyses presented to this point focused on anger and sadness in order to replicate the Plant et al. (2000) findings. However, because sympathy is a feminine stereotypic emotion and contempt is a masculine stereotypic emotion, we also investigated the possibility that poser gender would influence participants' ratings of these emotions. Therefore, participants' contempt and sympathy ratings were submitted to a 2 (poser gender: man vs. woman) \times 2 (pose: upper anger, lower sadness vs. upper sadness, lower anger) \times 2 (rated emotion: anger vs. sadness) within-subject ANOVA. The analysis revealed several main effects and lower order interactions. However, these lower-order effects were qualified by a poser gender by pose by rated emotion interaction, $F(1, 68) = 21.71, p < .001$ (see Table I).

Table I. Mean and Standard Deviations for Anger and Sadness as a Function of Poser Gender and Pose for Study 1

	Man	Woman
Sadness		
Upper sadness, lower anger	3.44 _a (1.58)	4.54 _b (1.33)
Upper anger, lower sadness	3.96 _a (1.38)	4.33 _b (1.26)
Anger		
Upper sadness, lower anger	3.50 _a (1.28)	2.64 _b (1.20)
Upper anger, lower sadness	4.52 _a (1.18)	4.74 _a (1.29)
Sympathy		
Upper sadness, lower anger	2.44 _a (1.41)	3.28 _b (1.57)
Upper anger, lower sadness	1.83 _a (0.93)	1.78 _a (1.08)
Contempt		
Upper sadness, lower anger	2.58 _a (1.58)	2.09 _b (1.19)
Upper anger, lower sadness	2.62 _a (1.67)	2.54 _a (1.56)

Note. Means on each row with different subscripts differ at the .05 level.

In order to examine the nature of this three-way interaction, the sympathy and contempt ratings were examined in separate 2 (poser gender: man vs. woman) \times 2 (pose: upper anger, lower sadness vs. upper sadness, lower anger) within-subject ANOVAs. The analysis of the sympathy ratings revealed a main effect of poser gender, $F(1, 68) = 21.49, p < .001$, such that the woman versions of the faces were rated as expressing more sympathy ($M = 2.53, SD = 1.33$) than the man versions of the faces ($M = 2.14, SD = 1.17$). There was also a main effect of pose, such that the upper sadness, lower anger poses were rated as expressing more sympathy ($M = 2.86, SD = 1.49$) than the upper anger, lower sadness poses ($M = 1.81, SD = 1.01$), $F(1, 68) = 55.13, p < .001$. In addition, there was a poser gender by pose interaction, $F(1, 68) = 16.61, p < .001$. Post hoc paired samples t tests indicated that the gender difference for sympathy ratings was significant for the upper sadness, lower anger pose, $t(68) = -5.11, p < .001$, but did not reach significance for the upper anger, lower sadness pose, $t(68) = 0.41, p = .68$.

The analysis of the contempt ratings revealed a main effect of pose, such that the upper anger, lower sadness poses were rated as higher in contempt ($M = 2.58, SD = 1.62$) than the upper sadness, lower anger poses ($M = 2.34, SD = 1.39$), $F(1, 68) = 6.88, p < .02$. In addition, there was a poser gender by pose interaction, $F(1, 68) = 6.927, p < .02$. Paired samples t tests indicated that the gender difference for contempt ratings was significant for the upper sadness, lower anger pose, $t(68) = 3.77, p < .001$, but did not reach significance for the upper anger, lower sadness pose, $t(68) = 0.35, p = .53$.

STUDY 2

The first study replicated the findings from Plant et al. (2000) and indicated that blended expressions of anger and sadness were viewed as expressing less intense sadness and more intense anger when the poser was male than when the poser was female. However, unlike the previous work with adult posers, in the current work, the actual expression was held constant, whereas the gender of the poser was manipulated with peripheral cues such as hair and clothing. This provides a stronger test of the hypothesis that gender influences the interpretation of emotion.

Our goals in Study 2 were threefold. One goal was to replicate these basic findings. A second goal of Study 2 was to examine whether the effect of

expression type that was found in Study 1 (i.e., a stronger gender effect with the upper sadness, lower anger blend) would be replicated. In addition, a third goal of Study 2 was to explore whether the difference in the interpretation of men's and women's emotional expressions is due to the social roles that men and women have historically held in our society (Eagly & Steffen, 1984; Eagly & Wood, 1999). To this end, in Study 2, the posed expressions that participants viewed varied both in the apparent gender of the poser and the social role of the poser. The social roles were manipulated by providing some basic information about each poser that included his or her job title. Job titles were chosen based on statistics from the United States Department of Labor. Specifically, firefighters and electricians were chosen as masculine jobs and nurses and elementary school teachers were chosen as feminine jobs on the basis of the proportion of men and women who typically hold these jobs.

On the basis of the findings from Study 1, it was expected that the gender stereotypes of emotion would influence participants' ratings of the facial expressions such that those who rated a male poser's expression would interpret the poser as angrier and less sad than those who rated a female poser's expression. We also anticipated that when the poser was labeled with a masculine job title, the job title would lead to a more agentic interpretation of the poser, and thus cause the facial expression to be rated as angrier and less sad than when the poser was labeled with a feminine job title. Further, by including both apparent gender and occupation of the poser in the same study, some interesting comparisons can be made. For example, if the effect of the occupation overwhelms the gender effect, then it could be that the gender effects in Study 1 can be attributed to the raters' beliefs about the social-roles played by the men and women in the photos (Eagly & Steffen, 1984; Eagly & Wood, 1999; Snodgrass, 1985, 1992). On the other hand, if the effect of gender persists even when the occupation is included, it suggests that differing beliefs about the social roles of the people in the photos in Study 1 can not explain the gender effects.

Method

Participants and Design

Participants were 140 undergraduate students (97 women, 43 men) at a large southeastern univer-

sity who earned research credit for their general psychology classes. The design of the study was a 2 (participant gender: man vs. woman) \times 2 (poser gender: man vs. woman) \times 2 (pose: upper anger, lower sadness vs. upper sadness, lower anger) \times 2 (job title: masculine vs. feminine) \times 2 (rated emotion: anger vs. sadness) mixed model design with poser gender, pose, job title, and rated emotion as repeated factors.

Materials and Procedure

We used the same pictures as were used in Study 1. Job titles were chosen on the basis of statistics from a survey conducted by the United States Department of Labor, Bureau of Statistics (2001) which found that women make up 93.1% of registered nurses, 82.5% of elementary school teachers, 2.7% of firefighters, and 1.8% of electricians (<http://www.bls.gov/cps/#tables>). Because of the overwhelming gender inequality in these professions, these four job titles were chosen for the current study.

Although participants in Study 1 did not indicate that they were aware that they had seen two versions of the same face, we wanted to avoid any potential suspicion that seeing both versions might arouse. Therefore, participants viewed only one version of each of the four different morphed expressions. Because the faces were not repeated, it was not necessary to have participants view distracter pictures. As a result, only four pictures were rated in the current study. From the two upper anger, lower sadness poses participants viewed the man for one and the woman for the other. Similarly, participants viewed one man and one woman for the two upper sadness, lower anger poses. The version (man or woman) that was viewed for the different poses was counterbalanced across participants. In addition, each face was presented with a job title (either masculine or feminine). The job titles were distributed so that each participant saw one of the four possible combinations (man's face/masculine job title, man's face/feminine job title, woman's face/masculine job title, woman's face/feminine job title). The specific version of the gender/job title combination that was rated for each face was counterbalanced.

Participants were instructed as follows: "For each of the faces below, you will be given the person's name and occupation. Please look carefully at the information and each facial expression." They were then asked to rate each expression on four

emotions (sadness, anger, sympathy, and contempt). Each emotion was rated on a scale from 1 (*no emotion*) to 5 (*extreme emotion*).⁵ Participants completed the questionnaires in classroom settings with 15–20 people per session.

Results

Because each participant rated only one of each possible gender/job title combination, responses were combined across the different counterbalanced questionnaire versions. The anger and sadness ratings were submitted to a 2 (participant gender: man vs. woman) \times 2 (poser gender: man vs. woman) \times 2 (job title: masculine vs. feminine) \times 2 (rated emotion: anger vs. sadness) mixed model ANOVA, with poser gender, job title, and rated emotion as the within-subjects factors. The analysis revealed a significant main effect of poser gender, such that, across rated emotion, female posers' expressions were rated as more emotional ($M = 3.05$, $SD = 0.88$) than the male posers' expressions ($M = 2.77$, $SD = 0.88$), $F(1, 125) = 17.94$, $p < .001$. That is, averaged across both the anger and sadness ratings, the women tended to be rated more emotional overall (but see below). In addition, there was a main effect of rated emotion, such that the pictures were rated more sad ($M = 3.01$, $SD = 0.90$) than angry ($M = 2.79$, $SD = 0.86$), $F(1, 125) = 7.53$, $p < .008$. However, these main effects were qualified by a significant poser gender by rated emotion interaction, $F(1, 125) = 11.42$, $p < .002$ (see Table II).

In order to explore the nature of the interaction, the effect of rated emotion was examined separately as a function of poser gender. Examination of the sadness ratings revealed that the female posers' expressions were rated as sadder than the male posers' expressions, $F(1, 138) = 24.00$, $p < .001$ ($d = .54$). In contrast, examination of the anger ratings revealed that the female posers' expressions were rated as angry as the male posers' expressions were rated, $F(1, 138) = 0.81$, $p = .37$. The results of rated emotion were also examined within each gender. The woman versions of the poses were rated more sad than angry, $F(1, 138) = 16.90$, $p < .001$ ($d = .51$),

⁵Unfortunately, the rating scale for Study 2 (1–5) was different than the scale for Study 1 (1–7). This was due to a miscommunication when the materials for Study 2 were created and copied. As a result, the overall emotion ratings are lower for Study 2, but the meaning of the relationships between the ratings of the man and woman versions remains the same.

Table II. Mean and Standard Deviations for Anger and Sadness as a Function of Poser Gender for Study 2

	Man	Woman
Sadness	2.78 _a (0.88)	3.27 _b (0.91)
Anger	2.75 _a (0.87)	2.82 _a (0.84)

Note. Means on each row with different subscripts differ at the .05 level.

whereas the man versions of the poses were rated similarly sad and angry, $F(1, 138) = 0.11$, $p = .74$. None of the other main effects or interactions were significant.

Because the specific pose (i.e., upper anger, lower sadness vs. upper sadness, lower anger) influenced the ratings of the facial expressions in Study 1, we tested whether this effect replicated in Study 2. For these analyses, because participant gender and job title did not influence the interpretation of the emotional expressions in any conducted analyses, these two factors were not included in the reported analyses. A 2 (poser gender: man vs. woman) \times 2 (pose: upper anger, lower sadness vs. upper sadness, lower anger) \times 2 (rated emotion: anger vs. sadness) repeated measures ANOVA was conducted. Note that the three-way poser gender by pose by rated emotion interaction did not reach significance, $F(1, 139) = 1.42$, $p = .24$.

When the analyses were conducted on the sympathy and contempt ratings, there were no significant main effects or interactions. It is also worth noting that none of the analysis revealed main effects or interactions involving participant gender. These findings are consistent with Plant et al.'s findings (2000) both regarding the consistency of college age men's and women's gender stereotypes of emotions as well as their similar interpretation of emotional expressions. However, some caution should be taken in drawing conclusions from this lack of effects because there were far more women than men in the sample, and unequal cell sizes can increase the Type II error. Further, Widen and Russell (2002) found that the gender of children influenced their interpretations of men's and women's emotions in interesting and complicated ways.

GENERAL DISCUSSION

In the current studies, we examined the influences of gender and social role on the interpretation of ambiguous emotional expressions. The results indicated that people are influenced by the apparent

gender of the poser when they interpret ambiguous emotional expressions and that people's interpretations are consistent with previously documented gender stereotypes of emotion. Specifically, across both studies, the female posers' expressions were rated as sadder than the male posers' expressions, consistent with the stereotype that women express more sadness than men do (e.g., Plant et al., 2000). Further, in Study 1, for one of the poses, the male poser's expression was rated higher on anger and contempt but lower on sympathy than the female poser's expression. The findings across these studies suggest that the ratings of facial expressions were judged in accordance with the gender stereotypes of emotion. Thus, even though the facial expressions that participants rated were identical (i.e., morphed faces that differed only in clothing and hair) the findings of Plant et al. (2000) were replicated. These findings indicate that people's interpretations of ambiguous facial expressions are influenced by their expectations such that they rate men and women as expressing more intensely emotions that are stereotypically associated with the poser's gender.

Although the intensity of the poser's emotional expressions was rated in a stereotype consistent manner, it is possible that other types of ratings (e.g., the appropriateness of the expression) may have revealed quite different reactions. That is, gender stereotypic emotional responses (e.g., angry men and happy women) tend to be perceived as less appropriate than the same responses made by the other gender (e.g., angry women and happy men; e.g., Hutson-Comeaux & Kelly, 2002; Smith et al., 1989). Recent work suggests that these differential evaluations of appropriateness may be due to perceptions of the validity of the responses, with counterstereotypic responses being viewed as more valid and sincere and, hence, more appropriate (Hutson-Comeaux & Kelly, 2002). In future work, it will be important to examine a larger range of responses to facial expressions of emotion including the appropriateness and validity of such expressions.

In the current work, all of the posers were in their early- to mid-20s. However, it is quite possible that the findings would have been different for different aged posers. Indeed, Fables and Martin (1991) found that beliefs about the experience and expression of emotion differed as a function of the age of the target such that expectations for gender differences increased with the age of the target. Therefore, it is less clear whether the findings would have been replicated if children had been the posers. Also im-

portant in the current work is that all of the posers were White. Few researchers have examined the implications of ethnicity for the stereotypes of emotion (Fischer & Manstead, 2000; Shields, 2002). However, it is quite possible that there are differential expectations for men and women of different ethnicities. It will be important for future researchers to explore the implications of ethnicity for the interpretation of emotion and the gender stereotypes of emotion.

Although the findings in the current studies were generally consistent with Plant et al. (2000), in Study 2, the male posers were not rated angrier than the female posers, which they were in Plant et al.'s work and in Study 1. However, the lack of gender differences in the anger ratings for Study 2 may have to do with the strength of the gender stereotype of anger. Consider for example, that Plant et al. did not consistently find a gender stereotype for anger. In their third study, participants rated men and women as equally likely to express anger. It may be that the gender stereotype of anger was not strong enough in the sample from Study 2 to influence the ratings of the facial expressions. Further, the fact that the stereotype for sadness was influential but the stereotype for anger was not might indicate a difference in the relative social taboos associated with men and women expressing these emotions. In our society, men who express sadness may experience more severe social sanctions than do women who express anger. For example, an angry woman might be called names, but a sad man might be viewed as losing his masculinity. Thus, the stereotype for sadness may not only be that women are sadder than men, but also that men do not and should not express sadness.

It is also worth noting that in Study 2 the social role of the poser (as indicated by job title) did not influence the interpretation of the emotional expressions. Therefore, it appears that the gender of the poser was a stronger influence on the interpretation of facial expressions than the occupational role of the poser. However, in Eagly and Steffen's research (1984) only the homemaker–employee difference used in their third experiment appeared to account for participants' beliefs that women were communal and men were agentic; occupational status did not account for these beliefs. In Study 2, the homemaker–employee roles were not used but instead the focus was on sex-segregated occupations that either men or women are more likely to hold. The use of different occupations may be one reason why the social role

was not influential. Another possible explanation for the lack of influence of the social roles might be the salience of the job titles during the rating process. Because the job titles were provided in writing next to the faces, participants might not have viewed the job title as an integral part of the emotional expressions shown, or they may have looked at and evaluated the expression prior to reading the occupational description. In addition, the responses may have been influenced by the particular jobs selected. Compared to some stereotypically masculine jobs (e.g., police officer), the professions of firefighter and electrician may be less associated with anger, and firefighter, in particular, may be strongly associated with sympathy.⁶ It will be important for future researchers to examine further whether the influence of social-role influences the interpretation of men's and women's emotional expressions.

⁶It is worth noting that when a separate sample ($N = 16$) of participants rated how often people in the different professions expressed the rated emotions (i.e., anger, sadness, sympathy, and contempt), they rated people who hold the feminine jobs as expressing sadness and sympathy more often than people who hold the masculine jobs, $t_s > 2.25$, $p_s < .04$. However the professions were not rated significantly differently for their anger or contempt.

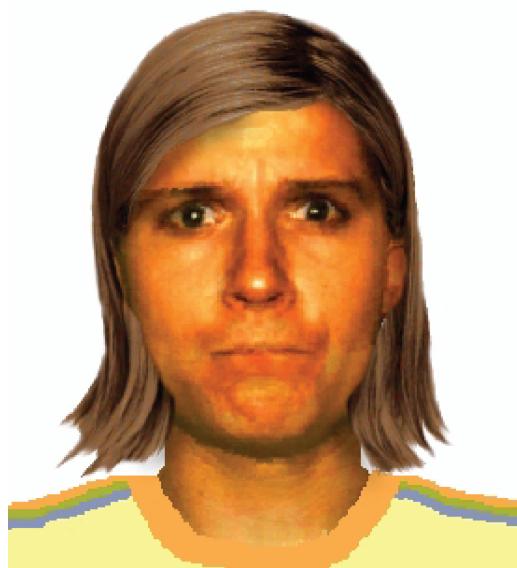
Conclusion

The current work further documents the role of gender in the interpretation of people's emotional expressions. When participants evaluated male posers' and female posers' facial expressions, which were identical except for their hairstyle and clothing, the ambiguous facial expressions were rated differently as a function of apparent gender. By using identical faces for the male poser's and female poser's facial expressions, other potential explanations for the differential ratings, such as actual gender differences in the facial expressions, were eliminated.

The current results clearly document that when individuals are confronted with an ambiguous facial expression, gender is used as a tool to resolve the ambiguity. Our results, when considered simultaneously with previous work (e.g., Condry & Condry, 1976; Plant et al., 2000), indicate that people are likely to interpret both adults' and children's emotional expressions in a stereotype consistent manner. The extent to which these biased interpretations influence ongoing social interactions is a question that should be addressed in future work.

APPENDIX A

Woman Version



Man Version



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REFERENCES

- Algoe, S. B., Buswell, B. N., & DeLamater, J. D. (2000). Gender and job status as contextual cues for the interpretation of facial expression of emotion. *Sex Roles*, 42, 183–208.
- Brody, L. R. (1999). *Gender, emotion, and the family*. Cambridge, MA: Harvard University Press.
- Brody, L. R., & Hall, J. A. (1993). Gender and emotion. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 447–460). New York: Guilford Press.
- Condry, J., & Condry, S. (1976). Sex differences: A study of the eye of the beholder. *Child Development*, 47, 812–819.
- Conway, M., Di Fazio, R., & Mayman, S. (1999). Judging others' emotions as a function of the others' status. *Social Psychology Quarterly*, 62, 291–305.
- Darley, J. M., & Fazio, R. H. (1980). Expectancy confirmation processes arising in the social interaction sequence. *American Psychologist*, 35, 867–881.
- Eagly, A. H., & Steffen, V. J. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology*, 46, 735–754.
- Eagly, A. H., & Wood, W. (1999). The origins of sex differences in human behavior: Evolved dispositions versus social roles. *American Psychologist*, 54, 408–423.
- Ekman, P., & Friesen, W. V. (1978). *Facial action coding system: A technique for measurement of facial movement*. Palo Alto, CA: Consulting Psychologist Press.
- Fabes, R. A., & Martin, C. L. (1991). Gender and age stereotypes of emotionality. *Personality and Social Psychology Bulletin*, 17, 532–540.
- Fischer, A. H. (Ed.). (2000). *Gender and emotion: Social psychological perspectives*. Cambridge, UK: Cambridge University Press.
- Fischer, A. H., & Manstead, A. S. R. (2000). The relation between gender and emotion in different cultures. In A. H. Fischer (Ed.), *Gender and emotion: Social psychological perspectives* (pp. 71–96). Cambridge, UK: Cambridge University Press.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48, 621–628.
- Grossman, M., & Wood, W. (1993). Sex differences in intensity of emotional experience: A social role interpretation. *Journal of Personality and Social Psychology*, 65, 1010–1022.
- Hess, U., Senecal, S., Kirouac, G., Herrera, P., Philippot, P., & Kleck, R. (2000). Emotional expressivity in men and women: Stereotypes and self-perceptions. *Cognition and Emotion*, 14, 609–642.
- Hutson-Comeaux, S. L., & Kelly, J. R. (2002). Gender stereotypes of emotional reactions: How we judge an emotion as valid. *Sex Roles*, 47, 1–10.
- Johnson, J. T., & Shulman, G. A. (1988). More alike than meets the eye: Perceived gender differences in subjective experience and its display. *Sex Roles*, 19, 67–79.
- Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The gender stereotyping of emotions. *Psychology of Women Quarterly*, 24, 81–92.
- Robinson, M. D., Johnson, J. T., & Shields, S. A. (1998). The gender heuristic and the database: Factors affecting the perception of gender-related differences in the experience and display of emotions. *Basic and Applied Social Psychology*, 20, 206–219.
- Roseman, I. J., Wiest, C., & Swartz, T. S. (1994). Phenomenology, behaviors, and goals differentiate discrete emotions. *Journal of Personality and Social Psychology*, 67, 206–221.
- Rosenkrantz, P., Vogel, S., Bee, H., Broverman, I., & Broverman, D. M. (1968). Sex-role stereotypes and self-concepts in college students. *Journal of Consulting and Clinical Psychology*, 32, 287–295.
- Ruble, T. L. (1983). Sex stereotypes: Issues of change in the 1970s. *Sex Roles*, 9, 397–402.
- Shields, S. A. (1987). Women, men, and the dilemma of emotion. In P. Shaver & C. Hendrick (Eds.), *Sex and gender* (pp. 229–250). Thousand Oaks, CA: Sage.
- Shields, S. A. (2002). *Speaking from the heart: Gender and the social meaning of emotion*. Cambridge, UK: Cambridge University Press.
- Smith, K. C., Ulch, S., Cameron, J., Cumberland, J., Musgrave, M., & Tremblay, N. (1989). Gender-related effects in the perception of anger expression. *Sex Roles*, 20, 487–499.
- Snodgrass, S. E. (1985). Women's intuition: The effect of subordinate role on interpersonal sensitivity. *Journal of Personality and Social Psychology*, 49, 146–155.
- Snodgrass, S. E. (1992). Further effects of role versus gender on interpersonal sensitivity. *Journal of Personality and Social Psychology*, 62, 154–158.
- Tiedens, L. Z., Ellsworth, P. C., & Mesquita, B. (2000). Stereotypes about sentiments and status: Emotional expectations for high- and low-status group members. *Personality and Social Psychology Bulletin*, 26, 560–574.
- U.S. Department of Labor, Bureau of Labor Statistics. (2001). *Labor force statistics from the current population survey* (Table 11) [Data File]. Available from <http://www.bls.gov/cps/#tables>
- Widen, S. C., & Russell, J. A. (2002). Gender and preschoolers' perception of emotion. *Merrill-Palmer Quarterly*, 48, 248–262.
- Williams, J. E., & Best, D. L. (1990). *Measuring sex stereotypes: A multination study*. Newbury Park, CA: Sage.

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