

CHAPTER 10

The Role of Facial Expression in Person Perception

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The role of emotional displays in how we perceive and react to others has long been a question posed by students of human behavior. Aristotle, for example, noted that “those who do not get angry at things at which it is right to be angry are considered foolish, and so are those who do not get angry in the right manner, at the right time, and with the right people. It is thought that they do not feel or resent an injury, and that if a man is never angry he will not stand up for himself; and it is considered servile to put up with an insult to oneself or suffer one’s friends to be insulted” (Nicomachean Ethics IV.5).

This quote suggests that not only can we accurately perceive felt anger when expressed by others but also that as perceivers of that anger we are likely to draw important inferences regarding the expresser’s character. Although the assertion that emotional expressions convey more than just information concerning the emotional state of another has appeared in the writings of many, an empirical examination of this idea has until

recently largely been absent from the person perception literature (for some exceptions see Hess, Blairy, & Kleck, 2000; Knutson, 1996).

If one goes back a little over a hundred years to Darwin’s seminal work on facial expression (1872/1965), one would find that most of the subsequent research on the perception of emotion has focused on the perceiver’s ability to “get” the emotional message. Much effort has been devoted to how such factors as the sex (e.g., Hall, 1990), cultural background (e.g., Matsumoto et. al., 2002), psychiatric status (e.g., Mendlewicz, Linkowski, Bazelmans, & Philippot, 2005), or the perceiver’s own arousal (e.g., Niedenthal, Halberstadt, Margolin, & Innes-Ker, 2000) might impact this accuracy. In this process, relatively little attention has been devoted to the issue of the further person perception inferences that a perceiver might draw from the knowledge that a given expresser has displayed a given emotion within a particular social context. Put another way, the perceiver has largely been treated as an emotion expression decoding machine who perceives a given expression independent of the specific expresser or the context in which it is shown. In effect, the investigation into the decoding process generally stops once an emotion label is affixed to the expression. What the perceiver brings to the task by way of social stereotypes or expectations, and what inferences that perceiver makes beyond simply labeling the emotion, has received relatively little attention.

The accuracy perspective is congruent with the neo-Darwinian view that has largely dominated the field since Ekman’s (1972) seminal book on facial expression. It essentially sees emotion expressions as strong innate signals generated in response to stimuli that act as unconditioned elicitors (Öhman, 1999). In this view, facial displays result from automatic processes that leave little room for variation. Given the motive to demonstrate the universality of emotional communication via specific facial behavior, individual differences on either the encoding or decoding side have been treated as error variance rather than as variables that might importantly modulate what is perceived in a given expression. This is not to say that the neo-Darwinian perspective has gone unchallenged, but much of this challenge has focused on attempts to undermine the universality assertion rather than on identifying the specific contextual and individual differences that play a role in the encoding and decoding processes (e.g., Russell, 1994).

Yet, it should also be noted that for much of the 20th century Darwin’s thesis of universality was rejected out of hand by anthropologists and psychologists committed to a learning approach or to an emphasis on the importance of cultural context in shaping what is displayed on the face (e.g., Birdwhistell, 1970; Kleinberg, 1938). When Ekman and his colleagues (Ekman, Sorenson, & Friesen, 1969) and Izard (1971) in-

independently offered evidence of similar cross-cultural interpretations of prototypical facial displays of specific emotions, those favoring a universality argument and those favoring a position of cultural relativism got into a lively debate. As Niedenthal, Krauth-Gruber, and Ric (2006) note in their recent book, most contemporary psychologists now favor an "interactionist perspective" in which both innate and cultural factors are seen to play some role. A meta-analysis of emotion judgment studies by Elfenbein and Ambady (2002) confirms the reasonableness of such a stance.

As noted earlier, it is our view that the debate concerning decoding accuracy and its implications for a universalist or culturally relative position is partially responsible for the lack of an analysis regarding how affective cues provided by the face may interact with or modulate the nature of the trait inferences and first impressions gained on the basis of facial appearance and emotional displays. This neglect is particularly surprising in that the very channel that transmits the emotion signal, the face, also transmits information about the social context, the social characteristics of the expresser, as well as his or her behavioral intentions. If such information is literally embodied in the expressive display, separating out the information carried by the expression itself from that information carried by all of those cues that co-occur with the expression is admittedly difficult. At the very least one would expect there to be important and complex interactions between information provided by the facial expression and that provided by these co-occurring cues (e.g., whether the expresser is male or female, young or old, an in-group or out-group member, etc.). As we will argue later in this chapter, the Brunswick lens model may be particularly helpful in the task of sorting out some of this complexity.

A set of recent studies by Adams and his colleagues (Adams & Kleck, 2003, 2005; Adams, Gordon, Baird, Ambady, & Kleck, 2003; Hess, Adams, & Kleck, 2007; see also Ganel, Goshen-Gottstein, & Goodale, 2005; Graham & LaBar, 2007; Sander, Granjean, Kaiser, Wehrle, & Scherer, 2007) serves to illustrate just how focused most of the research on facial expression has been on the facial display, independent of other cues that can co-occur within the face. Their specific interest was in the role gaze direction might play in the inferences perceivers draw from given expressions of emotion. Gaze direction is something not usually thought to be part of the emotional expression itself (e.g., Ellsworth & Ross, 1975; Fehr & Exline, 1987). Indeed, the faces employed in nearly all expression decoding studies have used stimuli where the expresser's gaze is directed at the perceiver. The general argument made concerning the effect of direct gaze is that it plays an important role in the perception of the intensity of the emotion but not in the

perception of its quality (e.g., Argyle & Cook, 1976; Kleinke, 1986; Webbink, 1986). An obvious reason this might be the case is that direct gaze signals that the perceiver is the object of whatever emotion is being displayed by the expresser and thus captivates attentional resources (Cary, 1978; Ellsworth & Ross, 1975; Grumet, 1999; Macrae, Hood, Milne, Rowe, & Mason, 2002). The several studies published by Adams and his colleagues support the *shared signal hypothesis*, demonstrating that the gaze direction of the expresser can affect the efficiency with which a given display is processed as well as determine the quality of the emotion that will be perceived in a blended or ambiguous expression. They argue that when different facial cues such as the specific expression and the direction of gaze share the same signal value (e.g., approach or avoidance) the shared signal facilitates overall processing efficiency. Others have reported evidence supporting perceptual integration in the processing of these cues. These studies also demonstrate that when gaze and emotion are not of relatively equal discriminability, direct gaze effects do occur (e.g., Graham & LaBar, 2007). Thus, gaze direction appears not only to influence emotion perception but also to do so through the competing processes of direct perceptual integration and indirect attention capture.

If the social and nonsocial information inherent in the face that displays an emotion are important, so also are factors inherent to the perceiver. For example, the stereotypes he or she holds with regard to members of different groups may include presumptions concerning their emotional lives. Two examples of these presumptions are the finding that women are generally thought to be more emotionally expressive of all emotions except anger (Fischer, 1993) and that in most countries individuals from the northern part of a given country are thought to be less emotional than those from the southern part of the country (Pennebaker, Rimé, & Blankenship, 1996). Given the pervasive influence of stereotype knowledge on judgment processes, it is likely that both emotional and trait inferences are influenced by such presumptions. Consistent with this argument, racial stereotypes have recently been demonstrated by Hugenberg and Bodenhausen (2003) to affect emotion processing. Specifically, they found that individuals high in implicit prejudice toward African Americans demonstrated greater readiness to perceive anger in Black faces than in White faces.

In what follows we will review evidence showing that emotion perception processes are impacted by the apparent social group membership of the expresser. We will further show that emotion expressions impact first impressions of the behavioral intentions and personality characteristics of the expresser. The recent call by Bodenhausen and Macrae (2006) to put "a face on social perception" emphasizes the fact that "the face has far more to offer than affective signals alone." Zebrowitz and

her colleagues have, of course, been making this argument for many years in regard to neutral facial appearance (see Chapter 8 in this volume). Here we will focus on the complex interactions that exist between facial expressions and other important socially relevant information carried by the face. Further, some attention will be given to the emotional stereotypes the perceiver brings to the situation and how these stereotypes affect what is perceived in any given affective signal. Perceiving others is truly an interactive process to which both the encoder and decoder contribute.

The present work focuses on the human face and the information that both facial morphology and facial expression can provide. However, the voice also transmits information regarding both personality (e.g., Scherer, 1978) and emotion (e.g., Scherer, 2003), as does posture (e.g., Henley, 1977, 1995; Pitterman & Nowicki, 2004). It is likely, therefore, that similar processes to those described below apply to these sources of emotional information as well.

EMOTION PERCEPTION IN A SOCIAL CONTEXT

There are two principal strategies for decoding emotion displays (Kirouac & Hess, 1999). First, in the absence of any contextual information, the sender's expressions can be used to draw inferences regarding his or her presumed emotional state, using a pattern-matching approach (Buck, 1984). This is the strategy tested in most studies of emotion-decoding ability, where participants typically rate the emotions from faces of unknown others. The second strategy depends upon the knowledge that the perceiver possesses regarding both the sender and the social situation in which the interaction is taking place. This information permits the perceiver to take the perspective of the encoder and helps him or her to correctly infer the emotional state that the sender is most likely experiencing.

It is important to note that in everyday life full-blown facial expressions are by far the exception. Rather, what are observed in natural settings are most often weak and transient facial movements. Furthermore, facial expressions are not necessarily expressed in the canonic form established by emotion researchers (e.g., Ekman et al., 1969). Indeed, facial expressions can be expressed partially, or they can be the result of blends that convey different emotions at the same time (Ekman & O'Sullivan, 1991). Thus, in real life, facial expressions rarely occur in the form of clear, prototypical signals, even though such stimuli are the ones most often used in emotion expression research. More commonly, the facial expressions we encounter are weak, elusive, or blended, result-

ing in a signal that often is ambiguous. This ambiguity itself suggests that significant interpretive work is needed. Particularly in the context of first impressions, this interpretive work will of necessity be partially based on stereotype knowledge about social groups rather than detailed personal knowledge about an individual's emotionality.

The social group context can impact all the sources of information on which decoding strategies depend. Specifically, certain factors that covary with group membership, such as facial appearance, may lead perceivers to interpret the same facial expressive movements quite differently, depending upon the specific nature of the face on which they are displayed. Thus, facial morphological differences between men and women or members of different racial groups may enhance or obscure some expressive elements and hence bias pattern matching. The facial morphology of women and younger individuals, for example, appears to enhance the cues associated with happiness, whereas those of men and older individuals enhance the cues associated with anger (Hess et al., 2007). The facial morphology differences across racial groups may have a similar impact on the clarity of cues associated with specific emotions (Beaupré & Hess, 2005). Further, independent of the cues actually present on the face of another, the perceptions of these are obviously going to be filtered through the goals, concerns, motivations, and stereotypes that individuals bring to an interaction. These factors may attract attention away from or toward the cues specifically linked to particular emotions.

THE ACTIVE PERCEIVER

This view of the decoding process is well described by an adaptation of Brunswick's lens model by Scherer (1978, 2003). According to this model (see Figure 10.1) an emotional state may be externalized via distal indicator cues. This process is influenced by the situational context, the relationship between the encoder and decoder, and the cultural context. Thus, a specific emotional state may be expressed differently or not at all, depending on context variables. Individuals may, for example, express their anger more freely in the presence of understanding friends than in the presence of the boss who caused the anger. The decoder in turn has access not to the distal indicator cues but rather to proximal percepts. This implies that the decoder may not perceive all of the cues that were signaled, perhaps because they were too weak or because the decoder did not pay sufficient attention to note all relevant cues.

Conversely, the decoder may use percepts that are not in fact actual cues regarding the emotional state of the encoder. Malatesta and colleagues (Malatesta, Fiore, & Messina, 1987; Malatesta, Izard, Culver, &

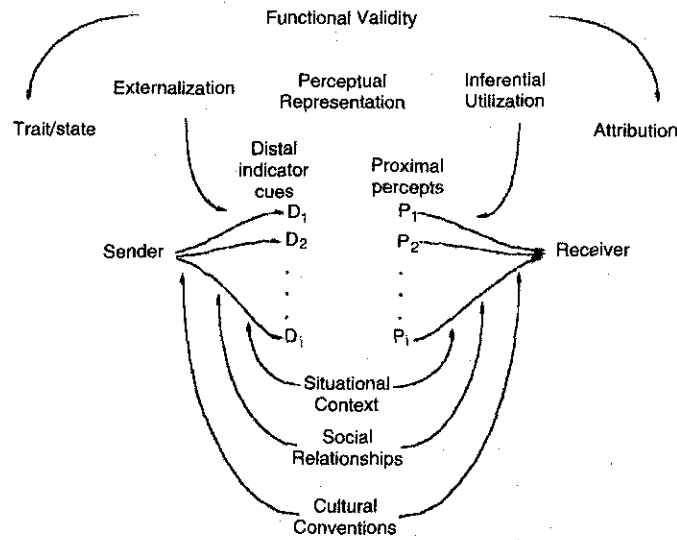


FIGURE 10.1. Modified Brunswik lens model. Adapted with permission from Scherer (1978). Copyright 1978 by Wiley.

Nicolich, 1987), for example, found some evidence that older people are often perceived as sad based on facial morphological cues that are simply due to old age, such as the sagging corners of the eyes and mouth. In this case the perceiver mistakes stable morphological features for expressive cues. Importantly, the interpretation of the proximal percepts is subject to the same social context influences as is the externalization of the distal indicator cues.

INFERRING BEHAVIORAL INTENTIONS AND DISPOSITIONS FROM EMOTION EXPRESSIONS

What happens once an individual has “decoded” an emotion expression? From the perspective of research on decoding ability, the task is done as soon as an emotional label has been affixed to the expression. Yet, as noted earlier, emotion expressions are not just a signal of emotional states. Rather, in many cases, they provide social information to the perceiver. In particular, they provide information regarding the sender’s understanding of the situation as well as the sender’s behavioral intentions (Hess, Banse, & Kappas, 1995).

In this vein, Frijda, Kuipers, and ter Shure (1989) define emotions as states of action readiness—that is, “the individual’s readiness or unreadiness to engage in interaction with the environment” (p. 213). These

states have been operationalized with statements such as “I wanted to oppose, to assault; hurt or insult” and “I did not want to oppose, I wanted to yield to someone else’s wishes” (p. 213). Thus, states of action readiness describe the behavioral intentions of individuals who experience an emotional state. A person who shows anger also signals an intention to (aggressively) approach the offending other, whereas a person who in the same situation shows sadness, signals impuissance and withdrawal. Consistent with this, research has found that participants detect the apparent approach of angry faces faster than the apparent withdrawal of the same faces (Adams, Ambady, Macrae, & Kleck, 2006).

This view of emotions implies that observers should be able to reverse-engineer an expresser’s perception of an emotion-eliciting event. For example, the person showing anger should be perceived as being more dominant because the person sees him- or herself as able to address the situation at hand and attack or resist the opposition. In contrast, the person showing sadness should be perceived as submitting to the situation because they do not see how it is possible to oppose. In short, emotional expressions tell us something about the appraisals being made by the encoder. In turn, these appraisals provide information on the person’s dispositions and enduring traits and modulate the first impressions that are formed of him or her. An individual who reacts with anger to failure also signals their belief that they have the power and competence to redress the situation (Lewis, 2000), whereas the person who reacts with sadness tells us that they are at their limit for coping with the failure. This information in turn leads to attributions of personality and ability. Hence, in the context of first impressions, just observing one emotional episode can—as suggested by Aristotle—lead to rather global inferences about the expresser. Thus, knowing how a person reacts emotionally to a specific situation may tell us a lot about the person in general, particularly when encountering him or her for the first time.

Yet, one might wonder whether the same emotional expressions shown by different individuals are perceived in the same way. As noted above, the social context and in particular the social group membership of the expresser impact our perception of emotion expressions. In what follows we will focus on one example of this phenomenon, the perception of anger and happiness in men and women.

SAUCE FOR THE GOOSE IS NOT SAUCE FOR THE GANDER: THE PERCEPTION OF EMOTIONS AS A FUNCTION OF THE GENDER OF THE EXPRESSER

One of the best-documented gender stereotypes regards male and female emotionality. Thus, women report smiling more and are considered by

others to smile more than are men. In turn, men's displays of anger have been reported to be both more pervasive and are generally perceived as more acceptable than are women's displays of this emotion (Brody & Hall, 2000; Fischer, 1993; Hall, Carney, & Murphy, 2002). These observed differences in emotional expressivity between men and women are accompanied by strong stereotypical expectations that individuals hold regarding sex differences in emotionality. These expectations are socialized early and can have dramatic consequences for the perception of emotion in others. For example, not only adults but even children as young as 5 years old tend to consider a crying baby as "mad" when the baby is assumed to be a boy but not when the same baby is assumed to be a girl (Condry & Condry, 1976; Haugh, Hoffman, & Cowan, 1980).

These generalized expectations regarding men and women's emotion displays are not without consequences for human emotion communication. Specifically, they seem to influence how men and women's facial expressions are perceived. For example, Gaelick, Bodenhausen, and Wyer (1985) found that husbands tend to interpret the simple absence of smiling during a marital dispute as a sign of hostility on the part of their wives, whereas wives tend to interpret the simple absence of hostility displays by their husbands in such disputes as a sign of love. Further, Hess, Blairy, and Kleck (1997) found that facial expressions of happiness and sadness are better recognized and rated as more intense when shown by a woman, whereas anger expressions are better recognized and rated as more intense when shown by a man. Given that the expressions used in this study were taken from a standardized set with careful control of the expressions, it is unlikely that the actual expressions were different across the sexes. However, there is an element in the stimuli used by Hess et al. that differed between men and women—the degree of social dominance communicated by the faces. Male faces are generally rated as showing more dominance than are female faces, and this difference tends to be quite large. In the study by Hess, Blairy, and Kleck (2000), men who displayed anger or happiness were rated about three times more dominant than women showing the same expressions.

These considerations offer an alternative—albeit related—explanation for the findings by Hess et al. (1997). Specifically, the stereotype bias in emotion perception they reported may not be directly related to the sex of the sender *per se* but could be mediated by the perceived dominance of the sender. The perception of dominance is strongly confounded with the sex of a stimulus person, in part 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.

Hess et al. (2007) proposed the notion that some aspects of facial

expressive behavior and morphological cues to dominance and affiliation are equivalent in both their appearance and their effects on emotional attributions. This notion is partially based on Darwin's (1872/1965) suggestion of an equivalence between certain emotional behaviors in animals and more enduring morphological appearance characteristics. Importantly in the present context, he proposed that piloerection and the utterance of harsh sounds by "angry" animals are "voluntarily" enacted to make the animal appear larger and hence a more threatening adversary (see, e.g., pp. 95 and 104). Recent work using connectionist modeling provides evidence for a perceptual overlap between the physical cues and the meanings derived from them along the dominance and affiliation continua (Zebrowitz, Kikuchi, & Fellous, 2007; see also Calder & Young, 2005, for a review of related work using principal components analyses).

The notion of a functional equivalence between morphology and expression also implies that there are important interactions between facial expressions and facial morphology in the decoding of expressions of emotion. Specifically, persons with dominant-appearing faces may not only be perceived as particularly capable of anger but also when anger is expressed on such a face it should be seen as quite intense. Likewise, a more affiliative-appearing face displaying happiness may be seen as happier than would a less affiliative face displaying the identical facial movement.

We initially tested the functional equivalence hypothesis by examining differences in the attribution of emotions to men and women (Hess, Adams, & Kleck, 2004, 2005).¹ In general, individuals attribute higher levels of emotional expressivity to women than to men with the exception of anger, which is seen as more frequent in men (see, e.g., Fischer, 1993). This pattern is also found when participants are presented with vignettes describing a specific emotion-eliciting event (Hess, Sénécal, et al., 2000). These stereotypical expectations regarding men and women's emotionality seem to be strongly normative (Hess et al., 2005).

In a correlational design, Hess et al. (2005) showed that the differences in perceived dominance and affiliation, as a function of facial appearance differences between men and women, mediate the perception of emotionality. To test this expectation experimentally, men's and women's faces were equated with regard to the level of dominance and affiliation they convey. Specifically, the interior of the face contains markers of dominance and affiliation (i.e., square jaw, heavy eyebrows), whereas hairstyle is a very potent marker of sex but not of social motives. Thus, by combining androgynous interior faces with male and female hairstyles, apparent men and women with identical facial appearance can be created. For both neutral faces and posed emotion displays

(Adams, Hess, & Kleck, 2007, Study 4; Hess et al., 2004, Study 2) parallel findings obtained such that for ratings of anger and happiness a pattern opposite to the gender stereotypical pattern was found. That is, when equated for facial appearance, apparent women were seen as more likely to show anger and less likely to show happiness than were apparent men. Similarly, expressions of anger by apparent women were rated as more intense and their expressions of happiness as less intense than when the identical expressions appeared on the faces of apparent men.

This reversal demands an explanation, as it suggests that intrinsically, facial appearance being equal, women are perceived as more anger-prone and less likely to be happy than are men. We propose that this reversal is due to the equivalence between morphological and expressive cues of dominance and affiliation, which leads to an interaction between these two sets of cues. That is, anger expressions emphasize some of the features that make a face appear dominant (e.g., the mouth region often appears especially square, and frowning reduces the distance between eyebrows and eyes). Conversely, smiling enhances the appearance of roundness of the face that is associated with perceived affiliation motivation and babyishness. Due to the manner in which the present stimuli were constructed, the expressive cues for anger and happiness were not "compensated for" by gender-typical appearance (the faces were chosen specifically because they were androgynous and were credible as either male or female). In some ways one could say that by depriving the interior of the face of clear gender cues we actually amplified the expressive cues to anger in women and happiness in men, which are normally "obscured" or reduced by the gender-typical facial appearance.

To reiterate, we are arguing that facial morphology and certain emotional expressions are parallel messaging systems with regard to the emotion inferences they generate. However, to the degree that both morphology and expression have to use the same "canvas" to communicate, there is a possibility of perceptual interference. Specifically, some of the same facial features that signal dominance and affiliation are used in expressive behavior and hence change appearance. In this process the facial appearance cues can either enhance or attenuate the perceived intensity of the expression. The implications of these findings for more general person perception processes should be obvious. Hess et al. (2007) also report the results of an experiment designed to assess the relative contributions of gender, the gender role stereotype, and facial appearance on men and women's perceived emotionality. The findings suggest that while both of the latter do influence these perceptions, gender per se does not. This implies that knowledge about gender roles and the perceptual effects of facial morphology combine to make men appear more anger-prone and their expressions more angry, whereas women are seen

as more likely to smile and their smiles to be indicative of greater happiness.

The research by Hess et al. (2004, 2005, 2007) serves to highlight the influence of facial morphology on the perception and interpretation of emotional facial expressions. In a similar vein, Marsh, Adams, and Kleck (2005) found evidence for functional equivalence between mature versus babyfacedness, on the one hand, and the signal value of angry versus fear faces, on the other. Yet, it is clear that not all traits that may be attributed to a person on the basis of facial appearance have a functional equivalence in expressive displays. There is no evidence, for example, that facial expressions lead to such trait attributions as trustworthiness or conscientiousness even though these are also traits of great relevance to a social species.

In sum, emotional facial expressions, via their shared signal value with morphological trait cues, signal behavioral intentions to perceivers. In turn, the morphological cues contained in the face tend to bias the decoding of emotion expressions in a manner consistent with those cues. Thus, men's anger and women's smiles are stronger signals for these specific affects because they are supported by an underlying facial morphology consistent with each of those expressions. Conversely, women's anger and men's smiles are partially veiled by the morphological context in which they are shown.

ANGRY PEOPLE ARE TOUGHER

As mentioned earlier, emotional expressions have signal value not only because of their functional equivalence to morphological cues but also because they inform us about the expresser's appraisals of the social situation. These include the motivational goals and resources that the expresser is perceived to bring to the situation.

Appraisal theories of emotion (see, e.g., Ellsworth & Scherer, 2003) lead to clear predictions regarding the personality inferences that observers will likely draw from facial expressive displays alone. Although appraisal theories vary with regard to both the number of appraisal categories they include and the exact definition of these categories, there is substantial overlap. Thus, a simplified model of the emotion-eliciting process as conceived of by appraisal theories starts with the perception of a change in the environment by the organism (novelty). This change is evaluated by the person according to its likely degree of pleasantness or benefit for him or her. Put another way, the change is responded to in accordance with whether it is either consistent with the motivational state of the individual or obstructs the individual's goals. The individuals also

evaluate their ability to cope with or adjust to the change. Yet a further set of evaluations is made in regard to the correspondence with relevant social and personal norms.

Importantly, appraisals relate to the subjective perception of the stimulus and not its objective characteristics. That is, different people may appraise the same situation differently, and different situations may lead to the same appraisals in different people. To cite an example, if I am walking through the woods and encounter a bear, my perception of the bear's presence would be one of very high goal obstruction, and I would be most uncertain regarding my coping potential in that instance. However, if my neighbor is bear hunting and encounters the same bear, he will evaluate the bear's presence as goal-conducive and his coping potential as high. I would probably experience panic, whereas he is likely to experience elation. It therefore follows that, when someone sees my expression of panic in the above situation, they can deduce my lack of felt competence to deal with the situation even if this is the first time they have seen me in such a context.

Following this logic, we can predict that expressions of anger and happiness (which both presume power to be high) should be perceived as reflecting social dominance. It should be noted that this prediction for happiness, which is signaled by smiling behavior, differs from views that focus upon the appeasement function of smiles (e.g., Henley, 1977, 1995; LaFrance & Henley, 1994). In contrast, expressions of sadness and fear presume low power and should be perceived as signaling low dominance. With regard to disgust, appraisal theories do not specify a level of power; yet, as part of the contempt—anger—disgust triad (Rozin, Lowery, Imada, & Haidt, 1999), it should be perceived similarly to anger. Based on an appraisal of controllability and power, anger should further signal competence, whereas sadness or fear should signal incompetence with regard to the emotion-eliciting object at hand. Also, because anger is elicited by goal obstruction, it should signal the presence of some sort of undesirable event.

Appraisal theories of emotion, however, do not allow us directly to predict attributions of affiliation. Yet, smiling is generally a sign of affiliation (see, e.g., Hess, Beaupré, & Cheung, 2002). Fear has also been argued to elicit affiliative reactions in conspecifics (Bauer & Gariépy, 2001; Marsh et al., 2005). Anger directed at the perceiver, in contrast, signals danger and should be perceived as low in affiliative intent (e.g., Aronoff, Woike, & Hyman, 1992). Also, sadness, which signals a greater tendency to withdraw (see, e.g., Argyle & Cook, 1976; Fehr & Exline, 1987), should be perceived as less affiliative.

In recent years, a limited number of studies have largely supported

these predictions. Knutson (1996), for example, showed still photos with facial expressions of anger, fear, disgust, sadness, and happiness to participants and asked them to provide their assessment of the targets' dominance and affiliation. As predicted above, angry and disgust expressions lead to high attributions of dominance and low attributions of affiliation. Individuals who showed happiness expressions were perceived as high in both dominance and affiliation. In contrast, individuals who showed sadness or fear were rated as low in dominance. However, they were not rated as high in affiliative intent. Hess, Blairy, and Kleck (2000) essentially replicated these effects but were able to show that these attributions were moderated by the gender and ethnicity of the expresser and varied with the intensity of the expression. Thus, weak smiles were already perceived as signaling affiliation, whereas only strong frowns signaled dominance.

The issue of whether emotion expressions can provide information concerning an individual's competence was addressed in studies by Lewis (2000) and Tiedens (2001). Tiedens conducted a series of studies showing that more status is conferred on an individual who shows anger rather than sadness and that this effect is mediated by the perceived competence of the expresser. Lewis (2000) also found that a manager who showed anger in response to bad news was perceived as more competent than a manager who showed sadness, but only when the manager was a man. Women were perceived as equally low in competence regardless of which emotion they showed, but as high in competence when they reacted with a neutral expression. It is possible that the generally negative view of emotional women in the workplace mediates this specific effect, showing again the impact of the social context on the perception and interpretation of emotions and on person attributions.

Finally, Hareli et al. (2007) found that individuals who displayed anger when presenting a complaint were judged to be more subjectively credible—that is, were judged to feel harmed—but only when the complaint was of an ambiguous nature. In this case, given the ambiguity of the objective situation, the display of anger emphasized the goal obstruction perceived by the complainant and thereby rendered the complainant more credible.

In sum, the above research shows that facial expressions of emotion express more than just emotion. Rather, they are informative about an individual's behavioral intentions and of the goals and resources that an individual is perceived to bring to the situation. These perceptions in turn allow us to extrapolate from the specific context to the trait and dispositional nature of the person. Such extrapolations may play a particularly important role in the formation of first impressions.

BE CAREFUL WHEN SHARING YOUR ANNOYANCE: THE INFLUENCE OF TALKING ABOUT AN ANGER EVENT ON LIKABILITY

In the preceding section we have demonstrated that when people are shown pictures, short videos, or vignettes of angry people they rate these individuals as particularly high in dominance and toughness but also to some degree as unlikable. Yet, all of these are very "thin behavioral slices" (Ambady, Bernieri, & Richeson, 2000), in which only very limited information is transmitted. What happens if people interact with a person for a longer period and have a variety of occasions to see that person behave? In this case will anger still drive attributions of personality characteristics? We investigated this question as part of a larger study. In this study 144 participants were paired in 72 male-female dyads. Psychophysiological measures were taken, and participants saw each other during electrode preparation. They then played a game together for about 10 minutes during which they habituated to the electrodes. Following this, a status manipulation was conducted. Participants were then randomly assigned to one of two conditions: either they had to tell their interaction partner about a happiness-eliciting event in their life or about an anger-eliciting event. At the end of the experiment participants were separated and asked, among other questions, to give their impression of their interaction partner, using a series of adjectives. The adjective pairs (sociable vs. not sociable, friendly vs. unfriendly, likable vs. not likable, interested vs. uninterested, tender vs. hard, and good vs. bad) were combined into one likability scale ($\alpha = .86$). A marginally significant emotion effect was found, $F(1, 130) = 2.75, p = .099$ as well as a significant Emotion \times Status interaction, $F(2, 130) = 5.55, p = .005$, which was qualified by an Emotion \times Status \times Sex interaction, $F(2, 130) = 7.58, p = .001$. Overall, as expected, individuals who were randomly assigned to talk about an anger-eliciting event they had experienced were perceived as less likable than were individuals who were assigned to talk about something that made them happy. There were two exceptions though. First, women rated men of equal status as more likable when they related an anger story than when they related a happiness story. Second, men rated higher-status women as least likable regardless of the emotional tone of their story.

These data highlight the two central issues we have discussed in this chapter. First, they show that emotion expressions can have an important impact on first impressions. What is noteworthy in this regard is that participants were in one another's presence for more than 1.5 hours by the time they made their judgments. Of this time, less than

10 minutes were devoted to the actual telling of the story. In addition, they saw their interaction partner interact with the experimenters during set-up, they interacted themselves with the partner during the initial game playing session, and the partner also listened to their story. Thus, they had a variety of sources of information to draw from when making their judgments. In addition, participants were aware that the partner had not chosen the topic but that the topic had been assigned by the experimenter. Nonetheless, the emotional tone of the story impacted on their impressions of the interaction partner's likability and traits.

Second, the data also show that emotion expressions are not interpreted in a social vacuum. The social context, in this case the gender and status of the interaction partner, moderated the judgments. It is noteworthy that for women with superior status the emotional tone of the story did not make a difference: they were rated as less likable. This parallels the findings by Hess, Adams, and Kleck (2005), who found that for women who are described as high in dominance the expression of anger is perceived as normatively appropriate, yet at the same time they are rated as less likable than are men expressing the same emotion. Fischer (2002) has called this effect the "bitch" factor.

CONCLUSION

As Aristotle already knew, what we express emotionally and the circumstances in which we express these affects reveals a great deal to others about what we are like as persons. Hence, when we see someone for the first time, his or her emotional reactions to the situation or elements of it have considerable informative value regarding the nature of the person. Emotions are not expressed in a social vacuum. In fact, the very medium that transmits emotional information, the face, also transmits information about important social characteristics of an individual. This information, especially when we first meet someone and do not have individuating information at hand, will moderate not only our perception of the emotions expressed but also our perceptions of the individual expressing them. In our view, research on emotion perception has greatly underestimated the complexity of these processes and the important social information that can be derived from where and when and by whom these expressions are displayed. In addition, the perceiver is not a passive processor of these expressions but filters the available cues through, among other things, the lenses of social stereotypes and the nature of their social relationship with the expresser.

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NOTE

1. Note that the *functional equivalence hypothesis* differs from the previously mentioned *shared signal hypothesis* in that the latter refers only to shared meaning among facial cues whereas the former refers to shared meaning derived via the resemblance of one cue to another, a notion building on Darwin's observation that expression can mimic stable appearance in the service of eliciting similar responses.

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