

## **Who may frown and who should smile? Dominance, affiliation, and the display of happiness and anger**

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Three experiments were conducted to test the hypothesis that the social stereotype that anger displays are more appropriate for men and smiling is requisite for women is based on the perception of men and women as more or less dominant or affiliative. The first study tested the mediation model that men are rated as more dominant and women as more affiliative and that expectations for men to show more anger and for women to smile more are partially mediated by this difference in perception. Second, a vignette approach was used to test the notion that these expectations translate into prescriptive social norms that are based on levels of perceived dominance and affiliation rather than sex per se. The results strongly support this hypothesis for dominance and provide partial confirmation for affiliation.

One of the more pervasive gender stereotypes is that women smile more and that men show more anger (for reviews see e.g., Fischer, 1993; Hall, Carter, & Horgan, 2000; LaFrance & Hecht, 2000; Shields, 1987). These expectations are socialised early and can have dramatic consequences for the perception of emotion in others. For example, even children as young as 5 years will tend to consider a crying baby as “mad” when the baby is purported to be a boy but not when it is purported to be a girl (Haugh, Hoffman, & Cowan, 1980). Further,

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This research was supported by a grant from the Fonds de Formation des Chercheurs et l’Aide à la Recherche to Ursula Hess and by a Rockefeller Reiss Family Senior Faculty grant to Robert E. Kleck. We are grateful to Nadine Murard, and Nathalie Gauthier for help with the data collection.

these expectations appear to be normative. That is, women feel that a failure to smile will be socially disapproved (LaFrance, 1998; Stoppard & Gruchy, 1993), whereas men feel more socially permitted to display anger as a signal of dominance (LaFrance & Hecht, 1999, 2000). However, although women do indeed smile more in general (Hall et al., 2000; LaFrance & Hecht, 2000), men are not found to show more anger (see Fischer, 1993).

Two explanations for these expectations have been previously proposed, one emphasising status and the other social roles. First, Henley (1977, 1995) as well as LaFrance and Henley (1994) emphasise that women generally have less power or status than men and that smiling in women is therefore a form of appeasement behaviour that is adaptive for a low power/status individual. However, evidence that low power/status is in fact linked to smiling is rather mixed. Although some authors report evidence for more smiling by individuals with less power/status (Deutsch, 1990; Dovidio, Brown, Heltman, Ellyson, & Keating, 1988; Nagashima & Schellenberg, 1997), others either did not find such an effect or they found just the opposite, that high power/status individuals smile more (Ding & Jersild, 1932; Halberstadt & Saitta, 1987; Hall, LeBeau, Reinoso, & Thayer, 2001; Hecht & LaFrance, 1998).

Anger displays have also been linked to the notion of power. Averill (1997), for example, has made the argument that anger has an "entrance requirement" of power. That is, for an anger display to be *perceived* as legitimate, the expressor has to have the power to address the anger eliciting event successfully. This view is congruent with appraisal theories of emotion (Frijda, 1986; Scherer, 1999) that include "power potential" as a necessary requirement for anger experiences. This link between expectations regarding anger displays and status is also reported by Maybury (1997, cited in Shields, 2000). In this study, anger displayed by high status protagonists was judged as more appropriate, favourable, and situationally motivated than those of low and medium status protagonists. Similarly, Lewis (2000) found that male leaders were perceived as more competent when reacting with an angry tone of voice than when reacting with a neutral or sad tone of voice. Interestingly, when the leader was a woman she was perceived as most competent when reacting with a neutral tone of voice, a finding most likely reflective of the somewhat lower status of women.

Thus, expectations regarding both smiling and the display of anger have been linked to the perceived power status of the expressor. It is plausible, given these results, that differences in the perception of men's and women's penchant to show happiness or anger is directly related to the differences in power/status that are generally found between men and women.

A second explanation for the stereotypical expectations regarding appropriate emotion displays by men and women focuses on their respective social roles (e.g., Brody & Hall, 2000; Shields, 2000). Specifically, it is generally assumed that women's nurturing role favours the acquisition of superior interpersonal skills and the ability to communicate nonverbally, whereas men's roles are seen as more

agentic and hence may foster more goal directed displays (Eagly & Steffen, 1984). Recently, LaFrance and Hecht (1999, 2000) have combined these two explanations by proposing that higher power individuals simply are given more leeway to show what they feel, whereas low status/power individuals are more strictly bound by social rules and expectations. That is, they hypothesise that one reason that women are expected to smile more and to show less anger is because their social roles demand them to be more affiliative and less dominant in general. However, this notion also suggests that for high dominant women anger displays should be perceived as appropriate in situations that can be expected to elicit anger because as high dominant individuals they are freer to show what they feel. Since men in general are considered to be more dominant than women they are also freer than women in general to show anger. Alternatively, we expect men to show more anger because they have more power to redress the situation.

In contrast, a low dominant woman should be more likely to smile in a variety of circumstances because her social role requirement is to be affiliative. At the very least, she should not show anger because she does not have the power to redress the situation that elicited the anger. In the same vein, if a man is explicitly described as affiliative, then he too should be expected to smile more than a low affiliative individual and a low affiliative woman should be expected to smile less than a high affiliative individual.

The present studies were designed to empirically test the effects that perceived dominance and affiliation have on expectations regarding appropriate facial displays of anger and happiness by men and women. Specifically, Experiment 1 examined the hypothesis that the social stereotype that considers anger displays as more appropriate for men and smiling as requisite for women is mediated by differences in perceived dominance and affiliativeness of men and women rather than by gender per se. Specifically, we expected that men are perceived as more dominant and less affiliative than women. We further hypothesised that perceivers expect women to feel and show more happiness, sadness, and fear, as these emotions are associated with more affiliation (Hess, Blairy, & Kleck, 2000a; Knutson, 1996) and are less agentic (Tiedens, 2001). Conversely, perceivers should expect men to feel and show more anger, disgust, and contempt, as these emotions are more dominant and less affiliative.

Experiments 2 and 3 aimed to show that when men and women are explicitly portrayed as either high/low in dominance or high/low in affiliation, sex differences would disappear or be attenuated in favour of social norm expectations that are linked to perceived dominance and affiliation.

## EXPERIMENT 1

The primary goal of Experiment 1 was to assess the effects of perceived dominance and affiliation on ratings of emotionality using mediational analyses. Given the potential for a semantic contrast between dominance and affiliation, a

conservative between-subjects design was chosen to avoid artificial inflation of correlations. For this, three groups of participants were asked to rate a series of individuals, all displaying a neutral facial expression, regarding their level of dominance and affiliation and regarding their likelihood to show anger, contempt, fear, sadness, disgust, happiness, and surprise, respectively. Each type of rating was done by a separate group of participants. The mean ratings were then used for the mediational analyses with stimulus person as the unit of analysis.

## Method

*Participants.* A total of 25 men and 29 women were recruited at Dartmouth College. Participants received extra course credit.

*Stimuli.* Photographs of neutral facial poses were taken from the Pictures of Facial Affect (Ekman & Friesen, 1976), the JACFEE (Matsumoto & Ekman, 1988), a set developed by Kirouac and Doré (1984), and a set developed by Adams and Kleck (2001). All stimulus persons were of European descent. However, because they were sampled from several different photo sets they varied widely with regard to age and appearance. In total, 73 black-and-white photographs of 32 men and 41 women were digitised and printed with an average size of 3 in  $\times$  4 in on separate sheets of 8.5  $\times$  11 in white paper. The photographs were cropped in order to display only the head and neck of each individual.

## Procedure

Each participant was seated at a table and was supplied with a questionnaire that contained on top of each page one stimulus picture and underneath the picture the rating scales. Participants in the show emotion rating group (7 men and 10 women) were asked to rate, on 7-point scales, the frequency with which each stimulus person would be likely to *show* each of the following emotions: anger, disgust, happiness, contempt, fear, surprise, and sadness. The interclass correlation coefficients for the mean ratings ranged from a low of .74 for show contempt and show sadness to a high of .86 for show happiness.

Participants in the dominance rating group (8 men and 9 women) were asked to report their perceptions of the level of social dominance of each stimulus person by rating them on a 7-point scale, anchored with “not at all” and “very much” (interclass correlation coefficient = .85), whereas participants in the affiliation rating group (10 men and 10 women) were asked to report their perception regarding the level of affiliation of each stimulus person on the same 7-point scale (interclass correlation coefficient = .90). For the purpose of this study a dominant person was defined as “someone who is assertive, decisive, and dominant across different situations. It is someone who emerges as a leader

over those that follow,” whereas an affiliative person was defined as “someone who is friendly, helpful, and sociable across different situations. It is someone who is inclined by nature toward companionship with others”.

## Results and discussion

To assess the hypothesis that differences in expectations regarding men’s and women’s emotionality are mediated by perceived facial dominance/affiliation, mediational analyses were conducted. For this, the ratings of emotional dispositions as well as of dominance and affiliation were averaged across observers for each stimulus person.<sup>1</sup> Consequently, the following analyses were conducted with facial stimuli ( $N = 73$ ) as units of analysis. Mediational analyses were conducted following Baron and Kenny (1986). Regression analyses were performed to assess each of the following paths: (a) the path from sex of stimulus person to perceived emotional disposition (this is the raw effect of sex of expressor on rated emotional disposition); (b) the path from sex of stimulus person to perceived dominance/affiliation; (c) the path from mean rated dominance/affiliation to emotional disposition while controlling for sex; and (d) the path from sex of stimulus person to emotional disposition while controlling for dominance/affiliation (see top panel of Table 1).

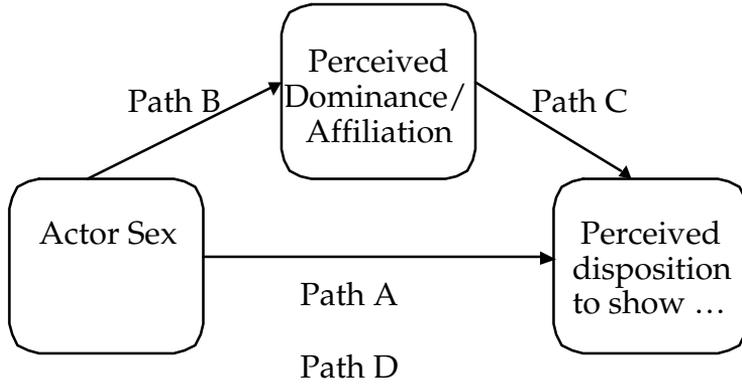
Following Baron and Kenny (1986), we can conclude that the effect of Sex of expressor on emotional disposition is mediated by facial dominance/affiliation if the paths from Sex of expressor to perceived dominance/affiliation and from perceived dominance/affiliation to emotional disposition are significant and if the beta for path D is smaller than for path A. The Goodman test (Goodman, 1960) assesses the hypothesis that the indirect (mediational) path is significantly different from 0. This test is considered to be rather conservative (see Kenny, 2003) and the alpha level for this test was therefore set to 0.1. The results are shown in Table 1, the last column refers to the significance level of the Goodman test.

*Initial analyses.* As expected, women were perceived as marginally more affiliative whereas men were perceived as significantly more dominant. Further, actors’ sex was significantly correlated with their perceived disposition to show all emotions. Congruent with previous findings, women were expected to show more fear, sadness, surprise, as well as more happiness, whereas men were expected to show more anger, contempt, and disgust.

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<sup>1</sup> Initial analyses revealed no sex of rater effect. The ratings were therefore averaged across all participants. Specifically, a conservative test, using a series of uncorrected *t*-tests to assess sex of rater differences across the 657 ratings revealed a significant difference for only approximately 3% of the ratings.

TABLE 1  
Path coefficients for mediational analyses: Experiment 1



|                    | <i>Path A</i> | <i>Path B</i>      | <i>Path C</i> | <i>Path D</i>     | <i>Sig.</i> |
|--------------------|---------------|--------------------|---------------|-------------------|-------------|
| <b>Dominance</b>   |               |                    |               |                   |             |
| Anger              | .415***       | .284*              | .423***       | .295**            | .029        |
| Contempt           | .300*         | .284*              | .338**        | .204 <sup>t</sup> | .047        |
| Disgust            | .356**        | .284*              | .307**        | .269*             | .054        |
| Fear               | -.721***      | .284*              | -.287***      | -.639***          | .035        |
| Sadness            | -.624***      | .284*              | -.430***      | -.502***          | .022        |
| Happiness          | -.273*        | .284*              | .069          | -.293*            | .543        |
| Surprise           | -.498***      | .284*              | -.069         | -.479             | .499        |
| <b>Affiliation</b> |               |                    |               |                   |             |
| Anger              | .415***       | -.207 <sup>t</sup> | -.661***      | .279***           | .079        |
| Contempt           | .300*         | -.207 <sup>t</sup> | -.637***      | .168 <sup>t</sup> | .081        |
| Disgust            | .356**        | -.207 <sup>t</sup> | -.711***      | .209**            | .079        |
| Fear               | -.721***      | -.207 <sup>t</sup> | .271***       | -.665***          | .101        |
| Sadness            | -.624***      | -.207 <sup>t</sup> | -.148         | -.655***          | .193        |
| Happiness          | -.273*        | -.207 <sup>t</sup> | .791***       | -.110             | .077        |
| Surprise           | -.498***      | -.207 <sup>t</sup> | .558***       | -.383***          | .082        |

0, women; 1, men.

As expected, perceived dominance was related to the actors' perceived disposition to show emotions. Specifically, after controlling for the influence of actor sex, perceived dominance was significantly positively related to the disposition to show anger, disgust, and contempt, and significantly negatively related to the actors' perceived disposition to show fear and sadness. In contrast, perceived dominance was not related to the disposition to show surprise or happiness. Conversely, after controlling for the effect of actor sex, perceived affiliativeness was significantly positively related to the perceived disposition to

show happiness, surprise, and fear. Perceived affiliation was significantly negatively related to the perceived disposition to show anger, disgust, and contempt.

In sum, as expected, sex of expressor was strongly related to observers' expectations regarding the expressor's dispositional tendency to show certain emotions. Overall, the data confirm the common stereotypical expectations for men's and women's emotionality described above.

Further, both perceived dominance and perceived affiliativeness were found to be significantly related to perceptions of an actor's emotionality. Overall, these results match previous findings that individuals who express anger and disgust are generally perceived as relatively more dominant than those who express sadness or fear, as well as less affiliative than those who show happiness or fear (Hess et al., 2000a; Knutson, 1996). That is, judgements of affective dispositions based on perceptions of dominance and affiliation match judgements of dominance and affiliation based on expressive behaviour. Further, perceived dominance was not found to be related to the perceived disposition to show happiness. This latter finding is not congruent with Henley's (1977, 1995) hypothesis that individuals who are perceived as less dominant are also expected to smile more.

*Mediational analyses.* As Table 1 shows, dominance was significantly and affiliation marginally significantly related to actor sex. The indirect (mediational) path from sex of expressor through dominance to dispositions to show certain emotions was significant for all emotions except happiness and surprise. The indirect path from sex of expressor through affiliation to dispositions to show emotions was significant for all emotions except fear and sadness. Specifically, the significant Goodman test (alpha was set to .1, because of the severity of the test) suggests that men's perceived disposition to show more anger, contempt, and disgust, was at least partially mediated by their more pronounced perceived social dominance and their lower levels of perceived affiliation. In the same vein, the perceived tendency for women to show more fear and sadness was partially mediated by their lower perceived dominance. More importantly in the present context, their perceived tendency to show more happiness as well as more surprise was partially mediated by their higher levels of perceived affiliation. Interestingly, the perceived tendency to show happiness was not mediated by perceived dominance but only by perceived affiliation. This is somewhat in contrast to notions expressed by LaFrance and Hecht (Hecht & LaFrance, 1998; LaFrance & Hecht, 1999) that smiling—a facial behaviour frequently associated with happiness—is shown by women as a sign of appeasement due to their lack of social dominance. In contrast, the perceived tendency to show fear and sadness was mediated by dominance only, which is congruent with the notion that showing fear and sadness leads to attributions of submissiveness (Hess et al., 2000b; Knutson, 1996).

In sum, Experiment 1 provides correlational evidence for the partial mediation of perceived emotionality by perceived social dominance and affiliation. Thus, the tendency to perceive women as more likely to show happiness, surprise, sadness, and fear was mediated by their higher perceived affiliation and lower perceived dominance respectively. In the same vein, the tendency to perceive men as more prone to show and feel anger, disgust, and contempt was partially mediated by both their higher level of perceived dominance and their lower level of perceived affiliation. In short, Experiment 1 provides evidence for the proposed mediational model that perceived dominance and affiliation rather than only sex per se influence people's expectations regarding a person's likely emotional behaviour. Experiments 2 and 3 aimed to assess whether the behaviour deemed most appropriate in a specific situation would be the one that is more appropriate to the perceived level of dominance/affiliation of a person or more appropriate to a person's sex.

## EXPERIMENT 2

The goal of Experiment 2 was to assess the influence of perceived dominance on the attribution of facial expressions to men and women in situations that elicit anger, happiness, and a neutral state, respectively. Dominance was manipulated via a verbal description of a protagonist that described him/her as either dominant or submissive in combination with the use of photos of individuals who had been rated as high and low, respectively, in facial dominance. We predicted that for high dominant individuals the expression of anger in an anger eliciting situation would be perceived as more appropriate than for low dominant individuals. The latter would be expected to smile more and/or to show less anger.

For this a vignette paradigm was chosen. Vignettes have been criticised because they represent a reality that is different from the more stimulus rich and interactive environment of actual emotional interactions (see e.g., Parkinson & Manstead, 1993, for a discussion of this issue). As such vignettes are not suited to assess how people would actually react in a given social situation. However, for the same reason vignettes are an excellent tool to assess the symbolic knowledge about emotion theories and rules that people apply when judging social interactions.

Although social rules can often be verbalised, more subtle rules may be more difficult to put into verbal statements. Therefore, we did not ask participants to name the expression they felt was most appropriate for a given protagonist in the given social situation. Rather, participants were shown a series of drawings of androgynous faces and were asked to point to the face that seemed to show the most appropriate expression for the protagonist. The nonverbal approach used here was employed in an attempt to bypass the potential difficulty of articulating social rules for emotional displays.

## Method

*Participants.* A total of 302 (151 men, 151 women) participated individually. They were recruited on campus and at parks and public places in the city of Montreal and all spoke French as their first language: 19% had only a high school degree and 60% had some level of university education, the remainder had not completed a high school degree.

*Stimulus materials.* To manipulate dominance, participants first saw a photo of a man or woman who had previously been rated as high/low in dominance. The photo was accompanied by a short description assigning a name (Anne or Marc) to the person who was described either as dominant and forceful or as submissive and shy.

Two vignettes were constructed for each emotion condition. The anger vignettes contained a reference to the protagonist's loss of face or the wanton destruction of his/her personal property. The happiness vignettes described a situation where the protagonist obtained something desirable (a promotion at work or a long anticipated vacation) and the emotionally neutral vignettes described a situation where something relatively trivial that was expected to happen did indeed happen (an expected package arrived or an expected meeting is confirmed). This resulted in a 2 (sex of protagonist)  $\times$  2 (level of dominance)  $\times$  3 (emotion condition) between subjects design.

*Dependent measures.* To assess the facial expression deemed most appropriate to the described situation, we presented participants with a page showing eight drawings of facial expressions. The expressions were: neutral, angry, embarrassed, happy, fearful, sad, disgusted, and a "miserable smile" consisting of a smile with a frown component. The expressions were drawn by a professional artist based on the corresponding expressions from the Montreal Set of Facial Displays of Emotion (MSFDE; Beaupré & Hess, 2004). The drawings showed facial interiors only and facial features associated with perceived dominance or affiliation (eyebrows, forehead, jawline) were kept to average size (see Figure 1).<sup>2</sup>

Following this, two manipulation checks were conducted.<sup>3</sup> First, participants rated the protagonist on 7-point bipolar adjective scales anchored with the terms dominant-self-effacing, introverted-extraverted, sociable-nonsociable, likable-unlikable, and attractive-unattractive. For the second manipulation check, participants were asked to indicate on 7-point scales the degree to which the

<sup>2</sup> In addition, a measure of the appropriate intensity of the expression was obtained. These data will not be discussed in the present context.

<sup>3</sup> Due to a clerical error these questions were not included in all questionnaires.

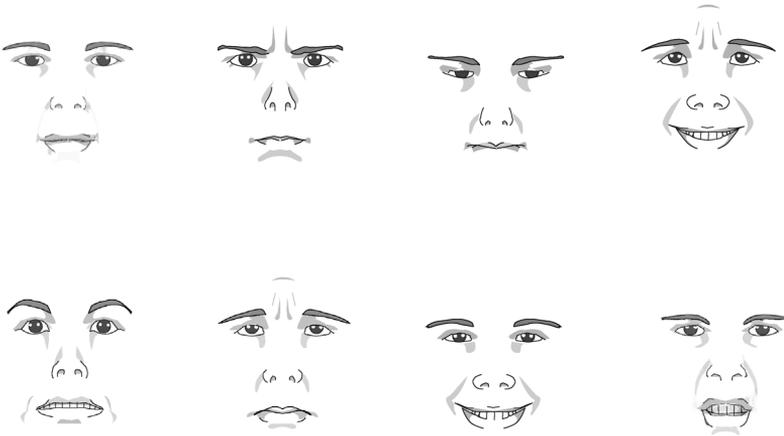


Figure 1. Response scales for the selection of appropriate emotional facial expressions.

protagonist felt each of the emotions happiness, anger, fear, sadness, interest, disgust, contempt, and surprise.

## Procedure

Experimenters approached potential participants by introducing themselves as a student at the University of Quebec at Montreal and then asked if they would agree to participate in a short study on facial expressions. Each participant read one vignette (featuring either the male or the female protagonist) and then chose the expression they considered most appropriate for the protagonist to show. They then responded to the manipulation check questions. Following the completion of these scales, sociodemographic information was obtained and participants were debriefed.

## Results

Initial analyses did not reveal any sex of rater effects nor any differences between the two vignettes for each emotion. These factors were therefore dropped from the analyses reported below.

*Manipulation check.* A 3 (emotion condition)  $\times$  2 (dominance level)  $\times$  2 (sex of protagonist) multivariate analysis of variance was conducted on the trait adjective ratings. Significant multivariate main effects of Dominance level,  $F(5, 233) = 42.07, p < .001$ , and Sex of Protagonist,  $F(1, 233) = 2.91, p = .014$ , emerged. The Dominance level effect was univariately significant for ratings of dominance,  $F(1, 237) = 186.24, p < .001$ , extraversion,  $F(1, 237) = 52.96, p < .001$ , and likableness,  $F(1, 237) = 21.89, p < .001$ . The Sex of Protagonist effect

was univariately significant for dominance,  $F(1, 237) = 8.51, p = .004$ , and attractiveness,  $F(1, 237) = 3.70, p = .055$ . Compared to protagonists who had been described as low dominant individuals as part of the experimental manipulation, individuals who had been described as high dominant were rated as more dominant ( $M = 5.14, SD = 1.60$  vs.  $M = 2.65, SD = 1.24$ ). In addition, they were rated as more extroverted ( $M = 4.11, SD = 1.63$  vs.  $M = 2.72, SD = 1.30$ ) and less likable ( $M = 3.76, SD = 1.61$  versus  $M = 4.68, SD = 1.45$ ) than were individuals who had been described as low dominant. Further, men were rated as more dominant than women ( $M = 4.25, SD = 1.90$  vs.  $M = 3.56, SD = 1.84$ ), whereas women were rated as more attractive ( $M = 4.16, SD = 1.38$  vs.  $M = 3.80, SD = 1.40$ ).

The emotion profile data were used to assess whether participants attributed the vignette appropriate emotions to the protagonist. Table 2 shows the means and standard deviations for the nine scales comprising the profile. Planned contrasts confirmed that, as intended, participants who had read the happiness and anger vignettes attributed significantly more happiness and anger respec-

TABLE 2  
Means and (standard deviations) for rated intensity of the emotional state of the protagonist as a function of the emotion eliciting event

| <i>Rated emotion</i> | <i>Emotion eliciting event</i> |              |                |
|----------------------|--------------------------------|--------------|----------------|
|                      | <i>Happiness</i>               | <i>Anger</i> | <i>Neutral</i> |
| Experiment 2         |                                |              |                |
| Happiness            | 3.97 (1.69)                    | 0.43 (1.14)  | 1.89 (1.74)    |
| Anger                | 0.28 (0.75)                    | 4.13 (1.56)  | 0.55 (1.15)    |
| Interest             | 2.87 (1.53)                    | 1.15 (1.50)  | 2.43 (1.74)    |
| Fear                 | 1.61 (1.46)                    | 2.69 (1.50)  | 0.69 (1.15)    |
| Sadness              | 0.45 (1.00)                    | 2.86 (1.79)  | 0.49 (0.88)    |
| Disgust              | 0.31 (0.93)                    | 2.86 (1.57)  | 0.47 (1.02)    |
| Contempt             | 0.40 (0.98)                    | 2.20 (1.84)  | 0.53 (1.19)    |
| Surprise             | 2.11 (1.77)                    | 3.12 (1.88)  | 1.17 (1.52)    |
| Embarrassment        | 1.20 (1.42)                    | 2.14 (1.88)  | 0.75 (1.32)    |
| Experiment 3         |                                |              |                |
| Happiness            | 3.85 (1.54)                    | 0.79 (1.34)  | 2.29 (1.48)    |
| Anger                | 0.89 (1.41)                    | 3.98 (1.32)  | 1.25 (1.55)    |
| Interest             | 3.03 (1.69)                    | 1.94 (1.84)  | 3.30 (1.65)    |
| Fear                 | 2.25 (1.51)                    | 2.99 (1.64)  | 2.06 (1.78)    |
| Sadness              | 1.17 (1.78)                    | 3.24 (1.53)  | 1.34 (1.67)    |
| Disgust              | 0.71 (1.41)                    | 3.10 (1.59)  | 1.13 (1.65)    |
| Contempt             | 0.88 (1.53)                    | 1.95 (1.67)  | 0.91 (1.53)    |
| Surprise             | 2.27 (1.79)                    | 3.65 (1.31)  | 1.84 (1.50)    |
| Embarrassment        | 1.78 (1.88)                    | 2.46 (1.76)  | 1.82 (1.83)    |

tively than any other emotion to the protagonist. Participants who read the neutral vignettes attributed more interest than any other emotion to the protagonist.

In sum, the manipulation checks showed that the dominance and emotion manipulations were successful. Also as expected, men were rated as more dominant, independent of the manipulation. This finding again confirms the strong confound between gender and perceived dominance. At the same time, women were not rated as more sociable suggesting that the link between gender and affiliation may not be quite as strong, thereby replicating the finding from Experiment 1, which also found a somewhat weaker relationship between gender and affiliation than between gender and dominance.

### *Expressions*

*Dominance level.* Table 3 shows the frequency of expression choice as a function of the manipulated dominance level of the protagonist, their sex, and the intended emotion content of the vignette. To assess whether the distribution of expressions chosen as most appropriate to the situation varied as a function of these three factors,  $\chi^2$  analyses were performed.<sup>4</sup>

Significant differences in the distribution of expression types as a function of dominance level were found for both the male and the female protagonist for the anger situation,  $\chi^2_{(5)} = 12.36, p = .030$ , and  $\chi^2_{(6)} = 15.23, p = .019$ , respectively. As shown in Table 3, anger was chosen more frequently as the appropriate expression for the individuals described as high dominant than for those described as low in dominance. For the low dominant woman sadness was chosen as the most appropriate reaction to the anger event by 42.3% of participants, yet only 12% of participants chose this expression as appropriate for the high dominant woman. For the low dominant man fear was chosen as the appropriate reaction more often than for the high dominant man, whereas for the latter disgust was chosen more often as appropriate than was the case for the low dominant individual.

*Gender.* When comparing the male and female protagonists at the same level of manipulated dominance, differences emerged for low levels of dominance for anger only,  $\chi^2_{(6)} = 18.74, p = .005$ . Specifically, in anger situations, low dominant men, compared to low dominant women, were more frequently expected to show anger expressions, whereas low dominant women were more often expected to show sadness or embarrassment. That is, whereas the same expressions were considered to be appropriate for both high dominant women and high dominant men this was not the case for low dominant individuals. When the protagonist was described as low dominant, gender

<sup>4</sup>For tables containing empty cells, Fischer's exact test was substituted.

TABLE 3  
 Frequency of choice for emotional expressions as a function of sex of protagonist,  
 dominance level, and emotion condition

| <i>Expression</i> | <i>High dominant</i> |                | <i>Low dominant</i> |                |
|-------------------|----------------------|----------------|---------------------|----------------|
|                   | <i>Women (%)</i>     | <i>Men (%)</i> | <i>Women (%)</i>    | <i>Men (%)</i> |
| Happy event       |                      |                |                     |                |
| Neutral           | 16.0                 | 16.0           | 32.0                | 24.0           |
| Angry             | 0.0                  | 4.0            | 0.0                 | 0.0            |
| Embarrassed       | 4.0                  | 4.0            | 4.0                 | 8.0            |
| Happy             | 72.0                 | 44.0           | 56.0                | 52.0           |
| Miserable smile   | 8.0                  | 28.0           | 8.0                 | 12.0           |
| Fearful           | 0.0                  | 4.0            | 0.0                 | 0.0            |
| Sad               | 0.0                  | 0.0            | 0.0                 | 4.0            |
| Disgusted         | 0.0                  | 0.0            | 0.0                 | 0.0            |
| Anger event       |                      |                |                     |                |
| Neutral           | 8.0                  | 0.0            | 0.0                 | 8.0            |
| Angry             | 44.0                 | 44.0           | 23.1                | 36.0           |
| Embarrassed       | 8.0                  | 0.0            | 19.2                | 8.0            |
| Happy             | 0.0                  | 0.0            | 0.0                 | 0.0            |
| Miserable smile   | 0.0                  | 4.0            | 0.0                 | 12.0           |
| Fearful           | 12.0                 | 16.0           | 11.5                | 28.0           |
| Sad               | 12.0                 | 16.0           | 42.3                | 8.0            |
| Disgusted         | 16.0                 | 20.0           | 3.8                 | 0.0            |
| Neutral event     |                      |                |                     |                |
| Neutral           | 64.0                 | 56.0           | 69.2                | 48.0           |
| Angry             | 8.0                  | 4.0            | 0.0                 | 4.0            |
| Embarrassed       | 0.0                  | 0.0            | 0.0                 | 4.0            |
| Happy             | 20.0                 | 32.0           | 19.2                | 24.0           |
| Miserable smile   | 4.0                  | 0.0            | 11.5                | 8.0            |
| Sad               | 0.0                  | 4.0            | 0.0                 | 8.0            |
| Disgusted         | 4.0                  | 0.0            | 0.0                 | 0.0            |

stereotypes seem to dominate the choice of expressions perceived as appropriate to the situation.

## Discussion

Both the sex of the protagonist and their level of ascribed dominance influenced the choice of the facial display seen as appropriate to an anger event. However, no influence of perceived dominance on reactions to happy or neutral events was found. At the same time, no significant gender effects emerged for these conditions either. However, for the female protagonist a higher frequency of expected smiles was observed than for the male protagonist.

Both high dominant men and high dominant women were more often expected to react with anger. This finding is in accordance with both Averill's (1997) notion of power as an entrance requirement for anger and LaFrance and Hecht's (1999, 2000) proposal that high power/status individuals should express their emotional state more freely. At the same time, a sex difference was observed for low dominant stimulus persons. Anger displays were chosen less frequently as appropriate for a low dominant woman than for a low dominant man. This is consistent with the trait rating data that revealed that men were rated as more dominant than were women even when they were described as equivalent in social dominance. This finding is congruent with the notion that low dominant individuals are confined to social role expectations. Specifically, social role expectations "permit" anger expressions for men in general but not for women.

The expression most frequently chosen as appropriate for low dominant women was a sadness display. In fact, for women sadness displays are often perceived as appropriate in anger situations (e.g., Hess et al., 2000b). It is noteworthy that the corresponding analysis of both the sadness and the anger emotion ratings for the anger situation revealed no significant Sex of Protagonist  $\times$  Dominance Level interaction. Hence, a low dominant woman was not expected to *feel* more sadness and less anger than a low dominant man, but she was expected to *show* more sadness and less anger. That is, she was expected to not show her emotions but rather conform to her social role, for which anger displays are less appropriate. In fact, for women crying when angry constitutes an accepted reaction (Crawford, Clippax, Onyx, Gault, & Benton, 1992).

In sum, the present study shows that for high dominant individuals the expression of anger in an anger eliciting situation is perceived as appropriate. In this sense, the study supports the notion that gender expectations regarding anger displays are more strongly linked to the perceived dominance of men and women than to sex differences per se. At the same time, however, the study confirms that even when dominance is explicitly manipulated, women are nonetheless perceived as less dominant than are men and low dominant women are indeed expected to not show their feelings of anger directly.

### EXPERIMENT 3

Experiment 3 investigated the influence of perceived affiliation on the attribution of facial expressions to men and women in situations that elicit anger, happiness, and a neutral state, respectively. The same procedure as in Experiment 2 was employed with the difference that photos showing individuals previously rated as high and low in affiliation were accompanied by vignettes that described the protagonist as either sociable and warm or aloof and reserved.

We expected that both male and female stimulus persons high in affiliation would be expected to show more smiling behaviour in happiness situations. We

further expected that when affiliation is explicitly assigned to an individual, gender differences would be reduced, as was the case in Experiment 2 for dominance. However, results from Experiments 1 and 2 suggest that the relationship between gender and affiliation is less strong than the relationship between gender and dominance. Thus it is possible that controlling explicitly for affiliation might have less influence on what is deemed appropriate in the given situation than was the case for the control of dominance.

## Method

*Participants.* A total of 240 (120 men, 120 women) participated individually. They were recruited at parks and public places in the city of Montreal and all spoke French as their first language: 16% had a high school degree only and 78% had some level of university education; the remaining participants had not completed a high school degree.

*Stimulus materials and dependent measures.* The same vignettes, manipulation checks, dependent measures, and procedure used in Experiment 2 were employed. To manipulate affiliation, photos of individuals who had previously been rated as either high or low in affiliation were chosen. Further, the protagonist was either described as sociable and warm or as aloof and reserved. These terms were used because the term “affiliation” is not part of the common vocabulary in French. The French translation of “sociable and warm” (*sociable et chaleureux*) is, however, very close in meaning to the English term “affiliative”.

## Results

Initial analyses did not reveal any sex of rater effects or differences between the vignettes and these factors were therefore dropped from the analyses reported below.

*Manipulation check.* A 3 (emotion condition)  $\times$  2 (affiliation level)  $\times$  2 (sex of protagonist) multivariate analysis of variance was conducted on the trait adjective ratings. Significant multivariate main effects of Affiliation level,  $F(5, 224) = 17.01, p < .001$ , and Emotion condition,  $F(1, 224) = 1.83, p < .053$ , were found. The Affiliation level effect was univariately significant for ratings of dominance,  $F(1, 228) = 7.30, p = .007$ , extraversion,  $F(1, 228) = 71.73, p < .001$ , sociable,  $F(1, 228) = 57.50, p < .001$ , likableness,  $F(1, 228) = 20.89, p < .001$  and attractiveness,  $F(1, 228) = 23.77, p < .001$ . An effect of Emotion condition emerged univariately for sociable only  $F(1, 228) = 3.48, p = .032$ .

Individuals who had been described as high affiliative were rated as significantly more sociable ( $M = 4.92, SD = 1.55$  vs.  $M = 3.48, SD = 1.46$ ) as well

as more dominant ( $M = 3.55$ ,  $SD = 1.43$  vs.  $M = 2.89$ ,  $SD = 2.27$ ), more extraverted ( $M = 3.76$ ,  $SD = 1.68$  vs.  $M = 2.23$ ,  $SD = 1.05$ ), more likable ( $M = 4.89$ ,  $SD = 1.64$  vs.  $M = 3.97$ ,  $SD = 1.48$ ), and more attractive ( $M = 4.54$ ,  $SD = 1.63$  vs.  $M = 3.61$ ,  $SD = 1.38$ ) than were individuals who had been described as low affiliative. Further, protagonists in the happiness vignettes were described as overall somewhat less sociable ( $M = 3.85$ ,  $SD = 1.54$ ) than protagonists in the anger ( $M = 4.40$ ,  $SD = 1.74$ ) or neutral ( $M = 4.36$ ,  $SD = 1.69$ ) vignettes.

The emotion profile data were used to assess whether participants attributed the intended emotions to the protagonist. Table 2 shows the means and standard deviations for the nine scales comprising the profile. Planned contrasts confirmed that, as intended, participants who had read the happiness vignettes attributed significantly more happiness than any other emotion to the protagonist. Also, participants who had read the anger vignette attributed significantly more anger to the protagonist than any other emotion except surprise. The relatively higher level of this latter emotion may be explained by the fact, that in both vignettes a recent negative event occurs that may be perceived as surprising (i.e., vandalism of a car and negative rumours). Participants who read the neutral vignettes attributed more interest than any other emotion to the protagonist.

In sum, the manipulation checks showed that the intended perceived affiliation and emotion manipulations were successful. Not surprisingly, the description of the protagonist as sociable and warm produced a certain halo effect (Thorndike, 1920). Individuals who were described as more affiliative were also perceived as more extraverted, likable, and attractive as well as somewhat more dominant.

### *Expressions*

*Affiliation.* Table 4 shows the frequency of expression choice as a function of the manipulated affiliation level of the protagonist, their sex, and the intended emotion content of the vignette. To assess whether the distribution of expressions chosen as most appropriate to the situation varied as a function of these three factors,  $\chi^2$  analyses were performed.<sup>5</sup>

Significant differences in the distribution of expression choices as a function of Affiliation level were found for the male and the female protagonist for both the happiness,  $\chi^2_{(6)} = 12.59$ ,  $p = .050$ , and  $\chi^2_{(6)} = 26.36$ ,  $p < .001$  and the neutral situation,  $\chi^2_{(6)} = 30.75$ ,  $p < .001$ , and  $\chi^2_{(5)} = 13.61$ ,  $p = .018$ . As shown in Table 4, the overall pattern for the male and the female protagonist in the happiness situation and the female protagonist in the neutral situation was the same. High affiliative protagonists were expected to show more smiles, whereas for low affiliative protagonists neutral expressions were chosen relatively more often. Further, for high affiliative men in the neutral situation smiles and neutral

<sup>5</sup>For tables containing empty cells, Fischer's exact test was substituted.

TABLE 4  
 Frequency of choice for emotional expressions as a function of sex of protagonist,  
 affiliation level, and emotion condition

| <i>Expression</i> | <i>High affiliative</i> |                | <i>Low affiliative</i> |                |
|-------------------|-------------------------|----------------|------------------------|----------------|
|                   | <i>Women (%)</i>        | <i>Men (%)</i> | <i>Women (%)</i>       | <i>Men (%)</i> |
| Happy event       |                         |                |                        |                |
| Neutral           | 10.0                    | 0.0            | 35.0                   | 35.0           |
| Angry             | 0.0                     | 5.0            | 10.0                   | 0.0            |
| Embarrassed       | 5.0                     | 0.0            | 5.0                    | 10.0           |
| Happy             | 60.0                    | 90.0           | 30.0                   | 25.0           |
| Miserable smile   | 20.0                    | 5.0            | 10.0                   | 20.0           |
| Fearful           | 0.0                     | 0.0            | 0.0                    | 5.0            |
| Sad               | 0.0                     | 0.0            | 10.0                   | 5.0            |
| Disgusted         | 5.0                     | 0.0            | 0.0                    | 0.0            |
| Anger event       |                         |                |                        |                |
| Neutral           | 5.0                     | 10.0           | 5.0                    | 15.0           |
| Angry             | 5.0                     | 40.0           | 35.0                   | 20.0           |
| Embarrassed       | 20.0                    | 5.0            | 15.0                   | 25.0           |
| Happy             | 10.0                    | 0.0            | 0.0                    | 5.0            |
| Miserable smile   | 15.0                    | 0.0            | 5.0                    | 5.0            |
| Fearful           | 10.0                    | 20.0           | 15.0                   | 10.0           |
| Sad               | 25.0                    | 20.0           | 25.0                   | 20.0           |
| Disgusted         | 10.0                    | 5.0            | 0.0                    | 0.0            |
| Neutral event     |                         |                |                        |                |
| Neutral           | 5.0                     | 45.0           | 40.0                   | 50.0           |
| Angry             | 0.0                     | 0.0            | 10.0                   | 10.0           |
| Embarrassed       | 10.0                    | 10.0           | 10.0                   | 10.0           |
| Happy             | 65.0                    | 40.0           | 0.0                    | 10.0           |
| Miserable smile   | 10.0                    | 0.0            | 25.0                   | 20.0           |
| Fearful           | 5.0                     | 0.0            | 0.0                    | 0.0            |
| Sad               | 5.0                     | 5.0            | 15.0                   | 0.0            |
| Disgusted         | 0.0                     | 0.0            | 0.0                    | 0.0            |

expressions were chosen equally often. For low affiliative men smiles were rarely chosen.

*Gender differences.* When comparing the male and female protagonists at the same level of manipulated affiliativeness, differences emerged for high levels of affiliativeness for all three emotion vignettes (happiness,  $\chi^2_{(5)} = 10.07$ ,  $p = .073$ ; anger,  $\chi^2_{(7)} = 16.53$ ,  $p = .021$ ; and neutral,  $\chi^2_{(5)} = 12.72$ ,  $p = .026$ ). Specifically, although happiness was chosen as the most appropriate reaction to a happiness situation for both men and women, it was chosen for 90% of the male but only for 60% of the female high affiliative protagonists. Further, high

affiliative men were more often expected to show anger in the anger situation than were high affiliative women. Finally, high affiliative women were more often expected than were high affiliative men to show happiness in the neutral situation.

## Discussion

Both the sex of the protagonist and their level of ascribed affiliation influenced participants' choice of the most appropriate facial displays for different emotional situations. As predicted, for high affiliative individuals happiness expressions were more often chosen as appropriate in a happiness situation. This was also the case for neutral situations. This expectation interacted with the gender of the protagonist. The high affiliative male protagonist was considerably more frequently expected to show happiness in a happiness situation (90%) than was the high affiliative female protagonist (60%). This finding may be due to a contrast effect. Given that men are generally expected to be less affiliative and to smile less in general, participants may have overcompensated by attributing smiles particularly to this group. A somewhat related effect has been observed by Berry and Landry (1997) who found that babyfacedness had a much larger self-fulfilling prophesy effect on men, for whom babyfacedness is gender astereotypic, than on women, for whom it is stereotypic.

These findings might be explained by status characteristics theory (Wagner & Berger, 1993). Status characteristics theory states that people will usually attempt to describe others in a stereotype congruent (assimilative) manner. As a consequence they require higher levels of "proof" to attribute a stereotype incongruent characteristic to a person. Since men are usually perceived as low in affiliation participants would, according to this logic, require them to show very high levels of affiliative behaviour before considering them to be actually affiliative. In contrast, they would conclude that a man described as high affiliative would indeed smile much more than a comparably affiliative women for which standards of proof would be lower.

Interestingly, these findings only obtained for the happiness situation. For the anger and neutral situations high affiliative participants' were expected to act congruent with the gender stereotype. Specifically, high affiliative men were expected to show more anger whereas for women the reverse was the case. In contrast, high affiliative women were more often expected to show happiness in neutral situations than were high affiliative men. That is, the high affiliative female protagonist in the neutral situation and the high affiliative male protagonist in the anger situation were more often expected to show stereotype congruent affect.<sup>6</sup> Given that participants also rated high affiliative individuals

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<sup>6</sup> Although there is little evidence that men actually show more anger than women, men are nonetheless perceived as generally more anger prone (see Fischer, 1993).

as more extroverted, it is possible that they attributed more anger expressions to high affiliative men as well as more smiles in neutral situations to high affiliative women because they consider such individuals to be more expressive overall. An alternative explanation is that high levels of affiliation are perceived as indicative of individuals who adhere well to social role expectations and that the attribution of anger to men and smiles to women reflects this stereotypical role expectation.

In sum, affiliation was found to mediate the rated likelihood of men's and women's happiness expressions in response to a happiness inducing event. However, for the other two emotional situations, participants rated high affiliative individuals as more likely to be more expressive in general in accordance with the gender stereotype. That is, unlike perceived dominance, which seems to fully mediate the gender stereotype, perceived affiliation interacts with the gender stereotype depending on the emotion eliciting situation. Specifically, high affiliative individuals are perceived as more likely to behave in a stereotype congruent manner.

## GENERAL DISCUSSION

Across the three studies a mediational model positing that the social stereotype that portrays anger displays as more appropriate for men and smiling as requisite for women is mediated by differences in perceived dominance and affiliativeness of men and women rather than by gender per se was strongly supported for dominance and partially supported for affiliation. Experiment 1 showed that gender is indeed linked to perceptions of dominance and affiliation, which in turn mediate or partially mediate expectations regarding a person's emotionality. Two vignette studies demonstrated that normative expectations regarding anger displays are based on the perceived dominance of the protagonist rather than his/her sex. For perceived affiliation, the findings were more complex. On one hand, men who are described as highly affiliative are overwhelmingly more frequently expected to smile in a happiness eliciting situation than the correspondingly affiliative female protagonist, a finding that seems to represent a status characteristics effect (Wagner & Berger, 1993). Yet, on the other hand male and female high affiliative protagonists are expected to behave in a gender stereotype congruent manner in anger and neutral situations.

These findings suggest that the social rules that guide decisions about "appropriate" facial expressions in a given context are informed not only by the sex of the protagonist (which defines the corresponding social roles), but also by the perception of the protagonists' level of dominance and affiliation. These factors are not orthogonal. In fact, the perception of dominance is strongly confounded with sex, because the morphological cues associated with perceived high dominance such as a square jaw, thick eyebrows and receding hairlines (Keating, 1985; Senior, Phillips, Barnes, & David, 1999) are generally more

typical for men than for women. Similarly, research on babyfacedness suggests that morphological traits more often associated with women (e.g., large eyes, narrow jaws) lead to perceptions of interpersonal warmth and honesty, as well as naiveté, submissiveness and incompetence (for a review see e.g., Zebrowitz, 1996).

Importantly, the present studies show that sex-based stereotypical expectations can be partially overruled by expectations based on our perceptions of the dominance and affiliativeness of a person. These latter perceptions may cue observers as to the likely level of a specific individual's stereotype adherence. The perception of relative dominance and affiliation is likely based on facial appearance in situations where we do not actually know the protagonist as is usually the case when we first encounter someone.

Consequently, given that social rules regarding the appropriateness of expressive behaviour are strongly normative, the present findings suggest that women who appear too affiliative may encounter social disapproval when showing anger. A dominant appearance, on the other hand, may make it possible for women to show "rightful" anger. Conversely, appearing affiliative may lead perceivers to expect more smiles from men in certain situations and more stereotype adherence by both men and women in others.

Manuscript received 18 November 2002  
Revised Manuscript received 5 May 2004

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