## ORIGINAL PAPER

# Observers' expectations regarding the emotional reactions of others in a failure context: the role of status and perceived dominance

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**Abstract** An important determinant of observer's expectations about other's emotional reactions is the status of the other person. Status can be derived from a variety of cues and in any given situation more than one status cue may be available. The present study showed that both information about another person's organizational status and information about their level of social dominance based on verbal descriptions or facial appearance influenced the emotions that the person was expected to show. Two vignette studies were conducted to investigate the combined impact of these two sources of status information. When perceptions of dominance were manipulated through facial appearance as well as a verbal description, only dominance but not organizational status influenced anticipated emotional reactions to failure. When the only cue for dominance was facial appearance, both organizational status and appearance influenced anticipated emotions. In turn, anticipated emotional reactions predicted the expectation that the person would take responsibility for the failure or apologize, and these expectations influenced the degree to which observers recommended firing the person.

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One of the basic characteristics of any social group, be it an informal group of friends or an organization, is that the individuals within these groups differ in social status (Hofstede 1991). Social status can be defined as "the outcome of an evaluation of attributes that produces differences in respect and prominence" (Keltner et al. 2003, p. 266). The important role that social status plays within the social arena is reflected by people's sensitivity to cues that mark social status (Ridgeway 1987) as well as by the existence of clear expectations and beliefs about the likely characteristics of individuals of different status. These expectations and beliefs are part of people's naïve theories and are used to predict how a potential interaction partner may behave in a given situation, including which emotions they may be expected to experience in response to a given situation (Keltner et al. 2003). Although in any given situation, there may be more than one source of information regarding an individual's social status, little is known about how different types of information concerning a person's status combine to affect expectations based on perceived status. The aim of the present research was to investigate the combined influence of two such sources-formal status information based on a person's hierarchical position in an organization and informal status information transmitted through information regarding a person's social dominance.

An individual's formal position in an organization defines their formal role-dependent status. Yet, other characteristics of the person such as their personality, age or appearance also impinge on perceived status (e.g., Berger et al. 1972; Mazur 1985). For example, older people are considered to be higher in status (Berger et al. 1972;



Mazur 1985) as are people who are taller (Wilson 1968) or have smaller eyes (Keating and Doyle 2002). Higher status is also reflected in behaviors such as attracting the other's gaze (Chance 1967) and avoiding smiling (Halberstadt and Saitta 1987; Keating et al. 1981). We refer to these sources of status information as informal status cues because they are independent of the formal role-dependent status that a person enjoys in a specific context.

Informal cues such as age, behavior or appearance, what Mazur (1985) refers to as "status signs," are always potentially available to the observer. This raises the question of the impact of these simultaneously available status cues on observers' expectations about another person's reactions and behaviors in a given situation. Is it the case, for example, that formal status has priority over informal status cues? After all, much of the actual social power of a person in a formal group stems from their formal position. Yet, informal status cues reflect things such as knowledge, ability or potential to persuade others (Harper 1991; Maynard Smith and Harper 1988). Thus, these cues may be influential even when formal status is known. If this were the case, then expectations concerning a person's responses may be formed based on both sources of status information.

The expectations and beliefs with which we enter an interaction are important factors for the development of that interaction. In this context, the beliefs we have about an interaction partner influence the perception of the interaction partner's emotions. Specifically, the processing of the meaning of facial expression can be made via two different strategies (Adolphs 2002; Atkinson 2007; Kirouac and Hess 1999), a bottom-up process where the perceptual features of the sender's expressions can be used to draw inferences regarding his or her emotional state using a pattern-matching approach (Buck 1984), and a top-down process that depends upon the knowledge that the perceiver possesses regarding the sender and/or the social situation in which the interaction is taking place. The beliefs that we generate about someone's likely reaction are hence one source of our perception of that reaction when it occurs. Further, people judge emotional expressions of others on whether they are believed to be appropriate to the situation as perceived by the observer and emotions which contravene expectations for the situation may be viewed with suspicion and elicit mistrust or other negative reactions from the interaction partner (Vrij and Semin 1996). Hence we assume that based on how we believe the other will react emotionally, we expect different behaviors from them to which in turn we anticipate responses of our own. Specifically, expectation states theory (Berger et al. 1977) posits that in order to plan their own behavior, people strive to predict the performance of other group members, amongst others, from situationally relevant status cues. Ridgeway (2006) proposes that one of the behavioral expectations entrained by status cues are the emotions that people of different status experience and which in turn may then impact on the observers' own planned behavior.

We first briefly review what is known about determinants of social status and their role in shaping observers' expectations regarding a person's likely emotional response to a situation. We then report the results of two experiments in which we investigated how information about a person's organizational status in combination with certain informal status cues (based on personality and appearance in Study 1 and on appearance only in Study 2) determine observers' expectations concerning that person's emotional and behavioral reaction to an organizational failure and how these expectations in turn shape the observers' intentions towards the protagonist. In both studies we used male and female targets as gender is another cue that shapes expectations with regard to emotional responding (Hess et al. 2005).

#### Social status

Status is viewed as one of the basic features underlying social relations (e.g., Hofstede 1991; Keltner et al. 2003; Kemper 1991; Kemper and Collins 1990; Ridgeway 2006). Differences in status potentially translate into variations in social power. Social power reflects an individual's capacity to affect others' lives (Keltner et al. 2003) and as a consequence determines how the individual is treated by those who are potentially affected (Gifford 1991; Schmid Mast and Hall 2004; Wiggins 1979). More generally, it can be claimed that much of what happens within a social group is shaped and determined by the relative social status of the group members and by the way that status determines their relative social power.

People also hold expectations concerning the likely response of another individual in a given context based on the status of that individual (Ridgeway 2006). Among other things, such expectations exist for emotional reactions. Thus, Tiedens et al. (2000) found that participants believed that in failure situations, a person with high organizational status (head advertising executive) would feel more angry than sad or guilty as opposed to a person with lower organizational status (an assistant to the head advertising executive) who is expected to feel more sad and guilty than angry. In contrast, in response to positive outcomes, the high-status individual is expected to feel more pride and the low-status person is expected to feel more appreciation. Tiedens et al. (2000) suggest that these expectations are driven by people's beliefs that status indicates ability. Accordingly, failure by individuals of lower status (i.e., lower ability) is more likely to lead to inward focused emotional reactions (sadness and guilt) whereas failure by people of higher status (i.e., higher ability) is more likely to



induce outward focused emotions (anger). Based on Kemper's work (e.g., Kemper 1991) such expectations can match actual relations between social status and emotional responding, because the expressers' own awareness of such expectations then acts as expressive forms which translate into feeling or display rules (Hochschild 1979; see also Ridgeway 2006).

In sum, information about individuals' organizational status determines expectations regarding their emotional reactions (Tiedens et al. 2000). However, behavior, appearance or information concerning personality characteristics also reflect social status and hence can also be expected to impact perceivers' expectations regarding an individual's emotional reactions. For example, Hess et al. (2005) presented participants with informal status information concerning the level of social dominance of a given protagonist. Dominance was manipulated via verbal descriptions of the individual as either dominant or submissive. These descriptions were matched with photos of individuals who had been previously rated as high and low, respectively, in facial dominance. Specifically, individuals with facial features such as a square jaw and a high forehead are perceived as more dominant (Keating et al. 1981; Senior et al. 1999). Conversely, people with facial features typical of infants (large eyes, high thin eyebrows, round face, small nose bridges) are perceived as more submissive (Berry 1991). Hess et al. (2005) showed that anger was perceived to be a more appropriate reaction for a dominant person than for a submissive one (see also, Hess et al. 2004).

We assume that a person's perceived dominance and hence their potential for exerting social power and gaining status is important over and above a person's formal status. This, because within a social group it is important for people to know their interaction partner's potential for controlling others and/or moving along the hierarchy in the future and appearance based dominance cues are perceived as indicative of one's likely potential for action and behavior (Harper 1991; Maynard Smith and Harper 1988). Further, humans are relatively attentive and sensitive to non-verbal status cues and people from different cultures interpret dominance cues (e.g., facial dominance) similarly (Collins and Zebrowitz 1995). There are also some indications that the information conveyed by signs such as facial dominance, at least in the case of men, predicts future status (Mueller and Mazur 1996). Thus, it seems that evolution shaped humans' mind to be sensitive to dominance cues and to use them to predict another person's likely reactions.

In turn, affect control theory posits that expectations concerning the emotional reaction of the other person will also affect expectations concerning their behaviors as well as the behavioral intentions of the observer (Heise 1979; Smith-Lovin and Heise 1988). For example, because guilt feelings signal that the emoter accepts responsibility for

an undesirable act and plans to do better in the future (Baumeister et al. 1994; Frank 1988; Hareli et al. 2005), a person expected to express guilt over a failure should be seen as accepting responsibility for the failure and thus should be forgiven more readily than a similar person who is not expected to experience guilt. Indeed there is evidence that the expression of guilt and shame when apologizing for social transgressions prompts forgiveness (Hareli and Eisikovits 2006). Sadness, because it signals an acknowledgement of the negative nature of a given situation, may be expected to have a similar effect. Thus, expectations concerning others' emotions may have an impact on expectations concerning the likelihood that these others will acknowledge their role in causing the failure. These, in turn, are expected to affect the behavioral intentions of the observer, for example, the likelihood that the observer recommends to fire the employee.

In sum, the present research aimed to assess (1) the extent to which expectations about a person's emotional reactions to failure are influenced by informal status cues based on dominance information when formal, organizational status is also known. We employed structural equation modeling to assess the following hypotheses: (H1) both dominance cues and organizational status cues predict the anticipated emotional reactions of the protagonist; (H2) the anticipated emotions of the protagonist influence expectations regarding restitution behaviors (taking responsibility, tendering an apology) and these in turn (H3) influence recommendations to fire the person for the failure.

In this context, we also investigated whether dominance cues by men and women work similarly on perceivers. Hess et al. (2005) found that differences in observers' judgments of which emotions are appropriate for a man or a woman in a given situation can to a certain extent be explained by differences in perceived dominance between the genders. Thus, gender can be seen as an additional indicator of status (Ridgeway 2006) and we predicted (H4) that gender also has an impact on anticipated emotional reactions.

# Overview

We report the results of two vignette experiments in which these questions were examined. Vignettes have been criticized because they represent a reality that is different from the more stimulus rich and interactive environment of actual emotional interactions (see for example, Parkinson and Manstead 1993, for a discussion of this issue). On the other hand, vignettes are an excellent tool to assess the symbolic knowledge about emotion theories and rules that people apply when judging social interactions and forming expectations about the likely reactions of the others (Hareli et al. 2005; Hareli and Hess 2010; Robinson and Clore



2002) and in the present context we are particularly interested in these 'naïve' theories. Specifically, such theories are likely to affect observers' reactions, especially, when the observer is not well acquainted with the other or when there are constraints on the observer that force shallow information processing, which increases the likelihood that stereotypical information affects reactions (Gilbert and Hixon 1991).

In both experiments participants had to imagine themselves in the role of a manager encountering the failure of either a male or female employee in the same organization who was either of lower organizational status (i.e., under his/her supervision), of equal organizational status (i.e., parallel level manager) or of higher organizational status (i.e., the participant's manager). Informal dominance based status was manipulated in Study 1, as in Hess et al. (2005), via verbal descriptions of the individual as either dominant or submissive that were matched with photos of individuals who had been rated as high and low, respectively, in facial dominance. Thus, information about the target's social dominance was provided via two separate but matching sources. In an additional condition, no dominance information was provided. In Study 2, only photos were used to manipulate the informal status of the employee. The main goal of that study was to assess whether facial dominance cues, that is, cues based on facial appearance alone, are sufficient to shape observers' expectations and reactions when organizational status is known. Finally, the extent to which the observer felt pity and anger toward the achiever were also assessed as these emotions are likely to arise when one learns about another person's failure and are likely to influence the behavioral intention towards the person who caused the failure (Weiner 1985).

# Study 1

Method

**Participants** 

Participants were 423 (336 women, 74 men, and 13 gender unknown, mean age, M = 29 years; SD = 8.2; mean number of years of work experience, M = 8; SD = 6.8)<sup>1</sup> undergraduate and graduate students at the University of Haifa and the Emek Yezreel Academic College who participated voluntarily during lecture time.

<sup>&</sup>lt;sup>1</sup> Most undergraduate students in Israel serve in the army prior to their university studies and some still work during their studies. Accordingly, most students have work experience within a highly hierarchical organization. This also means that most students start university not earlier than the age of 20, most much later after excursions and some years of work.



#### Materials and procedure

After having signed a consent form, participants proceeded to read a vignette. Specifically, each participant was asked to envision a scenario describing a man or woman of different organizational status for whom informal status information was also provided and who had caused a failure. In particular, participants were asked to imagine that they are the manger of a Research and Development department of a big pharmaceutical firm and that a protagonist (Moshe/Sara) failed to do a job properly. The protagonist was described as either an employee under the participant's supervision (low status), a parallel level manager (equal status) or a manager in charge of the participant (high status). The department was described as recently involved in a big project for the development of a new treatment for Alzheimer's disease based on genetic engineering. Yesterday, when testing on laboratory rats was planned to start, the manager (i.e., participant) discovered that a special apparatus for the controlled release of the drug directly into the brain was not operating properly. Inquiry indicated that (Moshe/Sara) who is responsible for testing experimental equipment had failed to do so when it arrived a month ago. Repair of the equipment is impossible and replacement will take 2 weeks as the machine is manufactured only in Switzerland and on back order. The delay in testing will cause the company to lose around \$100,000.

In addition to this scenario, information about the interpersonal disposition of the target person was provided describing the protagonist as either dominant or submissive. In a control condition this information was omitted. The dominant protagonist was described as a very assertive and decisive person who is very dominant, one who seems to be the kind of person who is a leader. The submissive protagonist was described as a very friendly and helpful person who is very sociable and who seems to be a good friend to others. This information about the interpersonal disposition of the target was coupled with one of two matching photos of dominant and submissive male and female individuals. Photos were chosen based on a prior study in which a total of 700 individuals (402 women, 268 men and 30 gender unknown participants) had rated 272 male and 272 female faces, with neutral expressions, on several scales including dominance and affiliation. Scales ranged from -3 (submissive, non affiliative) to 3 (dominant, affiliative). The faces were taken from the FERET database (www.itl.nist.gov/iad/humanid/feret/feret master. html) and the aging faces database (Minear and Park 2004). Only faces that did not show any discernable facial expression were included. The selected faces were all in the upper 90 percentile for dominance. Mean ratings of dominant faces ranged from 1.75 to 1.81 for dominance and -1.50 to -0.38 for affiliation. Mean ratings of submissive faces ranged from -1.18 to -1.50 for dominance and from 0.13 to 1.56 for affiliation. The photos appeared on the top center of the questionnaire with the name of the employee below. The condition in which dominance information was not provided lacked the photo of the targets as well as description of their personality. This resulted in a (3) dominance (dominant vs. submissive vs. no information) X (2) employee gender (male vs. female) X (3) formal status (low vs. equal vs. high) between-subjects factorial design.

## Dependent measures

After reading the scenario, participants were asked to rate the likelihood that the target person would experience sadness, guilt and shame following the failure event (In your opinion, how likely is it that (Sara/Moshe) will feel sadness/shame/guilt because of what happened?) as well as the likelihood that s/he would take responsibility for the failure (In your opinion, how likely is it that (Sara/Moshe) will take responsibility for what had happened?). Participants completed single item scales for each emotion following the procedure employed by Tiedens (2001).

The likelihood that the observer would recommend firing the employee because of what had happened was also measured (If this were your decision to make, how likely is it that you would fire (Sara/Moshe) because of what happened?).

As mentioned above, pity and anger on the part of the observer toward the employee were also assessed to investigate their impact on the recommendation to fire the employee (*How angry/how much pity towards* (*Sara/Moshe*) would you feel because of what happened?). All scales were anchored with (0) "not at all" to (6) "very much."

## Results and discussion

Structural equation modeling using AMOS was used to assess the hypotheses that H1: both formal (organizational status) and informal (dominance) status cues influence the anticipated emotions for the protagonist, H4: employee sex impacts on anticipated emotions, H2: anticipated emotions predict expectations regarding the employee's actions (taking responsibility) which in turn influence intentions to fire the employee (H3). Because the three emotions correlated substantially (r's > 0.58), we combined them into one scale ( $\alpha = 0.86$ ). Dominance and status were ordinal scaled variables coded -1 (submissive, lower status), 0 (no dominance information, equal status), and +1 (dominant, higher status). Employee sex was dummy coded with 0—woman, and 1—man. Model fit was assessed using the CFI and the

Root Mean Square Error of Approximation (RMSEA). A CFI > 0.90 (Bentler 1992) and a RMSEA < 0.08 (MacCallum et al. 1996) indicate adequate fit.

The model described in Fig. 1 was found to have excellent fit  $(\chi^2_{(6)} = 0.92, p = 0.989, CFI = 1.00, RMSEA = 0.000)$ . Table 1 presents the correlations between the variables in the model. As can be seen in Fig. 1, organizational status did not impact on expected emotions. By contrast, the predicted effect of dominance cues on expected emotions was significant, such that dominant individuals were expected to feel less sadness/shame/guilt than submissive ones. Further, the predicted effect of employee sex was found, such that a woman was expected to feel more sadness/shame/guilt than a man. As hypothesized, anticipated emotions predicted the perceived likelihood that the employee takes responsibility, which in turn predicted the expressed likelihood to fire the employee, such that someone who takes responsibility was less likely to be fired.

In addition, there was a direct effect of both dominance and organizational status on expectations that the employee would take responsibility, such that more dominant and higher status employees were expected to a lesser degree to take responsibility. A direct path from organizational status to firing suggested that participants were more likely to recommend firing higher status employees. By contrast, the effect of dominance on recommendations to fire was fully mediated by its effect on expected emotions and expectations that the employee would take responsibility, as the direct path from dominance to firing was non-significant. Also, the effect of the employee's anticipated emotional reaction on the participants' recommendation to fire the employee was fully mediated by their effect on the expectation that the employee takes responsibility, as the direct path from sadness/shame/guilt was non-significant.

As mentioned above, the observer's own emotional reaction to the failure itself can be expected to influence the recommendation to fire the employee. We therefore added self-reported pity and anger to the model shown in Fig. 1. The link from expected emotions to responsibility remained unchanged. Yet, in line with our predictions, the link from anger to firing was significant ( $\beta = 0.31$ ,

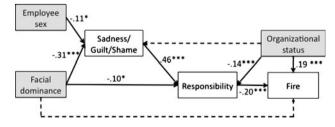


Fig. 1 Path model of the relationship between anticipated emotions, perceived likelihood that the protagonist takes responsibility and recommendations to fire



Table 1 Correlations among the variables in the model—Study 1

	C		ž					
Variable	1	2	3	4	5	6	7	8
1. Dom.	-							
2. Status	_	-						
3. Gender	_	_	_					
4. Sadness/Guilt/Shame	-0.30**	-0.06	-0.11*	_				
5. Resp.	-0.24**	-0.17**	-0.06	0.50**	_			
6. Fire	0.12*	0.23**	0.05	-0.10*	-0.23**	_		
7. Anger	0.13*	0.06	0.05	0.00	-0.10*	0.34**	_	
8. Pity	-0.18*	-0.02	0.03	0.28*	0.22**	-0.16**	-0.16**	_
M	_	-	-	4.60	4.54	2.99	4.71	2.82
SD	_	_	-	1.25	1.46	1.43	1.16	1.60

N = 423. Higher means represent more of the variable

Resp Responsibility, Dom Dominance; for Dominance and Status Spearman correlation coefficients are reported

p < 0.001), such that the more anger participants felt, the more likely they were to recommend firing, and the path from responsibility to recommended firing dropped slightly ( $\beta = -.16$ , p < 0.01). The link from pity to firing was not significant ( $\beta = -.08$ , n.s.). However, the model including these variables had an unsatisfactory fit ( $\chi^2_{(15)} = 53.19$ , p < 0.001, CFI = 0.88, RMSEA = 0.078).

In sum, H1: informal status impacts on anticipated emotions over and above formal status, was supported. In fact, in the presence of informal status information based on both appearance cues and a description of the protagonist's personality, formal status information had no impact on anticipated emotional reactions. This may be because personality presents arguably more proximal information about a person than organizational status and hence is perceived as more diagnostic for a person's likely emotional reactions. On the other hand, organizational status entrains expectations regarding organizational norms and hence may be more diagnostic for behavioral intentions.

Further, to the degree that the protagonist was expected to show more sadness/guilt/shame, participants were more likely to assume that he or she will take responsibility for the failure. Increased expectations of taking responsibility in turn decreased the tendency to recommend firing the failing employee. This finding is congruent with the notion that guilt signals an intention to take responsibility and do better in the future (Frank 1988). In the same vein, sadness and shame signal a realization that a mistake was made. It is noteworthy that even though organizational status did not affect the anticipated emotional reactions of the employee, it did affect the likelihood that the participant would recommend firing in this context and at the same time the high status employee was seen as less likely to take responsibility. This finding is in line with the notion

that higher rank comes with increased responsibility but also with an increased tendency to blame others (Gilbert 1992).

The relatively small observed effect of protagonist sex on expected emotional reactions is congruent with the notion that at least some of the known differences in observers' expectations concerning men's and women's emotions and related reactions (see Fischer 1993, for a review) are actually reflections of differences in dominance (Hess et al. 2004, 2005, 2007, 2009). That is, in the presence of explicit dominance cues the information imparted by the person's sex is reduced.

Overall, Study 1 showed that participants used informal, dominance based, cue to status rather than a formal status cue, to predict a person's likely emotional reactions. These expectations in turn entrained expectations regarding the person's behavioral reactions and shaped the participants' recommendations regarding the employee's future.

## Study 2

In Study 1 we were able to show that informal, dominance based status cues affect observers' expectations regarding others' reactions independently of formal status information. Yet, these informal status cues combined two sources of information: the person's appearance and a verbal description of his/her interpersonal disposition. However, appearance is a source of information that is more readily available to observers than is interpersonal disposition. In addition, appearance based on bone structure is a feature that is less likely to vary across situations as it is less susceptible to impression management (Mueller and Mazur 1996). Thus, consistent with the idea that sensitivity to



<sup>\*</sup> *p* < 0.05; \*\* *p* < 0.01

dominance cues is an evolutionary adaptation in humans (Bugental 2000), appearance based dominance cues even though much more subtle than verbal descriptions of personality, have a potential to impact on observers' expectations. The main goal of Study 2 was therefore to assess the extent to which facial dominance cues alone can influence observers' expectations in this context. We expected that facial appearance alone has a weaker relative influence in this context but still is likely to impact on anticipated emotional and behavioral reaction by the other and the self.

We further extended our investigation of the impact of expected emotions to a second restitution behavior, the likelihood that the employee will apologize, as the admission of responsibility often leads to remedial actions such as apologies (Hareli et al. 2005; Schlenker and Weigold 1992).

#### Method

#### **Participants**

Participants were 510 (400 women, 75 men, and 35 gender unknown, mean age, M = 25 years; SD = 5.7; mean number of years of work experience, M = 5; SD = 5.4) undergraduate and graduate students at the University of Haifa and the Emek Yezreel Academic College who participated voluntarily during lecture time.

# Material and procedure

After having signed a consent form, participants proceeded to read a vignette. The material and study design were the same as in Study 1 except that the verbal information regarding the interpersonal disposition of the employee was dropped. Thus, level of dominance was manipulated by facial appearance only. This resulted in a (3) facial dominance (dominant vs. submissive vs. no information) X (3) formal status (low vs. equal vs. high) X (2) protagonist sex (male vs. female) between-subjects factorial design.

## Dependent measures

In addition to the variables assessed in Study 1, we measured the extent to which the employee is perceived as likely to apologize (*In your opinion, how likely is it that* (*Sara/Moshe*) will apologize for what had happened?)<sup>2</sup>. All ratings of the single item scales were made on seven-point scales anchored at the extremes with (0) "not at all" to (6) "very much." Like in Study 1, because the three emotions

(sadness, guilt, and shame) correlated substantially (r's > 0.49), we combined them into one scale ( $\alpha = 0.77$ ).

#### Results and discussion

As for Study 1, structural equation modeling was used to assess the hypotheses that H1: both formal (organizational status) and informal (facial dominance) status cues influence the anticipated emotions for the protagonist, H4: employee sex impacts on anticipated emotions, H2: anticipated emotions predict expectations regarding the employee's actions (taking responsibility/tendering an apology) which in turn influence intentions to fire the employee (H3). Facial dominance and status were ordinal scaled variables coded -1 (submissive, lower status), 0 (no dominance information, equal status), and +1 (dominant, higher status). Employee sex was dummy coded with 0—woman, and 1—man.

The model described in Fig. 2 was found to have excellent fit ( $\chi^2_{(7)} = 5.85$ , p = 0.558, CFI = 1.00, RMSEA = 0.00). Table 2 presents the correlations between the variables in the model. When only facial appearance cues were combined with organizational status the latter regained its influence on anticipated emotions shown in previous research (Tiedens et al. 2000). Specifically, organizational status significantly predicted sadness/guilt/shame. Yet, as predicted, the subtle manipulation of facial appearance had an effect on anticipated emotions as well. When a photo of a highly dominant face accompanied the vignette, participants expected the employee to feel less sadness/guilt/shame than when the photo showed a submissive face. Further, as in Study 1, women were expected to feel more sadness/guilt/shame.

As in Study 1, the anticipated emotions in turn influenced expected behavioral intentions. Thus, the more the employee was expected to feel sadness/guilt/shame the more likely participants considered it that s/he would take responsibility and apologize. Further, taking responsibility was negatively related to the recommendation to fire the employee. To the degree that employee was expected to take responsibility, s/he was also perceived as more likely to tender an apology;

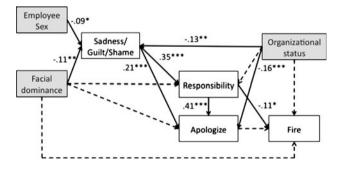


Fig. 2 Path model of the relationship between anticipated emotions, perceived likelihood that the protagonist takes responsibility and apologizes and recommendations to fire



<sup>&</sup>lt;sup>2</sup> We also measured the protagonist's likelihood to experience fear, however, this variable will not be discussed in this context.

Table 2 Correlations among the variables in the model—Study 2

Variable	1	2	3	4	5	6	7	8	9
1. Dom.	_								
2. Status	-	-							
3. Gender	-	-	_						
4. Sadness/Guilt/Shame	-0.09*	-0.11*	-0.09*	_					
5. Resp.	-0.01	-0.06	-0.08	0.35**	_				
6. Fire	0.04	0.12**	0.07	-0.08	-0.16**	_			
7. Apology	-0.06	-0.20**	-0.00	0.38**	0.49**	-0.15**	_		
8. Anger	0.07	0.11*	0.04	0.08	-0.13**	0.28**	0.00	_	
9. Pity	0.01	-0.07	-0.04	0.18**	0.17**	-0.14**	0.12**	-0.14**	_
M	-	_	_	4.60	3.92	2.57	4.41	5.04	2.76
SD	_	_	_	1.15	1.45	1.70	1.49	1.06	1.56

N = 510. Higher means represent more of the variable

Resp Responsibility, Dom Dominance; for Dominance and Status Spearman correlation coefficients are reported

however, the likelihood that this would be the case did not independently contribute to the recommendation to fire. Whereas in Study 1 dominance had also a direct effect on the perceived likelihood that the employee would take responsibility, in Study 2 the effect of facial dominance was fully mediated through its effect on anticipated emotions. The effect of sadness/guilt/shame on recommendations to fire was fully mediated by expected responsibility and apology as the addition of a direct path from these emotions to recommended firing was not significant.

As mentioned above, organizational status impacted in Study 2 on anticipated sadness/guilt/shame, thus replicating previous research (Tiedens et al. 2000). Given the weaker signal presented by facial appearance cues alone, organizational status seemed to have gained in diagnostic value. Whereas in Study 1 organizational status had a direct effect on the likelihood that the employee takes responsibility and on the recommendation to fire, in Study 2, these effects were fully mediated through the effect of organizational status on anticipated emotions. By contrast, a direct effect of organizational status on the likelihood that the employee tenders an apology emerged, such that higher status employees were perceived as less likely to do so. It is possible that this reflects an impression by the participants that in an hierarchical organization superiors are expected to a lesser degree to apologize to their inferiors than would be the case in the reverse situation.

As for Study 1, a model including the self-report variables pity and anger was tested. In this model, even though the contribution of expected emotions on responsibility and apology remained unchanged, a positive relationship of anger with firing emerged ( $\beta = 0.26$ , p < 0.001) as was the case in Study 1. Also, parallel to the finding of Study 1, the path between the likelihood that the employee will take

responsibility and recommended firing dropped and in this case even became non significant ( $\beta=0.05$ , n.s.). By contrast, the negative link between apology and firing became significant ( $\beta=-0.10,\ p<0.05$ ), suggesting a possible palliative effect of apologizing on the effect of anger (Weiner 1995). However, as for Study 1, the model including the participant's emotional reactions had a less than acceptable fit ( $\chi^2_{(20)}=68.11,\ p<0.001,\ CFI=0.87,\ RMSEA=0.069$ ).

Thus, Study 2 replicated the overall findings from Study 1 that informal dominance cues have an impact on anticipated emotional reactions over and above the effects of formal status information. In turn, anticipated emotions were found to impact on expectancies that the employee makes restitution behaviors which in turn influenced the recommendation to fire the employee. The effect of both facial dominance and organizational status information on these latter variables was largely mediated through the effects on anticipated emotions. This was the case even though the informal cue in this case was relatively subtle.

However, as can be expected, facial dominance cues alone had a weaker impact on expectations than the combined facial and personality based dominance cues employed in Study 1. Thus, the betas in Study 2 were lower than in Study 1 and whereas in Study 1 anticipated emotions were influenced exclusively by the arguably more diagnostic dominance information, in Study 2 both sources of status information had an impact. Again, once formal and informal status cues had been accounted for, protagonist sex had only a small effect. As in Study 1, expectations concerning the emotions the employee is likely to experience predicted the likelihood that s/he would be fired via the mediation of predicted responsibility.



<sup>\*</sup> p < 0.05; \*\* p < 0.01

#### General discussion

The present research investigated how informal status information, over and above formal status information, affects the emotional reactions and behaviors that an observer expects a person to show as well as the observer's own reactions. In two studies, we found that when status was signaled by informal cues, specifically dominance cues, dominant individuals, compared to submissive individuals, were expected to express lower levels of shame, guilt, and sadness. In addition, participants were less likely to recommend firing individuals described as submissive. A path model suggests that to the degree that the protagonist was expected to show emotions that signal that the person understands that they caused a failure and want to do better in the future, they were then expected to take responsibility for the failure and, in Study 2, to apologize. The expectation that these restitution behaviors would be shown then reduced the likelihood that firing would be recommended. These findings are congruent with research showing specifically that the expression of guilt leads to expectations that the person will do better in the future (Frank 1988) as well as forgiveness (e.g., Hareli and Eisikovits 2006).

Overall, the present research suggests that observers are sensitive to dominance information provided by verbal descriptions of interpersonal disposition as well as by facial appearance even when information concerning the formal status of the individual is provided. Specifically, it seems that these former sources of status information are perceived as predictive of the emotional reactions of a protagonist. On their own, facial appearance cues exert a weaker influence than when coupled with matching verbal information. This may suggest that if several cues point towards the same level of dominance, their combined impact on the perceiver is stronger. Notably, however, even the weaker facial appearance cues can substantially affect expectations.

When strong informal status cues were presented (Study 1), formal status cues influenced only expectations regarding the behavioral intentions of the protagonist and the self, but not anticipated emotions. This suggests that direct information regarding a person's personality is perceived as more diagnostic for a person's emotionality since arguably personality is a more proximal cue to emotionality than is status. However, when personality information is more subtle (Study 2) status information is used as a proxy and affects anticipated emotions, just as it does when only formal status information is available (Tiedens et al. 2000).

It is noteworthy that both formal and informal cues independently affected expectations concerning the emotional responding of the target person. Based on the observation that dominance is transmitted via similar cues in human and nonhuman primates, one can assume that

such information mainly impacts on bottom-up processes whereas the socially learned impact of organizational status engages mainly top-down processing. The present research has certain limitations. Specifically, given that dominance information was inserted in the stimulus material, participants may have assumed that this is important information that needs to be taken into account and hence responded to it more than they would have done under "normal" conditions. Yet, such a sensitization would only make people more likely to react to dominance information but cannot bias the direction of the effect. Thus, we believe that the present research contributes to our understanding of how even subtle information concerning another individual's social status affects observers' expectations and reactions toward that individual.

We also assessed the impact of formal and informal status information only in an organizational setting. Arguably, such a setting is particularly relevant with regard to formal status, as most companies have a hierarchy in which relative status is clearly defined. But many other organizations, in the domains of leisure, education or sport, also have clear leadership structures. It may be worthwhile to study the relative impact of formal and informal status cues as a function of the type of organization.

Also, both the verbal description and the facial appearance of the submissive person suggest a higher level of affiliation. Hence it is possible that the specific observed effects of these informal cues are in fact due to a combination of dominance and affiliation cues. This does not detract from the fact that such informal cues affect beliefs and expectations but suggests that future research may want to independently assess dominance and affiliation.

In sum, the present research provides evidence that informal status cues in the form of dominance information affect observer's expectations concerning the emotions and behaviors that a failing individual is likely to experience and this over and above the known effects of explicit information about one's formal status. Further, such expectations impact on the behavioral intentions of the observer because the expected emotional reactions also entrain expectations regarding the person's likely behavioral reactions.

#### References

Adolphs, R. (2002). Recognizing emotion from facial expressions: Psychological and neurological mechanisms. *Behavioral and Cognitive Neuroscience Reviews*, 1, 21–61.

Atkinson, A. (2007). Face processing and empathy. Empathy in mental illness (pp. 360–385). New York, NY, USA: Cambridge University Press.

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, 115, 243–267.



- Bentler, P. M. (1992). On the fit of models to covariances and methodology. *Psychological Bulletin*, 112, 400–404.
- Berger, J., Cohen, B. P., & Zelditch, M. (1972). Status characteristics and social interaction. American Sociological Review, 37, 241–255
- Berger, J., Norman, R. Z., & Zelditch, M., Jr. (1977). Status characteristics and social interaction. New York, NY: Elsevier.
- Berry, D. S. (1991). Accuracy in social perception: Contribution of facial and vocal information. *Journal of Personality and Social Psychology*, 61, 298–307.
- Buck, R. (1984). The communication of emotion. New York: Guilford Press
- Bugental, D. B. (2000). Acquisition of the algorithms of social life: A domain-based approach. *Psychological Bulletin*, 26, 187–209.
- Chance, M. R. A. (1967). Attention structures as the basis of primate rank orders. *Man*, 2, 503–518.
- Collins, M., & Zebrowitz, L. A. (1995). The contributions of appearance to occupational outcomes in civilian and military settings. *Journal of Applied Social Psychology*, 25, 129–163.
- Fischer, A. (1993). Sex differences in emotionality: Fact or stereotype? *Feminism and Psychology, 3*, 303–318.
- Frank, R. (1988). Passions within reason: The strategic role of emotions. New York: Norton.
- Gifford, R. (1991). Mapping nonverbal behavior on the interpersonal circle. *Journal of Personality and Social Psychology*, 61, 279–288.
- Gilbert, P. (1992). *Depression: The evolution of powerlessness*. Hove: Lawrence Erlbaum Associates Ltd., and New York: Guilford.
- Gilbert, D., & Hixon, J. G. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology*, 60, 509–517.
- Halberstadt, A. G., & Saitta, M. B. (1987). Gender, nonverbal behavior, and perceived dominance: A test of the theory. *Journal* of Personality and Social Psychology, 53, 257–272.
- Hareli, S., & Eisikovits, Z. (2006). The role of communicating social emotions accompanying apologies in forgiveness. *Motivation* and Emotion, 30, 189–197.
- Hareli, S., & Hess, U. (2010). What emotional reactions can tell us about the nature of others: An appraisal perspective on person perception. *Cognition and Emotion*, 24, 128–140.
- Hareli, S., Shomrat, N., & Biger, N. (2005). The role of emotions in employees' explanations for failure in the workplace. *Journal of Managerial Psychology*, 20, 663–680.
- Harper, D. G. C. (1991). Communication. In J. R. Krebs & N. B. Davies (Eds.), *Behavioral ecology* (pp. 374–397). Oxford: Blackwell.
- Heise, D. R. (1979). *Understanding events: Affect and the construction of social action*. New York: Cambridge University Press.
- Hess, U., Adams, R. B., & Kleck, R. E. (2004). Facial appearance, gender, and emotion expression. *Emotion*, 4, 378–388.
- Hess, U., Adams, R., & Kleck, R. E. (2005). Who may frown and who should smile? Dominance, affiliation, and the display of happiness and anger. *Cognition and Emotion*, 19, 515–536.
- Hess, U., Adams, R. B., Jr., & Kleck, R. E. (2007). When two do the same it might not mean the same: The perception of emotional expressions shown by men and women. In U. Hess & P. Philippot (Eds.), *Group dynamics and emotional expression* (pp. 33–50). New York: Cambridge University Press.
- Hess, U., Adams, R. B., Jr., & Kleck, R. E. (2009). The face is not an empty canvas: How facial expressions interact with facial appearance. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364, 3497–3504.
- Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology*, 85, 551–575.
- Hofstede, G. (1991). Cultures and organizations: Software of the mind. New York: McGraw-Hill.

- Keating, C. F., & Doyle, J. (2002). The faces of desirable mates and dates contain mixed social status cues. *Journal of Experimental Social Psychology*, 38, 414–424.
- Keating, C. F., Mazur, A., Segall, M. H., Cysneiros, P. G., Divale, W. T., Kilbride, J. E., et al. (1981). Culture and the perception of social dominance from facial expression. *Journal of Personality and Social Psychology*, 40, 615–626.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. Psychological Review, 110, 265–284.
- Kemper, T. D. (1991). Predicting emotions from social relations. Social Psychology Quarterly, 54, 330–342.
- Kemper, T. D., & Collins, R. (1990). Dimensions of microinteraction. *American Journal of Sociology*, 96, 32–68.
- Kirouac, G., & Hess, U. (1999). Group membership and the decoding of nonverbal behavior. In P. Philippot, R. S. Feldman, & E. J. Coats (Eds.), *The social context of nonverbal behavior* (pp. 182–212). Cambridge University Press: Cambridge.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1, 130–149.
- Maynard Smith, J., & Harper, D. G. C. (1988). The evolution of aggression: Can selection generate variability? *Philosophical Transactions of the Royal Society London, Series B*, 319, 557–570.
- Mazur, A. (1985). A biosocial model of status in face-to-face primate groups. *Social Forces*, 64, 377–402.
- Minear, M., & Park, D. C. (2004). A lifespan database of adult facial stimuli. Behavior Research Methods, Instruments, and Computers. 36, 630–633.
- Mueller, U., & Mazur, A. (1996). Facial dominance of West Point cadets as a predictor of later military rank. *Social Forces*, 74, 823–850
- Parkinson, B., & Manstead, A. S. R. (1993). Making sense of emotion in stories and social life. *Cognition and Emotion*, 7, 295–323.
- Ridgeway, C. L. (1987). Nonverbal behavior, dominance, and the basis of status in task groups. *American Sociological Review*, 52, 683–694.
- Ridgeway, C. L. (2006). Expectation states theory and emotion. In J. E. Stets & J. H. Turner (Eds.), *Handbook of sociology of emotions* (pp. 347–367). New York: Springer Press.
- Robinson, M. D., & Clore, G. L. (2002). Beliefs, situations, and their interactions: Towards a model of emotion reporting. *Psychological Bulletin*, 128, 934–960.
- Schlenker, B. R., & Weigold, M. F. (1992). Interpersonal processes involving impression regulation and management. *Annual Review of Psychology*, 43, 133–168.
- Schmid Mast, M., & Hall, J. A. (2004). Who is the boss and who is not? Accuracy of judging status. *Journal of Nonverbal Behavior*, 28, 145–165.
- Senior, C., Phillips, M. L., Barnes, J., & David, A. S. (1999). An investigation into the perception of dominance from schematic faces: A study using the World-Wide Web. *Behavior Research Methods, Instruments*, & Computers, 31, 341–346.
- Smith-Lovin, L., & Heise, D. R. (1988). Analyzing social interaction: Advances in affect control theory. New York: Gordon and Breach.
- Tiedens, L. Z. (2001). Anger and advancement versus sadness and subjugation: The effect of negative emotion expressions on social status conferral. *Journal of Personality and Social Psychology*, 80, 86–94.
- Tiedens, L. Z., Ellsworth, P. C., & Mesquita, B. (2000). Stereotypes of sentiments and status: Emotional expectations for high and low status group members. *Personality and Social Psychology Bulletin*, 26, 560–575.
- Vrij, A., & Semin, G. R. (1996). Lie experts' beliefs about nonverbal indicators of deception. *Journal of Nonverbal Behavior*, 20, 65–80.



- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *95*, 548–573.
- Weiner, B. (1995). Judgments of responsibility: A foundation for a theory of social conduct. New York: Guilford.
- Wiggins, J. S. (1979). A psychological taxonomy of trait descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology*, 37, 395–412.
- Wilson, P. R. (1968). Perceptual distortion of height as a function of ascribed academic status. *Journal of Social Psychology*, 74, 97–102.

