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3

Anger Is a Positive Emotion

URSULA HESS

In many ways anger is the prototypical negative emotion. A look into Webster's *Thesaurus* provides a list of related words, which includes *animosity, antagonism, embitterment, enmity, hostility, malevolence,* and *virulence,* all of which refer to strife and destruction. This is also the sense in which Seneca in *De Ira* (*On Anger*) refers to anger: "Certain wise men, therefore, have claimed that anger is temporary madness. For it is equally devoid of self-control, forgetful of decency, unmindful of ties, persistent and diligent in whatever it begins, closed to reason and counsel, excited by trifling causes, unfit to discern the right and true—the very counterpart of a ruin that is shattered in pieces where it overwhelms" (On Anger, n.d., Book 1). And it is with this view in mind that anger is often equated with blind aggression and destruction. In this sense, Berkowitz and Harmon-Jones (2004) define anger as "a syndrome of relatively specific feelings, cognitions, and physiological reactions linked associatively with an urge to injure some target" (p. 108).

However, there is another side to anger as well. A side from which anger can be considered a positive emotion, at least from the perspective of the emoter. The first to remark on this was Aristotle: "since 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*, n.d., IV.5).

From this perspective anger is a visible sign of strength and a signal that needed action to thwart insult to oneself or close others will be taken.

Obviously this does not imply that Seneca and those who focus on anger as a destructive force have it wrong. Anger can indeed and frequently does wreak great interpersonal havoc and destruction. Yet it is also important in this context to distinguish anger from hostility and aggression, with which it is frequently confused in common parlance. Hostility is a personality trait characterized by negative beliefs about and attitudes toward others, including cynicism and mistrust (cf. Miller, Smith, Turner, Guijarro, & Hallet, 1996). Aggression, in turn, refers to behavior that is intended to cause harm or pain and is often elicited by fear or dominance struggles (e.g., Berkowitz, 1993). And both hostility and aggression contribute to the negative reputation of anger.

This chapter focuses on the important positive side to anger. In what follows, I discuss the two aspects mentioned by Aristotle: anger as a sign of strength and anger as a force that leads to needed action.

In the first part of this chapter I discuss the role of anger as an approach emotion that leads to motivated action and, in the second, the role of anger as a sign of strength. In a third section I discuss the influence of individual differences in regard to these perceptions.

ANGER IS AN APPROACH EMOTION

The notion that anger leads to motivated action is inherent in appraisal theories of emotion (e.g., Frijda, 1986; Scherer, 1987) and finds support in research on anterior cortical asymmetries related to approach and avoidance (Carver & Harmon-Jones, 2009).

According to appraisal theories of emotion (e.g., Frijda, 1986; Scherer, 1987), emotions are elicited and differentiated through a series of appraisals of (internal or external) stimulus events based on the perceived nature of the event. A change in the (internal or external) environment is evaluated according to whether the event is pleasant or unpleasant (pleasantness), as well as whether the change is congruent with the motivational state of the individual or obstructs the individual's goals (goal obstruction). Individuals further evaluate their ability to cope with or adjust to the change (coping potential). A final set of evaluations regards the correspondence with the relevant social and personal norms, that is, how the event is to be judged in terms of ethical, moral, or social considerations (norm incompatibility). According to appraisal theory, each emotion is described by a unique pattern of appraisals. With regard to anger, there is some agreement that none of these appraisals is necessary or sufficient for a given anger episode (Berkowitz & Harmon-Jones, 2004; Kuppens, Van Mechelen, Smits, & De Boeck, 2003; Parkinson, 1999). However, it is important to note that there is a vast "family" of emotions that all share core appraisals with anger but that differ in details (Frijda, Kuipers, & ter Shure, 1989). Along with anger, Frijda et al. (1989) studied rage, aversion, and annoyance, which also overlap to some degree with disgust and contempt, as all three have implications for moral judgment (Rozin, Lowery, Imada, & Haidt, 1999). Also, as mentioned previously, not all anger episodes can be described as "righteous" anger or as invoked by a clear injustice. Yet even the instances of "unreasonable" anger studied by Parkinson (1999) contain elements of goal obstruction, which seems the common theme for all anger events.

That said, a typical anger event can be characterized by a goal obstruction, blamed on someone else, which is perceived as unjust, combined with strong coping potential, resulting in a desire to act to remove the goal obstruction (Berkowitz & Harmon-Jones, 2004; Frijda et al., 1989). Averill (1997), from a different theoretical perspective, considers power to be an "entrance requirement" for anger. In this manner, anger mobilizes energy and focuses attention on redressing the appraised wrong (Roseman, Wiest, & Swartz, 1994). In this vein, Averill (1982) argues that certain levels of anger can be conceptualized as forms of problem solving, which are generally more beneficial than harmful. In fact, angry individuals tend to feel more energized and active (Frijda et al., 1989; Shaver, Schwartz, Kirson, & O'Connor, 1987) and tend to make more optimistic judgments and choices about themselves. The latter effect is mediated by appraisals of control and of certainty regarding the situation (Lerner, Gonzalez, Small, & Fischhoff, 2003; Lerner & Keltner, 2001). Berkowitz and Harmon-Jones (2004) add that in fact, once aroused, anger may contribute to this feeling of strength and provide the energy for the resulting action. In sum, anger arouses a strong motivation to correct a perceived wrong.

That anger is related to approach is also supported by research on left versus right hemispheric asymmetries related to emotional states. Early research in this domain led to the conclusion that the left frontal cortical region is involved in the experience of positive affect, whereas the right frontal cortical region is involved in the experience of negative affect (see Harmon-Jones, Gable, & Peterson, 2010). Yet more recent research supports the notion that left hemispheric activation is related to approach motivation and right hemispheric activation to withdrawal (Harmon-Jones et al., 2010). Because, by and large, positive emotions are associated with approach and negative emotions with withdrawal, anger proved to be an important element in this argument. Thus Carver and Harmon-Jones (2009) reviewed literature showing that anger is also associated with left frontal activation. This is the case both for trait (Harmon-Jones & Allen,

1998) and state (Harmon-Jones & Sigelman, 2001) anger. In the latter study, only individuals who were insulted showed greater relative left frontal activity, and this activity was correlated with both self-reported anger and a behavioral measure of aggression. In sum, this research supports the notion that anger leads to goal-directed action.

Anger as a Motivational Force for Justice

The role of anger in situations of injustice has also been studied from the perspective of moral emotions, that is, those emotions that are associated with moral transgressions. Haidt (2003) distinguishes between other-condemning emotions (contempt, anger, disgust) and self-conscious emotions. Other-condemning emotions are shown in response to moral violations by others. Their function is to motivate people to change their relationships with moral violators, whereas the function of self-conscious emotions is essentially to enable altruistic behavior and to avoid being the target of other-condemning emotions (e.g., Cosmides & Tooby, 2000; Frank, 1988).

Rozin et al. (1999) link the three other-condemning emotions to specific types of moral violations. Specifically, anger is linked to violations of autonomy, contempt is linked to violations of community, and disgust to violations of divinity. That is, anger is conceived of as an emotion employed to condemn violations linked to notions of justice, freedom, fairness, individualism, individual choice, and liberty.

Evolutionary psychologists posit that moral emotions—in particular, guilt and the other-blaming emotions, including anger—have evolved in the service of the regulation of altruistic behavior and, more specifically, to address the cheater problem in social groups (Trivers, 1971). Cheating is a serious problem because an individual who accepts resources but does not reciprocate adequately harms the group in the long run. Guilt, in turn, motivates individuals either to not cheat at all or to make amends. Conversely, when cheating is detected, it should elicit anger from the cheated. In sum, theories on the role of emotions in moral action converge to see an important role for anger in regulating social relationships in a way that fosters altruistic behavior and the maintenance of positive social relationships.

ANGER AS A SIGN OF STRENGTH

As discussed earlier, Aristotle noted that those who do not show the right anger at the right time are "considered servile to put up with an insult to oneself or suffer one's friends to be insulted." That is, such an individual lacks strength of character and maybe also the competence to show such strength. In this sentence, Aristotle blithely assumed that the expression of

anger in a given situation is indeed indicative of lasting traits of a person. Yet is this the case?

In recent years, the question of whether and how emotions serve as social signals has gained more and more interest (Hareli & Hess, 2012). In fact, when we encounter others, we rapidly and spontaneously make judgments about their personality (see, e.g., Kenny, 2004; Todorov & Uleman, 2002, 2003), and such judgments are often made on the basis of very little information (Ambady, Hallahan, & Rosenthal, 1995; Ambady & Rosenthal, 1992). One relevant source of information about the likely characteristics of others is, as suggested by Aristotle, a person's emotional reactions.

Emotions signal the behavioral intentions, values, and goals, as well as the resources, of a person in a given context. This notion is based on appraisal theory of emotions (Scherer, 1987), and the process of concluding from an expression to a lasting characteristic of the person has been described by Hareli and Hess (2010) as the "reverse engineering of appraisals."

A Model of the Reverse Engineering of Appraisals

As mentioned previously, appraisal theories of emotion posit that emotions are elicited by the spontaneous and intuitive appraisal of (internal or external) relevant stimulus events according to the perceived nature of the event (Arnold, 1960; Scherer, 1987). Importantly, appraisals relate to the subjective perception of the stimulus and not its objective characteristics.

Thus the mere fact that someone reacts with an emotion to an event signals that the event is relevant to that specific person, which in turn provides information about the person's goals and values. For example, the fact that a person reacts with anger to a perceived injustice signals that the person cares about this fact. When such a relevant change in the environment is detected by an organism, it is evaluated according to whether it is pleasant or unpleasant and to what degree it is in line with the motivational state of the individual or obstructs the individual's goals. Thus the second information that is encoded in the resulting emotion is information about preferences (the pleasant–unpleasant evaluation) and motivational goals. The appraisal of coping potential provides information about a person's resources, and the evaluations regarding the correspondence of the event with the relevant social and personal norms provide information about a person's values. All of this information is therefore encoded in the emotional expressions that are generated in this process. In fact, it has been proposed that facial expressions of emotions are a direct readout of appraisals (Scherer, 1992; Smith & Scott, 1997).

Importantly, even though appraisals are typically not the product of reasoning processes, people can and do reconstruct appraisal processes

consciously after the fact (Robinson & Clore, 2002), and they can do so for other people's emotions as well (e.g., Roseman, 1991; Scherer & Grandjean, 2008). As such, emotions can be seen as encapsulated or compacted signals that tell a rather complex story about the emoter (see Figure 3.1).

Thus an angry person experiences a motivation-incongruent (low goal conduciveness) unpleasant state but considers the situation to be potentially under his or her control (high coping potential). An observer who sees a person react with anger to an injustice can hence conclude that the person has values according to which the event in question appears unjust, perceives this injustice as incongruent with his or her own motivational state (which would be to see justice done), and also feels endowed with enough resources to act accordingly. By contrast, the person who does not react with anger to the injustice may be accused—as by Aristotle—of either lacking understanding of the situation or being too weak to defend him- or herself or others against the injustice.

Importantly, the information provided by emotional reactions refers not only to the situation at hand but also to relatively stable characteristics of the person. Specifically, stable traits such as dominance, affiliation, and competence affect the motivational goals, preferences, and resources of a person. Thus a person who is competent may be expected to have more resources for dealing with potential problems than a person who is not. Likewise, an affiliative person can be expected to have affiliative goals. Conversely, seeing a person react with anger in a difficult situation suggests that this person is high in resources in this situation and likely in other situations as well.

In short, emotion displays convey, by their very nature, information regarding not only the senders' emotional states but also their interpersonal intentions (see also Frijda & Mesquita, 1994). However, the attribution of
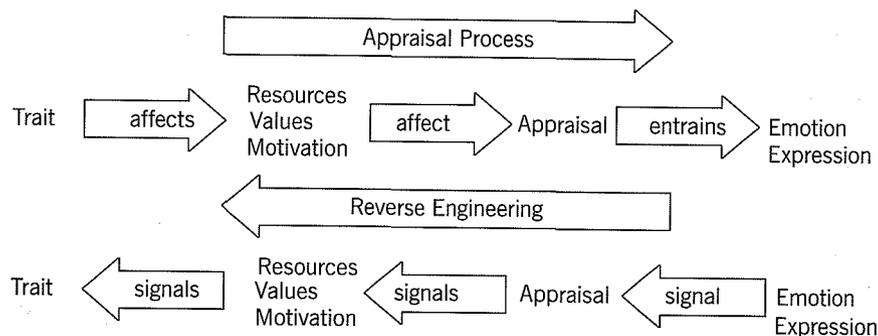

**FIGURE 3.1.** Reverse engineering of appraisals.

behavioral intentions also depends on the context of the interaction. Such elements as the relative status of the interaction partners, the gender composition of the dyad, and the cultural background of the interaction partners all play important roles. In fact, the social context can be expected to modify the interpretation of a specific expression insofar as context information is used as part of the process of understanding the other; that is, it permits the taking of the other's perspective in a given situation.

What Does Anger Signal?

Research on the social signal function of anger has focused mainly on behavioral intentions—specifically dominance and affiliation—as well as competence, which is related to both status and dominance (Hess, Blairy, & Kleck, 2000; Tiedens, 2001). The impact of anger expressions has also attracted attention in the context of negotiations (Sinaceur & Tiedens, 2006; van Kleef, De Dreu, & Manstead, 2004a, 2004b; see Van Kleef & Côté, Chapter 6, this volume) and with regard to credibility (Hareli et al., 2009).

Dominance and affiliation are of central importance for our interactions with others, as they allow us to judge vital social characteristics of individuals we may interact with. In hierarchical primate societies, for example, highly dominant individuals pose a certain threat insofar as they can claim territory or possessions (food, sexual partners, etc.) from lower status group members (Menzel, 1973, 1974). Hence the presence of a perceived dominant other should lead to increased vigilance and a preparedness for withdrawal (Coussi-Korbel, 1994). In contrast, an affiliation motive is associated with nurturing, supportive behaviors and should lead to approach when the other is perceived to be high on this disposition. When the same person is shown with different facial expressions, observers attribute high levels of dominance and low levels of affiliation to the anger expression (Knutson, 1996). Hess et al. (2000) showed that this effect is moderated by the gender and ethnicity of the expresser, which influence the perceived likelihood that a person of this gender and ethnicity shows anger in everyday life, which in turn—together with the intensity of the expression—influences the level of dominance and affiliation that is attributed to the person as a function of the anger expression (see Figure 3.2).

Specifically, men and European Americans were rated as more likely to display anger than were women and Japanese people. Further, more likely expressions (i.e., those by men and by European American actors) were rated as more dominant; expressions that displayed 80% of maximum intensity led to higher ratings of dominance than did expressions at 40% of maximum intensity.
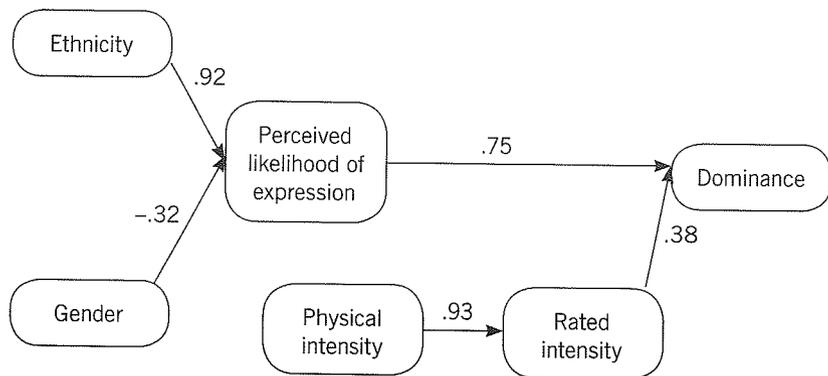
FIGURE 3.2. Moderators of the effect of anger on perceived dominance. Based on Hess, Blairy, and Kleck (2000).

For the affiliation ratings of anger expressions, the likelihood of the expression again predicted the participants' judgments, but intensity did not. Also, in addition to the link mediated by likelihood, a strong direct path between the sex of the actor and affiliation was found indicating that women are generally rated as more affiliative. Thus the degree to which anger expressions signal dominance or affiliation depends importantly on the beliefs that observers hold regarding the likelihood that the expression will be shown by a member of a specific social group. Further, whereas only stronger anger expressions signal dominance, a weak anger expression is already sufficient to signal a lack of affiliation. In short, even though anger per se tends to signal dominance, the strength of this signal depends crucially both on who does the signaling and on the observer's beliefs.

As regards competence, Lerner and Tiedens (2006) provide a review of the literature with regard to the potential positive effects of being angry on decision making. Their review was based on the appraisal-tendency framework (ATF) proposed by Lerner and Keltner (2000, 2001), which assumes that emotions are based on appraisals and serve a coordination role to enable the individual to deal quickly with encountered problems or opportunities. As such, they note the motivating force of anger described herein, as well as its potential to foster optimism (Lerner & Keltner, 2000, 2001). Overall, they conclude that an angry decision maker approaches a situation with the tendency to feel confident, in control, and thinking the worst of others. Such a mind-set can sometimes lead to disaster but at other times can lead to desirable outcomes. They refer in this context to Aristotle's emphasis on being angry at the right time toward the right person.

This finding suits the fact that showing anger positively influences

negotiations in contexts in which the negotiation partner has limited options or low power (Sinaceur & Tiedens, 2006; van Kleef et al., 2004a, 2004b). This positive effect is partially mediated by fear on the side of the recipient (Van Kleef et al., 2004a) but also by a perception of toughness (Sinacoeur & Tiedens, 2006).

Another question is how competent angry people are perceived to be. Tiedens (2001) found that observers attribute higher power to people who express anger rather than sadness. This matches the belief that in failure situations, a high-status person would feel more angry than sad or guilty, as opposed to a person with lower status, who is expected to feel more sad and guilty than angry (Tiedens, Ellsworth, & Mesquita, 2000). Tiedens (2001, Study 4) found that this status conferral is mediated by a perception of competence. Thus individuals who express anger are perceived not only as threatening but also as competent, powerful, and dominant and thus able to assert themselves. This perception is, however, not entirely independent of the expresser and the situation. Thus Lewis (2000) found that male managers who, on receiving bad business news, showed angry or neutral expressions rather than sadness were indeed perceived as more competent. By contrast, female managers who showed anger were rated as equally incompetent as those who showed sadness. Yet, when female managers showed a neutral expression, they were perceived as particularly competent. This finding may be explained by the prevailing workplace norms that tend to emphasize emotional neutrality, objectivity, and professionalism (cf. Ashforth & Humphrey, 1995; Weber, 1968). This and the notion that female emotions may be uncontrolled and hence suspect (Shields, 2005; Warner & Shields, 2007) create an impression of lack of professionalism for the angry woman but not the angry man.

Hareli and colleagues (Hareli et al., 2009; Hareli & Hess, 2010) found that expressing anger can lead to positive assessments by perceivers. Specifically, a complainant who showed anger was perceived as more credible (but only when the complaint was ambiguous). When the anger was appraised as signaling that the protagonist *cared* about the outcome rather than being indifferent, the display of anger can also lead a protagonist to be perceived as more emotional, warm, and gentle (Hareli & Hess, 2010). This latter effect was fully mediated by the observers' perception of the situation as one that the protagonist perceived as both unpleasant and norm incongruent. That is, the person was perceived as warm and gentle because the anger expression signaled concern for the injustice.

In sum, angry individuals are perceived as threatening but at the same time the anger can signal strength and the ability and motivation to address bad situations. However, the above data suggest that there may be

individual differences on the side of the expresser, which may moderate this effect. These are discussed in the following section.

THE ROLE OF BELIEFS IN EMOTION COMMUNICATION

As stated, the precise effect of an anger expression depends to some degree on who the expresser is. Specifically, for the reverse engineering process to work, an expression must first be classified as anger. However, in a series of studies, Hess, Adams and Kleck (Hess, Adams, & Kleck, 2007, 2008a, 2009b) found that beliefs about the expresser's social group and about the perceived dominance and affiliation of the expresser can influence the perception of anger (as well as of happiness). In particular, as men and women differ in the degree to which they are perceived as dominant, both the perception of their anger (Hess, Blairy, & Kleck, 1997) and the conclusions drawn about the angry man or woman differ as well. In the following I briefly summarize some of these findings. However, first the question needs to be addressed as to why it should matter who shows the emotion to be classified by an observer.

Two Strategies for the Recognition of Emotion

There are two principal strategies for decoding emotion displays (Kirouac & Hess, 1999).The first, *pattern matching*, associates specific features of the expression with specific emotions (Buck, 1984). Thus upturned corners of the mouth or lowered brows are recognized as smiles or frowns, respectively. This approach breaks down when the features are either too weak to be classified or lead to contradictory conclusions—such as would be the case when a person both smiles and frowns at the same time. The second decoding strategy, *perspective taking*, depends on the knowledge that the perceiver possesses regarding the sender and/or 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. Thus knowing that John encountered an injustice and that John abhors injustice would lead to the conclusion that John is angry. But what happens when we do not know the other person well or at all?

One important aspect of emotion expressions is that the same channels that transmit emotional information—the face, the voice, the body—all tell us a great deal about the social groups to which the emoters belong. These include the sex, age, and race of the other person. This knowledge

can be used by observers to predict the likely emotional reactions of the sender; that is, the beliefs about the likely emotions of others that can then substitute for personalized knowledge and affect the perception and interpretation of emotion expression. Thus Hugenberg and Bodenhausen (2003) found that implicit negative stereotypes toward African Americans were associated with perceivers' sensitivity to anger expressions by African Americans in a change detection task. Also, women are known to cry when angry (Crawford, Clippax, Onyx, Gault, & Benton, 1992; see also Shields, 1987), a behavior very atypical for men. Therefore, when seeing a man cry, we would probably not consider the possibility that he is angry, whereas we might consider this possibility when we see a woman cry.

In addition, as regards facial expressions, the very faces that show the emotions may enhance or obscure some expressive elements and hence bias pattern matching. Thus 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 (Becker, Kenrick, Neuberg, Blackwell, & Smith, 2007; Sacco & Hugenberg, 2009). In sum, the same facial expressions shown by two individuals may not be interpreted the same way, either due to the influence of the observers' beliefs about the emoter or because facial features and facial expressions may interact such that pattern-matching errors are made.

This notion of a perceptual overlap between emotion expressions and certain trait markers, which then influences emotion communication, has been more recently proposed by Zebrowitz (see Zebrowitz & Montepare, 2006), as well as by Hess, Adams and Kleck (2007, 2008b, 2009c). Specifically, Hess et al (2007) propose the *functional equivalence hypothesis*, which posits that some aspects of facial expressive behavior and morphological cues to dominance and affiliation are equivalent in their effects on emotional attributions. In what follows I summarize findings on the impact of beliefs on one hand and facial morphology on the other on perceptions of anger in men and women.

Facial Appearance and Beliefs about the Emotionality of Men and Women

In general, men are perceived as more likely than women to express anger (Fischer, 1993). In a number of studies, Hess, Adams, and Kleck (2004, 2005) showed that this belief can be traced in part to beliefs about dominant and affiliative individuals. That is, men's faces were perceived as more dominant in appearance, and men were rated as more likely to show anger, disgust, and contempt. By contrast, women's faces were rated as more affiliative in appearance, and women were expected to be more likely to

show happiness, surprise, sadness, and fear. Mediational analyses showed that the beliefs about men's and women's emotions were partially mediated by their respective perceived affiliation and dominance. Hess, Thibault, Adams, and Kleck (2010) showed that, in fact, the beliefs about men's and women's emotionality are based on facial morphology—the degree to which the faces seem dominant and affiliative—on the one hand and on social roles (nurturing vs. agentic) on the other. When these were taken into account, sex per se did not explain further variance.

Implications for Men's and Women's Anger Expressions

As mentioned earlier, the facial morphological features that make a face appear male or female and in turn dominant or affiliative interact directly with the movement patterns that characterize specific emotional expressions. Thus some of the cues that mark anger expressions, such as lowered eyebrows and tight lips, mimic features also associated with dominance, whereas high eyebrows and smiling in happiness expressions reinforce affiliative features.

Hess, Adams, and Kleck (2009a) showed that these similarities actually lead to perceptual overlap. Specifically, participants had to identify neutral expressions of highly dominant and highly affiliative appearing individuals embedded in either a series of angry, happy, or fear faces. To the degree that anger and dominance look alike, it is harder to identify a dominant neutral face within a series of anger faces. By contrast, the identification of the affiliative neutral faces is comparatively easy. The converse is the case for affiliative faces embedded in a series of happy expressions.

As predicted, participants were slower to identify dominant neutral faces compared with affiliative faces embedded in a series of angry expressions. The converse was the case for affiliative faces embedded in a series of happy faces. These results support the notion that for all intents and purposes a highly dominant face looks angry even when no actual facial movement is present. By contrast, highly affiliative neutral faces look happy. Put another way, the facial configurations that create impressions of dominance and affiliation are the same that make a face appear to show anger and happiness. These perceptual similarities between dominance/anger and affiliation/happiness then can be expected to bias the perception of these emotions, especially when facial expressions are weak and ambiguous.

Importantly, as noted previously, men's faces are generally perceived as more dominant and women's faces as more affiliative. In fact, the high forehead, square jaw, and thicker eyebrows that have been linked to perceptions of dominance (e.g., Keating, Mazur, & Segall, 1981) are also more

typical for men's faces (Brown & Perrett, 1993; Burton, Bruce, & Dench, 1993). On the other hand, a rounded baby face with large eyes is more feminine (Brown & Perrett, 1993; Burton et al., 1993), perceived as more approachable and warm (Berry & Brownlow, 1989) and is more typical for women's faces.

This implies that the preceding findings have implications for the perception of anger in men and women. Thus men who show weak anger are more likely to be perceived as angry than women, and the reverse is true for happiness.

However, this also implies that men's and women's anger will have a different emotional effect on the observer. The reason is that, in addition to the previously described perceptual association between dominance and anger, anger expressions in fact signal dominance on the part of the expresser, whereas happy expressions signal affiliation (Hess et al., 2000; Knutson, 1996). In turn, perceptions of the dominance and affiliation tendencies of others are relevant to the approach–avoidance dimension.

Because anger, dominance, and male sex markers on the one hand and happiness, affiliation, and female sex markers on the other overlap perceptually and are functionally equivalent, anger shown by women and happiness shown by men can be expected to elicit different emotional reactions from observers. Specifically, when anger is shown on a highly dominant face, the threat signal of the expression and the threat signal derived from facial morphology are congruent and reinforce each other. By contrast, when anger is expressed on a highly affiliative face, the two signals contradict each other and hence weaken the overall threat message. The converse is true for happy expressions (Hess, Sabourin, & Kleck, 2007). Following this line of argument, the female anger expression can be viewed as a combination of an appetitive face with a threatening expression. Male anger, on the other hand, represents a less ambiguous example of a threat stimulus. Conversely, female happiness is a clearer appetitive stimulus than male happiness.

Hess, Sabourin, and Kleck (2007) tested this hypothesis using a startle-reflex methodology, which is independent of consciously applied stereotypes. Specifically, the eye-blink reflex to a sudden acoustic probe is modulated by emotional state (e.g., Lang, 1995; Lang, Bradley, & Cuthbert, 1990; Vrana, Spence, & Lang, 1988), such that when an individual is exposed to a threatening or withdrawal-inducing stimulus, the reflex is potentiated. Conversely, a pattern opposite to that of the eye-blink reflex is found for the postauricular reflex, the muscle response that serves to pull the ears back and up (Berzin & Fortinguerra, 1993) such that individuals show an augmented postauricular reaction to an acoustic startle probe when exposed to appetitive stimuli (Benning, Patrick, & Lang, 2004; Johnson, Valle-Inclán, Geary, & Hackley, 2012).

Congruent with the notion that dominance and affiliation signals from the face and facial expressions of anger and happiness interact perceptually, eye-blink startle was potentiated for male anger faces compared with neutral and happy faces, as well as compared with female anger faces. In contrast, the postauricular reflex was potentiated for female happiness faces and attenuated during male anger faces, compared with neutral faces, as well as male happiness faces. Thus anger potentiated eye-blink startle only when shown by a man—that is, shown on a face suggesting social dominance. Conversely, the postauricular reflex was potentiated preferentially for female happy expressions.

In brief, facial features and facial expressions interact when it comes to the perception of anger expressions. The studies reported herein focused on male and female faces because these represent a natural category differing in facial dominance and affiliation. But obviously individuals within each sex differ on these dimensions, and hence we would expect, for example, anger to be more threatening when shown on a highly dominant female face and, conversely, male anger to be less so when shown on a highly affiliative male face. It is important to note that not only do men and women differ with regard to these dimensions but other groups do as well. What this means is that it matters who shows anger and that anger's social signal will vary as a function of its expresser. This is demonstrated in the study reported next.

Whom Do You Trust with Your Money?

The goal of this study was to assess the impact of angry, happy, and neutral facial expressions on trust in an interaction. Smiling is an affiliative signal, and we expect that we can trust smiling people—a logic that salespeople are well aware of. The question in this research was whether anger could stack up to happiness in terms of the trust it inspires, given its association with competence.

In this specific interaction, participants expected to play an economic trust game with a partner but in fact played with the computer. The game required the participants to decide to either cooperate or to make an egoistic decision that favored their own outcome. The payoff matrix was constructed such that cooperative behavior by both participants maximized the payoff for both, with higher payoff when both invested a similar high amount. Egoistic behavior by either game player favored his or her own outcome to the disadvantage of the other player, but the payoff was lower than the one that would be achieved by cooperating. Hence, if participants trusted their partner to cooperate, they could maximize their outcomes. In cases of distrust, an egoistic strategy should be chosen. Thus the fact that someone invested at all and the amount of investment were both dependent on assuming that the game partner would make similar choices, as the payout was less advantageous when one partner invested much more than the other.

Male and female participants played the game with either a man or a woman. In addition, we varied perceived-expert status by indicating that the game partner was either an economics student (expert) or an arts student (nonexpert). For the manipulation of emotion expression and expert status, participants and the (virtual) partners were introduced to each other prior to the game. They were told to take photos of themselves using the web camera and to provide information on their name, field of study, and age. In turn, each participant received a photo that showed a person with either a slight smile, a slight anger expression, or a perfectly neutral expression, as well as the name, age, and field of study of the partner.

Across all conditions, only 66% (SD = .48) of the participants chose the cooperative option. Figure 3.3 shows the average amount invested in a cooperative fashion when playing the game with a man or a woman showing each of the three emotions. Overall, participants invested in a cooperative fashion more when playing with a man rather than a woman, but the gender difference depended on the emotion.
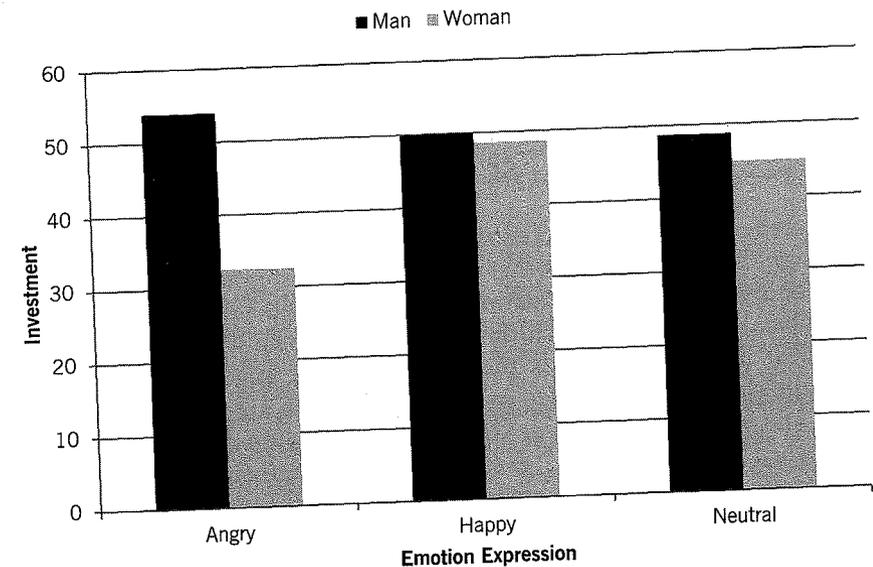

FIGURE 3.3. Mean investment in function of partner sex and facial expressions.

For male game partners, no significant difference between emotion conditions emerged. Thus participants showed the same level of trust in their investments whether the man they played with showed anger, happiness, or a neutral expression. Importantly, showing anger did not lead to any less trust; the pattern, in fact, suggests if anything more trust. For women, however, a different pattern emerged, with a significant drop in trust, when they showed anger compared with either a smiling or a neutral expression. This suggests that anger in women has a notably less positive—in fact, a negative—effect that it does not have for men. Thus anger was indeed a positive emotion—as positive as happiness—when it comes to inspiring trust in a man, but it failed to do this for women, who were trusted more when they smiled or showed a neutral expression. That women are in some way penalized for showing anger resembles the effect found by Lewis (2000) in a business setting. In general, women are not expected to show anger easily, and, as shown by Hess et al. (2000), the degree to which an expression is expected moderates its social signal. Hence, the belief that women—at least nondominant women—do not show anger easily undermines the power of their anger expressions. Hess et al. (2005) found that dominant women are indeed expected to show just as much anger as dominant men but that they pay a price in that they are liked a lot less. Yet this finding suggests, as noted previously, that it is perceived dominance and not gender per se that undermines the power of anger for some women. Hence one could say that anger has positive effects especially for men and for dominant women.

SUMMARY

In sum, there is good evidence that Aristotle was right about anger. Anger both signals that the angry other will act with strength in an adverse situation and provides the motivational force for such actions. However, as was typical for his age, Aristotle thought about men when he formulated this idea; indeed, as regards the signal value of anger, the situation is not quite the same for women as for men. Women are liked less for their anger and women may appear stronger when staying neutral and remote than when "losing control," even in anger. Nevertheless, in most situations anger can be a positive emotion for both men and women. However, one thing must be noted: Anger is a positive emotion for the person who expresses it, but not necessarily for the person it is expressed toward. For the person on the receiving end of righteous anger, the situation may well appear negative.

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