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Portrait of the Rugged Individualist: The Nonverbal Pride Display Communicates
Support for Meritocracy

By

Elizabeth Jane Horberg

A dissertation submitted in partial satisfaction of the
requirements for the degree of
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in the
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of the
University of California, Berkeley

Committee in Charge:

Professor Dacher Keltner, Chair
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Support for Meritocracy
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By Elizabeth Jane Horberg

Abstract

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Doctor of Philosophy in Psychology

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Emotions profoundly influence beliefs about morality and justice (Haidt, 2001) and emerging research suggests that expressions of emotion communicate an individual's moral attributes to others (e.g., Brown, Palameta, & Moore, 2002). The present research examines the moral beliefs signaled by the nonverbal pride display. Pride is triggered by appraisals that the self merits high status and greater access to resources (Tracy & Robins, 2004) and pride's nonverbal expression has been shown to convey these appraisals to observers (Shariff & Tracy, 2009). Guided by appraisal-tendency frameworks of the association between distinct emotions and moral beliefs (Horberg, Oveis, & Keltner, 2010), I predicted that the nonverbal expression of pride would communicate greater support for meritocracy—the belief that social and material resources ought to be distributed according to merit—relative to egalitarianism, or beliefs that resources ought to be distributed in ways that promote equality of outcomes. Study 1 demonstrated these effects using unfamiliar male and female targets posing pride or joy in photographs. Study 2 found that individuals previously shown a photo of Barack Obama expressing pride, relative to a neutral expression, subsequently rated Obama as more likely to endorse meritocracy. Finally, Study 3 tests the validity of pride-based inferences of support for meritocracy. This study demonstrated that individuals who spontaneously expressed pride to a greater degree were more likely to advocate dividing a resource between the self and another on the basis of merit rather than equally. Moreover, consistent with Studies 1 and 2, observers rated the high-pride expressers as more likely to support meritocracy and less likely to support egalitarianism.

Dedication

This dissertation is dedicated to my graduate advisors, Dacher Keltner and Serena Chen, and to my undergraduate advisor, Richard Koestner. I will always be grateful for your mentorship.

Table of Contents

I. Introduction.....	1
II. Nonverbal Emotional Displays Signal Social Attributes Associated with the Emotion	2
III. An Appraisal-Tendency Approach to the Influence of Distinct Emotions on Moral Beliefs.....	4
IV. Past Research on the Nonverbal Pride Display.....	7
V. The Present Research	9
VI. General Discussion	21
VII. References	23
VIII. Footnotes	239
IX. Appendix	30
X. Tables and Figures	34

I. Introduction

Emotions are the heart of social living. They imbue relationships with meaning, shape interpersonal behavior and give rise to our core social and moral values (Darwin, 1874/1952; DeSteno, Petty, Rucker, Wegener, & Braverman, 2004; Frank, 1988; Horberg, Oveis, Keltner, & Cohen, 2009; Keltner & Haidt, 1999; Lazarus, 1991; Tiedens & Linton, 2001). The nonverbal displays that accompany specific emotions facilitate these functions by communicating social information to others. People rely on nonverbal emotion cues in the face, voice, and body to infer not only a sender's present emotional state, but also her current appraisals (Hareli & Hess, 2010), social roles and status (Tracy, 2010; Tracy & Robins, 2007) intentions to cooperate or compete (Brown, Palameta, & Moore, 2002) as well as her moral values and beliefs (Frijda & Mesquita, 1994; Haidt, 2001; Zebrowitz & Montpare, 2008a).

The present research investigates the moral beliefs communicated by the emotion of pride. Over the past two decades, moral psychology has witnessed a pronounced shift toward the study of the emotional roots of human morality (Greene & Haidt, 2002; Haidt, 2001). Within this broad development, scholarship has begun to investigate how distinct emotions like pride, compassion, disgust or anger, uniquely amplify the perceived value of specific moral domains, such as justice, purity or hierarchy. In particular, emotions amplify moral domains that are semantically related to the appraisals that elicit and persist throughout an emotional state (Horberg et al., 2010; see also Lerner & Keltner; Rozin, Lowery, Imada, & Haidt, 1999). For example, disgust, an emotion characterized by appraisals of impurity and contamination, has been shown to heighten the perceived moral significance of protecting one's physical and mental purity (Horberg et al., 2009).

Guided by these recent findings, the present research examines the moral beliefs communicated by nonverbal displays of pride. Pride is triggered by appraisals of the self's elevated social worth, strength or status (Tracy & Robins, 2004) and the experience of pride leads individuals to perceive the social world in a fashion that enhance hierarchy. For instance, pride leads individuals to identify with strong individuals and distance the self from weak individuals (Oveis, Horberg, & Keltner, 2010). Extending this work to the realm of social inference, I propose that the nonverbal pride display communicates support for meritocracy, a hierarchy-enhancing form of distributive justice (Davey, Bobocel, Son Hing, & Zanna, 1999; Deutsch, 1975; Raskinski, 1987; Wagstaff, 1994). Three studies test this hypothesis by documenting that 1) people infer that others' nonverbal displays of pride signal their commitment to meritocratic beliefs and 2) there is validity to this inference. Individuals who display greater nonverbal pride in relevant social contexts do in fact ascribe to more meritocratic beliefs.

II. Nonverbal Emotional Displays Signal Social Attributes Associated with the Emotion

Distinct emotion experiences are accompanied by unique nonverbal displays as well as shifts in social perception, belief and intention. By implication, an emotion's nonverbal display serves as a reliable signal of those social perceptions linked to the emotion (Hareli & Hess, 2010; Keltner & Kring, 1998; Keltner & Lerner, 2010). This is evident in embodiment research showing that people with stronger emotion expressions in the face or body, such as of happiness or anger, are more likely to show emotion-congruent shifts in perception, attitude and judgment (Niedenthal, 2007). For example, participants found cartoons more amusing if they had been led to smile rather than inhibited from smiling (Strack, Martin, & Stepper, 1988). In related work, people were prouder of personal success feedback if they had been manipulated to sit upright, a posture indicative of pride, compared to other participants led to slump over (Stepper & Strack, 1993).

The robust association between emotion expression and emotion-specific social-cognitive changes hints at the motivating idea underlying the present investigation: that nonverbal emotion displays may be a useful heuristic to inferring others' actual values and beliefs. Within work on nonverbal emotional behavior, an emergent literature documents that observers treat facial expressions of emotion as signs of enduring traits, beliefs, behavioral inclinations, and other stable attributes (Frijda & Mesquita, 1994; cf. Hess, Blairy & Kleck, 2000). Critical to the present work, observers' inferences are largely consistent in content with the appraisals of the observed emotion (Harseli & Hess, 2010; Secord, 1958; Zebrowitz & Montpare, 2008a, 2008b). For instance, anger involves appraisals that the self has been unjustly harmed and is capable of retaliation (Lazarus, 1991; Rozin et al., 1999). In line with these appraisals, facial expressions of anger are perceived to communicate low affiliation and high dominance (Hess et al., 2008; Marsh, Ambady & Kleck, 2005; Zebrowitz & Montpare, 2003). In contrast, fear involves appraisals of low certainty, low control, and threat to one's well-being. Consistent with these appraisals, observers view fear-expressing individuals as more submissive (Hess et al., 2000; Marsh, Ambady, & Kleck, 2005). With respect to inferences about moral beliefs, embarrassment is triggered by appraisals that one has (unintentionally) violated group norms or conventions, pointing to the sender's inherent loyalty to the group and desire to restore relations. Given these appraisals, displays of embarrassment act as a nonverbal apology (Keltner & Buswell, 1997), and observers infer that individuals who display embarrassment, as opposed to other emotions, are highly prosocial and committed to cooperating with other group members (Feinberg, Willer, & Keltner, 2010).

An important question I pursue in the present investigation concerns the validity of pride's proposed moral signal. Evolutionary perspectives hold that emotion expressions are valid sources of social information because they are unbidden, involuntary and difficult to falsify (Brown & Moore, 2002; Vehrencamp, 2000). These features inhibit the evolution of con artists who fake emotions in order to mislead and exploit others. Moreover, the capacity to accurately detect the emotional, social and moral attributes of others confers evolutionarily significant social benefits. By accurately detecting one another's social intentions, in part by reading emotions, people are able to tailor their behavior to satisfy personal and mutual interests (Frank, 1988). For these reasons, I propose that the meritocracy beliefs communicated by nonverbal pride displays

will prove to be accurate. Indeed, observers often demonstrate impressive accuracy in inferring social attributes (beyond specific emotional states) from nonverbal behavior. Evidence from the thin-slicing and zero-acquaintance literatures illustrate that exposure to a minute of a stranger's nonverbal behavior, or even just to a static image, leads observers to reliable and accurate judgements of various personality features, including traits, prosociality, socioeconomic status, and trustworthiness (Ambady & Rosenthal, 1992; Kaul & Schmidt, 1971; Kraus & Keltner, 2009; Verplaetse, Vanneste, & Braeckman, 2007).

Expressions of distinct emotions, these different literatures suggest, signal social attributes related to the emotion's core appraisals. There are few direct investigations of this claim. However, such investigations are essential to basic scientific understanding of the social function of different expressions, and more specifically, how distinct expressions enhance fitness by conveying meaningful information about others. Research of this kind also sheds light on the everyday process by which people construct impressions of others and quickly transmit information about the self to others. As well, exploring these questions vis-à-vis pride, as I do in this research, is particularly important given the paucity of work on pride. My studies test the claim that the nonverbal behavior associated with feelings of pride leads to accurate inferences about others' beliefs about morality and justice. To guide my hypotheses, I use the *appraisal-tendency framework*, which explains how distinct emotions influence moral beliefs based on the content of the emotion's appraisals (DeSteno et al., 2004; Horberg et al., 2010; Keltner, Horberg, & Oveis, 2006; Lerner & Keltner, 2001; Lerner & Tiedens, 2006).

III. An Appraisal-Tendency Framework of the Influence of Distinct Emotions on Moral Beliefs

The appraisal-tendency framework offers specific predictions about how different positive and negative emotions amplify beliefs associated with the emotion's appraisals and has linked pride to amplified beliefs in the value of social hierarchy (Han, Lerner & Keltner, 2007; Horberg et al., 2010; Lerner & Keltner, 2001). A chief assumption of this framework is that unique patterns of cognitive appraisals, which are the meanings and interpretations that individuals ascribe to their environments (e.g., Ellsworth & Scherer, 2003; Lazarus, 1991), trigger emotion and persist throughout the emotion experience. These appraisals reflect specific concerns that are relevant to social judgment, such as concerns about control, certainty or fairness. During an emotion experience, the associated concern is salient and becomes a more prominent guide of subsequent relevant judgments (Horberg et al., 2010; Keltner et al., 2006; Lerner & Keltner, 2001). For example, the emotion of fear involves appraisals of low control and low certainty. During a state of fear, people's judgments and values reflect increased concerns about uncertainty and lack of control. For instance, fearful individuals show an elevated preference for risk-averse decisions. In contrast, during a state of anger, people prefer risk-seeking decisions, consistent with the appraisals of high control and high certainty that define anger (Lerner & Keltner, 2001).

Recently, studies have applied the appraisal-tendency framework to understand how distinct emotions change social and moral values (Horberg et al., 2010). Here, the assumption is that the appraisal patterns of certain emotions are semantically connected to specific sociomoral concerns. Sociomoral concerns refer to the several domains of morality found across cultures, such as justice, harm/care, purity and hierarchy (Haidt & Graham, 2007; Shweder, Much, Mahapatra, & Park, 1997). As a result, when an individual experiences one of these emotions, his or her moral beliefs come to increasingly reflect the associated sociomoral concern. Empirical work on appraisal-tendency effects within the moral sphere has focused on four emotion-morality pairings: the effects of disgust upon purity, anger upon justice, compassion upon harm-reduction and care-taking, and pride upon beliefs about social hierarchy.

Several investigations illustrate that disgust and anger diverge in their influence upon moral values. Disgust, with its attendant appraisals of contamination and impurity, has been tied to increased concerns about protecting the purity of the body, mind and soul (Haidt & Graham, 2007; Rozin et al., 1999). The experience of anger, by contrast, involves appraisals of others' unjust acts and increases concerns with restoring justice, autonomy and individual rights (Berkowitz, 1999; Ortony, Clore, & Collins, 1998). In research inspired by this perspective, feeling disgusted by descriptions of impure but harmless sexual behavior, such as having sex with a chicken carcass, predicted harsher condemnation of the behavior, whereas feeling angry did not. By contrast, feeling angry in response to descriptions of unjust behaviors, such as failing to return an overdue book needed by another student, predicted harsher condemnation of the unjust behaviors, whereas feelings of disgust did not. In keeping with these patterns, temporarily induced disgust increased criticism of behaviors perceived to violate purity as well as moral praise of behaviors perceived to uphold purity, such as meditation (Horberg et al., 2009). Temporarily induced anger has been found to increase support for policies when the

policies were framed in terms of restoring justice rather than in terms of loss (DeSteno et al., 2004).

The positive emotions of compassion and pride likewise amplify moral beliefs associated with their appraisals. Compassion is induced by appraisals of others' need, and heightens concerns about reducing harm and caring for others, particularly weak and vulnerable others. Judgments made during a state of compassion reflect these harm/care concerns. For instance, participants who have been induced to feel compassion and sympathy toward a needy target are more likely to help the target, even at a cost to the self (Batson & Shaw, 1991; Eisenberg & Miller, 1987) and even when doing so is unfair to a third party (Batson, Klein, Highberger & Shaw, 1995).

Pride, the emotion I focus upon in this research, amplifies moral beliefs relevant to social hierarchy (Horberg et al., 2010; Tracy, Shariff, & Cheng, 2010). Hierarchies pervade relationships and are critical to effective group functioning, even in relatively egalitarian cultures (Fiske, 1992). They stabilize and organize group life and yield quick solutions to evolutionary challenges concerning conflict resolution, protection, division of labor, control over resources, and access to mates (de Waal, 1988, 1996; Shiota, Keltner, & John, 2006). Given hierarchies' deep involvement in decisions about resources, social influence, control, and protection, it is not surprising that many of our beliefs about ethical conduct enhance or preserve hierarchies (Haidt & Graham, 2007; Haidt & Joseph, 2008; Shweder et al., 1997). The hierarchy domain unifies a variety of moral rules found across cultures. For example, one study showed that respecting community leaders, fulfilling one's role-prescribed duties, and striving for achievement through hard work emerged as examples of hierarchy-related moral obligations in the U.S. and the Philippines (Vasquez, Keltner, Ebenbach, & Banaszynski, 2001).

Pride's major social function is to create, regulate, and reinforce status hierarchies (Clark, 1990; Tracy & Robins, 2007). Pride motivates actions and goals that sustain hierarchies by increasing one's relative rank or reinforcing a currently high rank (Cheng, Tracy & Henrich, 2010). The appraisals of pride reflect this function: pride arises out of appraisals that the self is strong, capable and worthy of high social status. Based on the appraisal-tendency framework, I would expect pride to amplify the perceived value of hierarchy in contrast to egalitarian social structure. Research partly motivated by this assertion has documented the opposing effects of pride and compassion on perceptions of psychological distance between the self and other individuals who varied in degree of strength and status (Oveis et al., 2010). In one study, participants were manipulated to experience either pride or compassion by watching evocative picture slides. Then, ostensibly as part of separate research, participants reported how similar they felt to a series of target groups, including relatively weak, low-status groups (e.g., homeless people) and relatively strong, high-status groups (e.g., corporate lawyers). Participants earlier induced to experience pride rated themselves as less similar to groups on average than the compassion-induced participants. Moreover, pride-induced participants felt particularly different from the weak, low-status groups, but more similar to the strong, high-status groups, relative to compassion-induced participants. Pride's differentiation between the weak and the strong, and psychological closeness to strong others, aligns with claims that pride activates the concept and importance of social rank, and ultimately colors moral beliefs accordingly.

In the present research, I examine whether individuals who express pride through nonverbal channels are perceived as more likely to support a hierarchy-enhancing form of distributive justice: meritocracy. Distributive justice pertains to beliefs about whether a division of goods and resources is ethical or unethical. Resource allocation strategies can be parsed into the two classes of meritocracy and egalitarianism (Deutsch, 1975, 1985; Rasinski, 1987). With meritocracy, individuals are allocated resources (e.g., money, positions of power) according to a criterion of merit, such as performance, contribution or ability. This approach organizes group members hierarchically, and reflects an underlying belief that fairness is rooted in equity (Walster, Berscheid, & Walster, 1971), and that groups prosper when high-achieving members are rewarded (Wagstaff, 1994). By contrast, an egalitarian resource allocation strategy places less emphasis on achievement, aims to create equality of outcomes among group members and to eliminate hierarchy. Depending on group conditions, equality of outcomes is achieved through two kinds of allocation methods: distributing resources evenly across group members (i.e., equality) or preferentially to those in need (Rasinski, 1987; Wagstaff, 1994).

Research directly related to my hypotheses relating pride displays to support for meritocracy is scarce. However, some evidence implies that the experience of pride increases devotion to tasks when social outcomes are based on merit. Across several studies, individuals manipulated to experience pride, compared to other positive emotions, were subsequently more likely to persevere and succeed at difficult tasks in paradigms when outcomes (social approval) were based on task performance (Verbeke, Belschak, & Bagozzi, 2004; Williams & DeSteno, 2008, 2009). With these preliminary data suggesting that pride may enhance the perceived value of meritocracy, I propose that the nonverbal expression of pride signals these beliefs to social observers.

IV. Past Research on the Nonverbal Pride Display

Pride has only recently come into focus in the literature on emotional expression. Researchers are beginning to detail the expressive components of pride, and to explore the character attributes signaled by pride (Shariff & Tracy, 2009; Tiedens, Ellsworth, & Mesquita, 2000; Tracy & Matsumoto, 2007;). The prototypical pride display involves an expanded posture, slight backward head tilt, small smile, with fists planted on the hips or raised over the head in a “V” (Tracy & Robins 2004b; Tracy, Robins, & Lagattuta, 2006). Pride displays are highly recognizable and potentially universal. Even individuals from pre-linguistic cultures who maintain virtually no contact with Western society label images of Westerners expressing pride with a degree of accuracy comparable to that of “basic” emotions like disgust and anger (Tracy & Robins, 2008). Moreover, congenitally blind individuals were found to spontaneously display pride after prevailing in competitions in a manner similar to sighted individuals. Finally, both American and Japanese Olympic wrestlers produced similar expressions of pride (e.g., tilted the head back and raised their arms in a “V”) after a victory at the Olympic Games (Tracy & Matsumoto, 2008).

Building upon these findings, scholars have theorized that the pride display evolved from the dominance displays prevalent in primate societies. Evolutionary accounts hold that pride has an adaptive role in group governance by drawing attention to socially valuable individuals, and alerting both the self and others that one deserves increased status and acceptance. Doing so helps group members to select appropriate responses in interactions with high- or low-status individuals, to forge constructive alliances and to positively influence their own rank (Shariff & Tracy, 2009). In this way, the pride display enables the quick negotiation of hierarchies, and consequently, conflict-free resolution of social issues including how to allocate resources (Tracy et al., in press; Tracy & Robins, 2004a, 2004b).

A growing body of work illustrates that observers automatically infer status information even from nonverbal displays of pride, even displays that are static and context-free. Across several studies, Shariff and Tracy (2009) found that participants were quicker to pair high status words with a target individual when the target posed pride, compared to shame, embarrassment, happiness, disgust or anger. Similarly, participants were more likely to describe a novel piece of artwork as “high-status” if the artwork had been preceded with a subliminal image of an individual posing pride, rather than a non-emotional stimulus. In other relevant work, participants were more likely to believe that an individual occupied a higher-status position—company boss rather than employee—when the individual was described as reacting to a positive event with pride rather than gratitude (Tiedens et al., 2000).

Taken together, these findings suggest that observers use the pride expression to arrive at fairly accurate judgments of a sender’s status appraisals. What is not known, however, is whether the nonverbal expression of pride reliably and validly signals the amplified moral significance of hierarchy, and more specifically, increased support for meritocracy, as the appraisal tendency framework would anticipate. I thus examine whether a stronger nonverbal pride display leads observers to infer greater support for meritocracy.

I also examine whether the pride display is a valid signal of support for meritocracy by testing whether it predicts actual support for meritocracy. The validity question is critical, in part because of its important implications for interpersonal behavior. As noted earlier, the detection of others' traits can improve interactions and individual fitness. Accurate inferences of others' moral beliefs and distributive justice orientations—predominantly meritocratic versus predominantly egalitarian—help observers adjust their expectations and behavior in a number of useful ways. For instance, the ability to distinguish between meritocratic and egalitarian individuals may help people anticipate whether another person will work hard to earn rewards versus expect to be taken care of by others or to receive equal shares regardless of input. It may also help people identify others who would be willing to share their hard-earned rewards. These expectations, in turn, can shape decisions about whether or with whom to initiate close relationships. For reasons such as these, the ability to reliably distinguish “rugged individualists” on the basis of nonverbal cues may be very valuable.

V. The Present Research

Three studies test two overarching claims. First, I investigate the moral inferences associated with the nonverbal pride display. I test the claim that expressing pride, relative to other emotions, leads observers to perceive senders as more likely to value meritocracy and less likely to value egalitarianism. Second, I examine whether the inferred meaning of the pride display predicts the real behavior of social actors, which would reveal the validity of the signal. Here, I analyze whether individuals prone to expressing pride do, in fact, advocate rewarding merit over establishing equality of outcomes.

I test these predictions across a variety of targets, including unfamiliar male and female individuals (Study 1 & 3), and perceptions of a well-known political figure (Study 2). Across studies, I contrast the nonverbal pride expression to either the nonverbal expression of joy, which features a large, Duchenne (genuine) smile, or to a neutral expression. The comparison to joy is crucial because, as with pride, joy signals positive feelings. However, it does not communicate appraisals of heightened status (Shariff & Tracy, 2009). As a result, any differences in the effects of the pride and joy expression on value inferences cannot be attributed to differences in the valence of an expressed emotion. Equally important, contrasting the pride expression against a neutral expression allows me to examine whether perceptions of pride influence observer inferences of support for meritocracy relative to the perceived absence of emotion. This comparison helps determine if shifts in perceived support for meritocracy are driven by perceptions of a target's pride, as predicted, rather than a comparison emotion.

As in past work on the relations between emotions and moral judgments, I primarily examine perceptions of support for meritocracy and egalitarianism in terms of general beliefs about how society “ought” to operate. Assessing general beliefs that have no direct implications for the target helps determine if, as I expect, pride conveys a message of increased moral support of meritocracy and not (solely) a selfish message of support for policies that benefit the self.

Study 1: Effects of the Pride Expression on Inferences of Support for Meritocracy in Unfamiliar Individuals

With as little as a single photograph, people quickly and easily decode the emotions of strangers, and use this information to make snap judgments about traits such as warmth, competence, dominance, submissiveness, and cooperative intent (Knutson, 1996; Reis et al., 1990; Verplaatse et al., 2007). Study 1 examined first impressions of support for meritocracy and egalitarianism with respect to unfamiliar individuals in photographs who displayed either the prototypical pride or prototypical joy expression.

I expected participants to perceive a target individual as more likely to endorse meritocracy and less likely to endorse egalitarianism when the target expressed pride compared to joy. Moreover, I examined two alternative hypotheses: 1) that these effects would differ by target gender, and 2) that these effects would be accounted for by how much participants liked the target. Regarding target gender, people stereotype men as more likely to experience and express pride (Plant, Hyde, Keltner, & Devine, 2000), which suggests the possibility that only men's expressions will be treated as a legitimate source of personality information. However, recent research shows that pride and joy

expressions are readily detected and used to interpret status in both male and female strangers (Tracy, Shariff & Cheng, 2010). Therefore, I expected that the hypothesized effects of pride displays on inferences of support for meritocracy would not vary depending on target gender.

Regarding target liking, I reasoned that participants may prefer targets when they express joy than pride, given that people form particularly positive impressions of individuals with large, sincere smiles—the hallmark of the joy expression (e.g., Reis et al., 1990). Given the positivity also attributed to characteristics of egalitarianism, such as cooperativeness (Anderson, 1968), it is possible that the proposed effects could be due to differences in positive views of the target, rather than to the role of emotion expressions in communicating moral beliefs. I therefore examine whether the hypothesized effects can be accounted for by target liking.

Method

Participants

Two hundred and forty undergraduate students (62% female, 5% unreported) participated in exchange for Psychology course credit. The mean age was 21 years old and the most common ethnicities were East or South Asian (53%) and Caucasian (30%).

Procedure

Participants completed a web-based survey (www.qualtrics.com) during mass testing sessions held at the start of the academic semester. First they provided demographic information. Next, following a number of filler tasks unrelated to this research, participants viewed and made ratings about one unfamiliar individual presented in a photograph. As a cover story, participants were told that the study investigated the accuracy of first impressions of the values and emotions of strangers. Participants were presented with one of eight images. The image depicted a Caucasian woman or man expressing either pride or joy. Participants estimated the target's level of support for meritocracy and egalitarianism, as well as the target's emotions. Finally, participants rated their level of liking of the target.

Materials

Target images. Static images of four unfamiliar target individuals (2 women, 2 men) were used in this research.¹ Each target was photographed posing the pride and joy expression, for a total of eight target images (see Appendix A for samples). Targets wore plain clothing and images showed their faces and torsos. Pride targets posed with their hands on their hips, heads tilted back slightly and a low intensity smile (Tracy & Robins, 2004). Joy targets posed with their arms at their sides and showed intense Duchenne smiles, which are smiles that involve the activation of muscles that lift the lip corners up and contract muscles surrounding the eyes.

Perceived support for meritocracy and egalitarianism. Drawing upon previous research (Rubinski, 1987), I created four meritocracy and four egalitarianism items (see Appendix B). Data from an independent sample of participants ($N = 26$) confirmed that meritocracy statements were viewed as representing an ideology of meritocracy whereas egalitarian statements represented an ideology of egalitarianism. These participants were

asked to rate the extent to which each statement reflected the view “that society should distribute resources and power according to merit, so people’s outcomes are determined by what they have earned” (meritocracy score) and the view “that society should distribute resources and power to create equality, so all people have equal outcomes” (egalitarianism score) on scales ranging from 1 (*Not at all*) to 7 (*Extremely*). All four meritocracy items received significantly higher meritocracy scores ($M = 5.87$) than egalitarianism scores ($M = 2.57$). All four egalitarian values statements received higher egalitarianism scores ($M = 5.45$) than meritocracy scores ($M = 3.22$), and the differences of three out of four items reached statistical significance.

In the main study, participants rated the extent to which the target would agree with each statement (1 = *Strongly disagree*, 5 = *Strongly Agree*). Ratings of the meritocracy items were averaged to create a meritocracy score ($\alpha = .70$). Egalitarian items were averaged to form an egalitarianism score ($\alpha = .70$). The two scores were negatively correlated ($r = -.53, p < .001$).

Target emotions. Participants estimated the extent to which the target tends to experience “pride” and “joy” (1 = *Not at all*, 7 = *Extremely*). These two items were embedded among filler emotions to conceal the purpose of the study.

Target liking. Participants reported how much they thought they would like the target (1 = *Not at all*, 7 = *A whole lot*).

Results

Preliminary Statistics

Confirming the effectiveness of the expression manipulation, participants rated the targets as significantly more likely to experience pride if exposed to the pride version of the target ($M = 4.44$) relative to the joy version ($M = 3.47$), $F(1, 232) = 80.93, p < .001$. They rated targets as significantly more likely to experience joy when exposed to the joy version ($M = 4.26$) relative to the pride version ($M = 3.77$), $F(1, 233) = 25.69, p < .001$.

Participants liked the targets significantly more when they expressed joy ($M = 4.73$) compared to pride ($M = 3.47$), $F(235) = 54.12, p < .001$, consistent with research demonstrating that joyful individuals are perceived as highly affiliative, social, and positive in general (Knutson, 1996; Reis et al., 1990). I therefore controlled for target liking in analyses reported below.

Central Analyses

To test the central hypothesis that participants would perceive proud targets as more likely to endorse meritocracy and less likely to endorse egalitarianism than joy targets, I conducted a 2 (Target expression) x 2 (Target values) mixed ANCOVA, controlling for target liking. There was no main effect of target expression ($F < 1$). A main effect of values emerged, wherein all targets were attributed stronger support for meritocracy ($M = 3.50$) than egalitarianism ($M = 3.32$), $F(1, 233) = 24.09, p < .001$. Most importantly, this was qualified by the predicted Expression x Values interaction, $F(1, 233) = 7.24, p < .01$.

To interpret the interaction, I separately examined the effects of target expression on meritocracy and egalitarianism scores, while controlling for target liking. As

predicted, targets were attributed stronger meritocracy scores when they expressed pride ($M = 3.69$) than when they expressed joy ($M = 3.31$), $F(1, 233) = 7.31, p < .01$. Conversely, targets were attributed stronger egalitarianism scores when they expressed joy ($M = 3.53$) than when they expressed pride ($M = 3.11$), $F(1, 235) = 3.85, p = .05$. Furthermore, within the pride expression condition, I found that support for meritocracy was significantly higher than support for egalitarianism, $F(1, 114) = 27.22, p < .001$. Within the joy condition, perceived support for egalitarianism was nonsignificantly higher than perceived support for meritocracy, $F(1, 118) = 1.85, p = .18$. Figure 1 depicts these patterns. Follow-up tests showed that target gender did not moderate the effect of the Expression x Values interaction on perceived support for meritocracy or perceived support for egalitarianism ($p > .15$).

Discussion

Study 1 provided the first evidence that, relative to nonverbal displays of joy, nonverbal displays of pride communicate greater support for meritocracy and reduced support for egalitarianism. Importantly, these effects emerged regardless of how well targets were liked and did not differ depending on targets' gender.

This initial study focused on first impressions of unfamiliar targets. It is feasible, however, that static emotion expressions only lead to perceptions of support for meritocracy and egalitarianism in strangers because little other relevant information is available. Study 2 therefore examined whether pride displays would evoke different inferences for a well-known figure, President Barack Obama.

Study 2: Effects of Barack Obama Nonverbal Pride Expression on Perceptions of His Meritocracy and Egalitarian Values

Study 2 builds on Study 1 in several respects. First, instead of snap judgments of strangers, I investigate the role of the pride display in guiding inferences about Barack Obama, a familiar individual who, in the eyes of the perceiver, may already be linked to a specific ideology. Given that people may have robust preconceived notions about Obama's values, Study 2 represents a more conservative test of my hypotheses.

Second, I compare the pride display to a neutral expression. This decision was partly motivated by pilot testing showing that images in which Obama wore a pure, prototypical expression of joy by scientific criteria (large Duchenne smile and no presence of pride cues), were perceived as equally high in pride and joy. This is perhaps not surprising; studies show that the positive emotional reactions of high-status individuals are often interpreted as high in pride, relative to lower-status individuals (Tiedens et al., 2000, Study 1b). Given these constraints, I was unable to compare the pride expression to an expression of joy. Additionally, an important advantage of using a neutral comparison is that, in conjunction with the results of Study 1, the anticipated results of this study would imply that any differences in perceived support for meritocracy are driven by the pride display, rather than a comparison expression. As a final extension, I tested my hypotheses in a community sample.

Method

Participants

One hundred and twenty-two participants (61% female, 2% unreported) were recruited online using Amazon Mechanical Turk (www.mturk.com). Participants were paid fifty cents in exchange for completing a web-based survey hosted on an external website (www.qualtrics.com). Participants' mean age was 34 years old and the most common ethnicities were Caucasian (69%), East or South Asian (22%) and African-American (6%).

Procedure

As a cover story, participants were told that the study investigated personality perceptions of various celebrities. They were then presented with one of two images of Barack Obama and informed that they would rate the celebrity in the photograph. The image either portrayed Obama expressing pride or no emotion. First, participants completed a task assessing perceptions of Obama's support for meritocracy and egalitarianism. Afterward, they rated their level of liking for Obama and perceptions of the emotions that Obama expressed in the image. Demographic data were gathered at the end of the survey.

Materials

Obama images. The pride and neutral images of Obama were publicly available, digital photographs posted on political and media websites. An initial pool of potential images was gathered by a team of individuals trained in the identification of emotion through nonverbal display. In the candidate pride images, Obama displayed one or more features of the prototypical pride display. Neutral images were selected by identifying images in which Obama gazed straight ahead and showed no discernible facial muscle movements, no discernible hand gestures and no meaningful postural movements. The two final images were selected on the basis of pilot data from an independent sample of participants ($n = 20$) who rated the extent to which Obama expressed feeling proud and neutral (1 = *Not at all*, 7 = *Extremely*) in each image. Pairwise comparisons of the images ultimately selected for use in the main study confirmed that Obama was rated as feeling prouder in the pride image ($M = 6.45$) than in the neutral image ($M = 2.50$), $p < .001$. He was rated as feeling more neutral in the neutral image ($M = 3.45$) than in the pride image ($M = 1.25$), $p < .001$. For the main study, both target images were set against a solid gray background (see Appendix A).

Perceptions of Obama's support for meritocracy and egalitarianism. Participants were presented with a series of quotes and instructed to estimate the likelihood that Obama had actually uttered each statement (1 = *Very unlikely*, 7 = *Very likely*). I created three categories of quotes: meritocratic, egalitarian and real (see Appendix B). Meritocracy and egalitarian quotes were created from the meritocracy and egalitarianism items used in Study 1. Additionally, I included six real quotes spoken by Obama during media appearances. This comparison would reveal whether there were baseline condition differences in participants' ability to recognize false quotes, which could confound results of the hypothesis tests. Ratings of meritocracy quotes were averaged ($\alpha = .76$), as were ratings of egalitarianism quotes ($\alpha = .57$) and real quotes ($\alpha = .60$). The meritocracy and egalitarianism scales were uncorrelated ($r = -.03$, *ns*).

Obama liking. Participants responded to the item: “Overall, how positive or negative is your opinion of this person” (1 = *Very negative*, 7 = *Very positive*).

Perceptions of Obama’s expressed emotions. Participants were presented with their randomly assigned image of Obama and asked to rate extent to which Obama expressed feeling “proud” and “neutral” (1 = *Not at all*, 7 = *Extremely*).

Results

Three IP addresses appeared twice in the data set, suggesting that three participants may have repeated the survey. In those three cases, I excluded data from the second time the survey was taken from that IP address.

Preliminary Statistics

Consistent with pilot tests, Obama was perceived as feeling significantly prouder in the pride expression condition ($M = 5.47$) than in the neutral expression condition ($M = 4.75$), $F(1, 116) = 6.58, p < .05$. He was perceived as feeling significantly more neutral in the neutral expression condition ($M = 4.09$) than in the pride expression condition ($M = 3.19$), $F(1, 118) = 8.86, p < .01$.

The degree to which participant’s liked Obama did not differ across the expression conditions, $F(1, 116) = .01, ns$. I therefore do not control for liking during central analyses.

Central Analyses

My central hypothesis is that participants exposed to images of Obama expressing pride would estimate that he was more likely to have spoken the meritocracy quotes, but not egalitarianism or real quotes, relative to participants exposed to images of Obama conveying a neutral expression. A 2 (Expression: Pride or Neutral) x 3 (Quotes: Meritocracy, Egalitarianism, Real) mixed ANOVA was conducted to test these predictions. A significant main effect of quotes emerged, wherein Obama was estimated as more likely to have spoken the egalitarianism quotes ($M = 5.15$) than the meritocracy quotes ($M = 3.42$) or real quotes ($M = 4.22$), $F(2, 232) = 85.49, p < .05$. More importantly, however, these main effects were qualified by the predicted Expression x Quotes interaction, $F(2, 232) = 3.68, p < .05$. To decompose the interaction, I examine the effects of expression condition separately for each category of quote. As predicted, participants were marginally more likely to attribute meritocracy quotes to Obama when exposed to the pride image ($M = 3.64$) than when exposed to the neutral image ($M = 3.17$), $F(1, 116) = 3.68, p = .058$. Attribution of the egalitarianism quotes and real quotes did not vary by expression condition ($ps > .20$). Figure 2 graphs these patterns.

Discussion

Study 2 found that recent exposure to an image of Barack Obama expressing pride led participants to infer that Obama was more likely to have made statements endorsing meritocracy than recent exposure to an image of Obama wearing a neutral expression. However, emotion expression did not affect perceptions of the likelihood that Obama had made statements reflecting egalitarianism, or statements that he actually had

spoken in the past. These results conceptually replicate the meritocracy findings from Study 1, but extend them to perceptions of a familiar political figure. I would argue that this extension is noteworthy due to the conservative nature of the test. The emotion expression prime was relatively subtle and participants almost certainly held pre-existing beliefs about Obama's character. I nevertheless detected an effect of the nonverbal pride expression on participants of Obama's support for meritocracy.

Unlike Study 1, Obama's expression of pride did not decrease inferences concerning his support for egalitarianism, relative to a control expression. There are several plausible reasons for these null findings. First, participants appeared to firmly believe in Obama's high egalitarianism (see Figure 2). These beliefs, quite likely pre-existing, may have been too fixed to be influenced by the expression primes. A second explanation concerns the expression stimuli. The images in this study were candid rather than posed, making it possible that Obama's expressions were more emotionally ambiguous than those of Study 1. This potential ambiguity could have weakened the influence of the pride expression on perceptions of Obama's support for egalitarianism.

Studies 1 and 2 yielded strong evidence of the role of the nonverbal pride display in communicating support for meritocracy. These findings beg an important question: Are observers' inferences veridical? This analysis will point to whether the pride display is a valid signal of support for meritocracy and enhances the accuracy of moral impressions.

In Study 3, I examine whether, during a real social interaction, the nonverbal pride display would predict actual behavior indicative of support for meritocracy. Additionally, I test whether these same nonverbal pride displays predict naïve observers' inferences of support for meritocracy, consistent with the first two studies.

Study 3: The Role of the Nonverbal Pride Display in Actual and Inferred Support for Meritocracy during Dyadic Interactions

Study 3 is a multi-method investigation of the claim that nonverbal pride displays reliably and accurately communicate level of support for meritocracy to social observers. To test this claim, I examine the two fundamental components of person perception: *cue validity* and *cue usage* (Ambady & Rosenthal, 1991; Borkenau & Liebler, 1992; Brunswick, 1956; Funder & Sneed, 1993).

First, I consider cue validity, which pertains to the type of behavioral cues that actually correlate with certain social attributes. Past work has shown that nonverbal displays of a distinct emotion correlate with social attributes related to the emotion's core appraisals, providing evidence that the display is a valid indicator of those attributes. As examples, facial expressions of anger are associated with attributing events to human rather than situational factors (Keltner, Ellsworth, & Edwards, 1993), and people with joyful, authentic smiles are higher in agreeableness, affiliation and extraversion (Harker & Keltner, 2001; Naumann, Vazire, Rentfrow, & Gosling, 2009). In the present study, I hypothesize that stronger nonverbal pride (but not joy) displays will predict participants' actual level of support for meritocracy and egalitarianism.

Second, I examine cue usage, or the nonverbal cues that observers use to infer which individuals possess an attribute of interest (regardless of whether or not those cues are valid). In past research, observers have been found to rely on nonverbal emotion

displays to infer an array of different attributes, including dominance, affiliation, competence and sociability (Harseli & Hess, 2010; Knutson, 1996; Zebrowitz & Montpare, 2008a, 2008b). Moreover, Studies 1 and 2 of the present research showed that observers tend to attribute stronger support for meritocracy and reduced support for egalitarianism to individuals with stronger nonverbal displays of pride. I test the same cue usage hypothesis in Study 3.

Study 3 also makes several important methodological advances. I test my cue usage and cue validity hypotheses using a thin-slicing paradigm (Ambady & Rosenthal, 1991), in which nonverbal displays emitted during a brief, potentially pride-eliciting event (discussing one's greatest strengths) are used to predict participants' actual meritocracy and egalitarianism beliefs as well as observer estimates of those beliefs. A major advantage of the thin-slicing approach is that it uses a more ecologically valid setting. Emotion expressions are real rather than posed, dynamic rather than static, and contextualized rather than independent of the social situation. Within this paradigm, I employ multiple methods to examine the proposed effects, including nonverbal coding of emotion expressions, narrative coding of participants' responses in an allocation task, and naïve observer ratings on several different scales assessing estimates of participants' support for meritocracy and egalitarianism.

Method

Participants

One hundred and six (55% female) undergraduates participated in exchange for Psychology course credit. Participants completed the study in pairs. Pairs were created through random assignment with the condition that partners not know one another. The most common ethnicities were East or South Asian (45%) and Caucasian (43%).

Procedure and Materials

This videotaped social interaction study was conducted in a 10- X 14-ft. laboratory room outfitted with partially concealed video cameras. Participants were aware of the cameras and gave consent both before and after the study session. Partners sat about three feet apart and cameras were positioned to film the full length of both participants. The experimenter explained that they would complete a mock job interview for a lab manager position. As part of this interview, participants took turns describing their greatest strengths. After completing other tasks, participants were seated at separate tables and privately reported how they would fairly divide a \$5,000 signing bonus between the self and partner based on the interview. Participants then wrote a paragraph to explain why they chose to divide the money as they did (i.e., their allocation strategy). To boost the validity of the money allocation task, participants learned that a panel of researchers would later read their responses. Those with the best responses would receive a free iPod. Demographic data were collected at the end of the study.³

Coding Pride and Joy Nonverbal Displays. For each participant, a team of three coders watched the video clip from the moment the participant began describing his or her greatest strengths until the moment he or she finished (average length: 26 seconds). The sound was muted and the participant's partner was concealed to prevent partner nonverbal behavior from influencing codes. Coders were informed of the anatomical

movements associated with pride displays, such as the backward head tilt, low intensity smile, and erect posture. They were also informed of movements that denote joy, namely the presence of a Duchenne smile.

After watching the clip, coders rated the overall intensity with which each participant expressed feeling “confident” and “joy” (0 = *Not at all*, 3 = *A whole lot*) while describing his or her strengths. In this study, I coded pride with the label “confident”—a term used to assess authentic pride in past research (Tracy & Robins, 2007)—because pre-tests revealed floor effects in ratings of “proud” ($M = .26$; $SD = .30$), but not ratings of “confident”. ($M = 1.67$; $SD = .59$). Supporting this operationalization, ratings of “confident” correlated substantially with ratings of “proud” ($r = .46^*$, $pr = .45^*$ controlling for “joy”) but not ratings of “joy” ($r = .14$, ns , $pr = .06$, controlling for “confident”).

Coders rated every videotape. Inter-rater reliabilities for “confident” (Cronbach’s $\alpha = .72$) and for “joy” ($\alpha = .75$) were satisfactory. I averaged across codes to create a nonverbal pride code and a nonverbal joy code for each participant.

Coding Participants’ Allocation Strategies. Four coders (three of whom had also coded the nonverbal expressions) read transcriptions of the participants’ allocation strategies, and coded the degree to which each strategy focused on merit and focused on equality. Specifically, they rated: “To what extent does the participant focus on splitting the money according to MERIT (i.e., performance in the interview task)?” and “To what extent does the participant advocate splitting the money EQUALLY, regardless of performance or any other factor?” (0 = *Not at all*, 3 = *A whole lot*). All coders rated every transcript. Cronbach’s alphas were .77 and .88 for the merit-focused and equality-focused allocation strategy codes, respectively. I averaged across coder ratings to arrive at final allocation strategy codes for each participant. The codes for meritocratic and egalitarian justifications were negatively correlated ($r = -.63$, $p < .001$).

Observer Inferences of Support for Meritocracy and Egalitarianism. An independent sample of 4 undergraduate naïve observers (3 male, 1 female) watched the clips of participants describing their greatest strengths. After each clip, they estimated the target participant’s support for meritocracy and egalitarianism on two types of measures. On the first measure, observers read the following description: *Suppose that later in the study, this person is asked to divide a pool of \$5000 between himself/herself and the partner in the mock interview. S/he must choose the fairest division and justify this division.* Observers then rated the likelihood with which the participant would (1) advocate dividing the money according to merit (performance in the interview), and (2) the likelihood that the participant would advocate dividing the money equally, regardless of performance or any other factor (1 = *Highly Unlikely*, 7 = *Highly Likely*). Cronbach’s alphas were .60 for estimates of merit-focus in the money allocation task and .52 for perceptions of equality-focus. For the second measure, the four observers rated each of the participants on the 4-item meritocracy and egalitarianism scales used in Studies 1 and 2. On this measure, Cronbach’s alpha was .82 for perceptions of support for meritocracy and .70 for perceptions of support for egalitarianism.

After finishing all ratings, observers underwent a funneled debriefing procedure that allowed me to check for conscious awareness of the role of nonverbal expressions in shaping impressions of target participants. Observers were asked to speculate on the research hypotheses, as well as to report any specific cues or information they used to

guide their ratings. None of the observers had deciphered the study hypotheses, nor did any report relying on emotion expressions to guide their ratings.

Results

One participant did not describe his greatest strengths. His data and his partner's data were removed from analyses.

Preliminary Analyses

First I tested for gender differences on all predictor and outcome variables. There were no actor gender differences in the amount of signing bonus money allocated to the self (vs. partner), or on the merit-focused and equality-focused codes. Consistent with past research on gender differences in emotion expression (Kring & Gordon, 1998), men expressed marginally more pride than women, whereas women expressed significantly more joy than men ($ps < .07$). With regard to thin slicing, women were viewed as more egalitarian and less meritocratic on both the money allocation strategy and scale measures ($ps < .05$). I control for actor gender in central analyses. Partner gender and the actor x partner gender interaction were unrelated to all predictors and outcomes with the exception that people allocated more money to male partners (\$2,537) than to female partners (\$2,268), $F(1, 98) = 7.32, p < .05$.

As in the previous studies, I sought to rule out the possibility that the predicted association between pride and perceived support for meritocracy, relative to joy and perceived egalitarianism, is due to observers' highly positive views of joyful individuals (Harker & Keltner, 2001; Reis et al., 1990). First, I tested the relationship of target liking to the other study variables. Naïve observers' ratings of the likeability of each target generally reached consensus ($\alpha = .67$), so I created an average liking score for each target. Target liking did not predict nonverbal pride or estimates of merit-focus on the money allocation task. However, liking was associated with greater nonverbal joy, higher estimates of equality-focus on the allocation task, and higher estimates of targets' scores on the meritocracy and egalitarianism values scales. I control for target liking in the thin-slice analyses.

Intraclass correlations examining the relationship between actor and partner expressions of emotion revealed a marginal positive relationship between actor and partner expressions of pride (ICC $r = .13, p = .088$), and a significant relationship for actor and partner expressions of joy (ICC $r = .24, p < .01$).

Cue validity: Do nonverbal pride displays predict actual support for meritocracy and egalitarianism?

My cue validity hypothesis was that participants who nonverbally express greater pride would be more likely to report allocating the \$5,000 between the self and partner on the basis of merit rather than equality. In contrast, I expected no relationship between nonverbal expressions joy and advocating merit versus equality. Since assumptions of independence of observations are violated in this study, data were analyzed using the actor-partner interdependence model (Kenny, Kashy & Cook, 2006).

The first model estimated the effects of nonverbal expressions of pride and joy on participants' actual level of merit focus in the money allocation task. The merit-focus

code was entered as the outcome variable. Codes of actor pride, actor joy, partner pride, and partner joy were entered as predictors. The actor pride x actor joy interaction was entered to examine the role expressions of pride at different levels of joy. Actor gender was included as a control variable. Results are depicted in Table 1. As expected, actor expressions of pride predicted a greater focus on merit on the part of the actor, whereas all other predictors were unrelated.

A similar second model examined the relationship of nonverbal expressions to the level of equality focus. There was a trend for actor pride to predict a reduced focus on equality, as I would anticipate, although this association was not statistically significant ($p = .11$). Interestingly, participants focused more on equality if their partner expressed greater pride. I speculate on this finding in the study discussion.

Altogether, the data support my hypothesis that expressions of pride are a valid indicator of an individual's belief in the value of meritocracy. However, an alternative interpretation of these results is that pride, being a self-conscious emotion, signals increased selfishness. Perhaps the prouder participants apportioned a greater share of the money to the self, and then endorsed a meritocratic allocation strategy merely to justify their selfish decision. To test this explanation, I examined the number of dollars allocated to the self versus partner using the same predictors as above. Contrary to the alternative hypothesis, there was no relationship between expressing pride and allocating money to the self versus partner ($ps > .40$).

Cue usage: Do nonverbal pride displays predict observer estimates of participant support for meritocracy and egalitarianism?

The next set of analyses tested the hypothesis participants with stronger nonverbal pride (but not joy) displays in the video clips would be rated by observers as more meritocratic rather than egalitarian. I analyzed two different measures: estimates of support for meritocracy and egalitarianism in participants' justifications for their monetary allocations and in estimates of their broader moral beliefs, relative to participants with weaker nonverbal pride displays. Four separate analyses were conducted to examine observer estimates of the two allocation strategies and observer estimates on the meritocracy and egalitarianism scales used in Studies 1 and 2. Predictors in each model were actor and partner joy and pride, the actor pride x actor joy interaction, as well as the control variables of target gender and target liking.

Table 2 presents the results. As expected, observers attributed a stronger merit-focused allocation strategy and a weaker equality-focused allocation strategy to participants who had been coded as having stronger nonverbal pride displays. Nonverbal joy was unrelated to estimates of allocation strategies. Observers also attributed higher scores on the meritocracy items from Studies 1 and 2. With respect to egalitarianism items, a significant Actor confidence x Actor joy interaction emerged. A pattern generally consistent with our conceptual model emerged: individuals with weaker pride expressions were especially likely to be perceived as higher in egalitarianism if they strongly expressed joy. Finally, similar to the unanticipated cue validity findings reported above, I found that participants were viewed as less likely to engage in a merit-focused allocation strategy and more likely to engage in an equality-focused strategy if they had a partner who strongly expressed pride.

Discussion

Study 3 revealed a “kernel of truth” in people’s assumptions of the beliefs communicated by the nonverbal pride display. Pride provided an accurate signal, at least in part, of support for meritocracy to social observers. Individuals who displayed more pride while discussing their most positive characteristics were more likely to advocate dividing a (fictitious) sum of money between the self and partner on the basis of merit instead of equality. Importantly, they did not allocate a greater share of the money to themselves than to their partners, suggesting that their support for meritocracy in this study was not merely an attempt to justify selfish decisions.

Furthermore, and consistent with the first two studies, observers who viewed the thin slices of emotional behavior estimated that the high-pride expressers would advocate meritocracy, rather than egalitarianism, both in the context of the money division task, and with respect to general beliefs about how society ought to function. As in Study 1, I conclude that these results were not due to the positive valence of the pride expression because perceived support for meritocracy was unrelated to level of expressed joy.

I submit that the social inferences in this study occurred automatically. Using a funneled debriefing, I found no evidence that observers were aware of their tendency to associate nonverbal pride displays with greater support for meritocracy. None of the thin-slice observers had noticed a link between nonverbal expressions and their impressions of the participants, nor did they detect my interest in investigating the role of emotion expression in impression formation. The notion that pride may automatically or unconsciously communicate support for meritocracy fits within evolutionary perspectives of emotion. These perspectives hold that emotion expressions serve to communicate social information in a highly swift, efficient manner. Relevant empirical work shows that conscious awareness of an expression is not required to influence a perceiver’s interpretation of events, actions or people (Willis & Todorov, 2006; Winkielman, Berridge, & Wilbarger, 2005). Moreover, other thin-slicing effects have been found to emerge without awareness on the part of the participant (Chaikin, Sigler, & Derlega, 1974). As well, the nonverbal pride expression is known to automatically activate assumptions about the sender’s high status (Shariff & Tracy, 2009). Overall, it seems that the pride-based moral inferences of this study occurred automatically.

Unexpectedly, while holding constant actor nonverbal pride and joy displays, I found that participants paired with a high pride-expressing partner were more likely to emphasize equality when justifying their monetary allocations. Moreover, observers—despite having no knowledge of the partner’s expressions—estimated that participants would emphasize equality and de-emphasize merit in their justifications if their partner had a strong pride expression. In other words, partner expressions independently influenced participants’ decisions about how to divide the money. Even more interestingly, observers picked up on this information just by watching the actor. It is not clear why these patterns emerged, but it is possible that participants’ egalitarian reactions to pride-expressing partners may have been leaked to observers through nonverbal cues not explored in this study, such as other facial expressions, gaze, posture, or hand gestures. These inquiries are worthy of further investigation.

It is worth seeking to replicate and understand these effects in future investigations.

In sum, Study 3 once again illustrated that social observers are more likely to attribute meritocracy beliefs to individuals who express greater pride—but this time these patterns were revealed using genuine, dynamic emotion displays that unfolded spontaneously during a relevant social interaction. Importantly, Study 3 depicted the validity of the pride signal. Participants who expressed greater pride were more likely to focus on merit and performance when selecting a fair division of a resource between the self and a partner. These results illustrate that people who expressed pride are not only *perceived* as more likely to value meritocracy, they actually *are* more likely to value meritocracy.

VI. General Discussion

Expressions of emotion shape the course of human interactions. They alert current and potential relationship partners to feeling states, personality traits and, I suggest, beliefs about morality and distributive justice. In particular, the nonverbal pride display is theorized to help groups establish social hierarchies, which are necessary for group stability and coordination, by clearly signaling individuals who deserve high status.

Consistent with this function and with appraisal-tendency frameworks, the present research demonstrated that nonverbal displays of pride communicate enhanced support for meritocracy, which is a hierarchy-enhancing form of resource distribution that selectively endows successful, high-achieving individuals with greater access to material and social goods. Social observers inferred that a target would be more likely to endorse meritocracy if the target appeared proud, rather than joyful or neutral. I found this pattern using targets diverse in gender, ethnicity, occupation and familiarity. Furthermore these patterns held across different perceptual modalities (static images, thin slices) and assessment methods (general beliefs about society, specific allocations between the self and partner).

In Study 1, participants estimated that an unfamiliar target presented in a photograph would endorse meritocracy to a greater extent, and egalitarianism to a lesser extent, if the target appeared proud. The opposite pattern emerged when targets appeared joyful. Study 2 extended these effects to perceptions of President Barack Obama. Participants primed with an image of Obama expressing pride were more likely to believe that Obama had uttered meritocracy-related statements than participants primed with an expressionless image of Obama. Finally, in Study 3, targets who expressed greater pride in the context of a mock interview were more likely to exhibit support for meritocracy on a money allocation task. They were also viewed by observers as more likely to support meritocracy during the money allocation task, and in terms of broader social values that would not bear directly on the target. These results portray that observers correctly base their assumptions of others' support for meritocracy on expressions of pride.

This research presents the first evidence that observers rely on expressions of pride to construct their moral impressions of others. However, it cannot speak directly to the psychological mechanisms that underlie the phenomenon. I speculate that the experience of pride involves both the initiation of a recognizable nonverbal display and an increase in social perceptions that promote hierarchy, such as support for meritocracy. Observers, perhaps automatically, correctly use the nonverbal display to infer the social perceptions. Why would observers implicitly or explicitly know to associate nonverbal

pride with hierarchy-enhancing beliefs? It may be through personal experience of pride-based shifts in moral beliefs or through repeated exposure to proud individuals who made their hierarchy-enhancing beliefs clearly known (see Tiedens et al., 2001 for similar arguments). The present data can neither confirm nor disconfirm this speculation, however, and it remains an important task for future research.

Contributions to the Embodiment and Person Perception Literatures

Findings of the present studies make important contributions to the flourishing literatures on embodiment and thin slicing. First, these studies are among the few to document emotion specificity in embodiment effects. Past embodiment research has predominantly examined the link between expressions of positive versus negative affect to different social perceptions (but see Schnall, Benton, & Harvey, 2008 for relevant work on embodied disgust and moral judgment). Few studies have explored differences between like-valenced emotions, such as pride versus joy. Yet emotions evolved to help humans confront the myriad challenges and opportunities afforded by social living. An emotion's unique cognitive elements (appraisals, shifts in judgment) and unique embodied elements (nonverbal displays, physiological reactions, neuroendocrine responses) enable adaptive behavior given current circumstances (Frijda & Mesquita, 1994; Keltner & Haidt, 1999). Consequently, we should find positive associations between emotion-specific changes in the body and emotion-specific changes in cognition. Study 3 found precisely this relationship with respect to pride: stronger displays of pride in the body predicted stronger support for meritocracy in a subsequent task.

In turn, the perception of emotion-specific embodiments, like nonverbal expressions, helps interaction partners rapidly interpret traits critical to the negotiation of group relations, such as beliefs about resource distribution. Beyond illustrating the values associated with the pride expression, I introduce an appraisal-tendency approach to understanding thin-slicing and zero-acquaintance effects in impression formation. Just as emotion experiences amplify specific moral beliefs (Horberg, Oveis, & Keltner, 2010), so too do emotions' nonverbal cues signal these beliefs to others. This theoretical contribution is notable given that previous research on emotion and morality has concentrated on the role of emotions in shaping an individual's own moral judgments. Fewer studies have linked the intrapersonal effects of discrete emotions (shifting moral beliefs in specific, functional ways) to the interpersonal effects of the emotion (conveying those beliefs to others), as these studies have attempted to do.

Ultimately, this kind of research is poised to reveal the far-reaching moral implications of emotion, from understanding how we interpret the actions of others to the way we unconsciously shift one another's moral intuitions—areas of inquiry that have been highlighted in theory (e.g., Haidt & Bjorklund, 2008; Haidt & Kesebir, in press) but rarely before touched in research.

VII. References

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VIII. Footnotes

¹ Images of one of the male targets came from the UC Davis Set of Emotion Expressions (<http://ubc-emotionlab.ca/research/#Ucdavis>).

² For all studies, no results changed when controlling for participant gender or ethnicity.

³ Aspects of the experimental procedure are described in Kraus and Keltner (2009). Some demographic data reported here are published in the same article. No other data or analyses from this study are published.

IX. Appendix

Sample Images of Nonverbal Displays of Joy and Pride used in Study 1



Target Images of Neutrality and Pride used in Study 2



Meritocracy and Egalitarian Items used in Study 1

Meritocracy items

1. Scholarships should be based more on merit than on need.
2. It is okay for some people to have better lives if they earned it.
3. Society should be structured so that people who are successful, competent or accomplished gain social status and power.
4. It is to everyone's benefit--not just some people's benefit--that highly capable people have more power and influence than less capable people.

Egalitarian items

1. Society should provide resources and services free-of-charge to people who cannot afford them.
2. People who earn larger incomes should pay higher taxes than people with smaller incomes.
3. There is never a time when it's okay for some people to get more than others, no matter what they have accomplished.
4. It is important to treat all individuals as equals, no matter who they are.

Meritocracy, Egalitarian and Real Quotes used in Study 2

Meritocracy Quotes

1. "I stand by what I said. It is absolutely the ethical course of action...that [college] scholarships should be based more on merit than on need."
2. "I believe I've been very clear [about my position]. Society should be structured so that people who are successful, competent or accomplished gain social status and power."
3. "It is to everyone's benefit---not just some people's benefit---that the highly capable person has more power and influence than the less capable person."

Egalitarian Quotes

1. "This country should provide resources and services free-of-charge to people who cannot afford them. Period."
2. "It's a simple matter of right and wrong. People who earn larger incomes should pay higher taxes than people with smaller incomes."
3. "There is never a time when it's okay for some people to get more than others...no matter what they have accomplished."
4. "Senator, what you're saying is that it's okay for some people to have better lives if they earned it. What I'm saying is that this is wrong, and it has to stop."
5. "We must treat all individuals equally, no matter who they are."

Real Quotes

1. "Americans... still believe in an America where anything's possible - they just don't think their leaders do."
2. "The thing about hip-hop today is it's smart, it's insightful. The way they can communicate a complex message in a very short space is remarkable."
3. "Contrary to the rumors you have heard, I was not born in a manger. I was actually born on Krypton and sent here by my father Jor-El to save the Planet Earth."
4. "We can't drive our SUVs and eat as much as we want and keep our homes on 72 degrees at all times... and then just expect that other countries are going to say OK. That's not leadership. That's not going to happen."
5. "I know my country has not perfected itself. At times, we've struggled to keep the promise of liberty and equality for all of our people. We've made our share of mistakes, and there are times when our actions around the world have not lived up to our best intentions."
6. "If I had to name my greatest strength, I guess it would be my humility. Greatest weakness, it's possible that I'm a little too awesome."

X. Tables and Figures

Table 1. Relationship of Nonverbal Expressions to Allocation Strategies (Study 3)

		Allocation Strategy	
		Merit-focused	Equality-focused
Actor Pride	β	.16*	-.13
	SE β	.07	.08
	t	2.13	1.60
Actor Joy	β	-.11	.02
	SE β	.08	.10
	t	1.30	.23
Partner Pride	β	-.04	.19*
	SE β	.07	.08
	t	.50	2.92
Partner Joy	β	-.07	.15
	SE β	.08	.09
	t	.96	1.71
Actor Pride x Actor Joy	β	.10	-.07
	SE β	.07	.08
	t	1.41	.97
Gender	β	-.07	-.01
	SE β	.07	.08
	t	.94	.11

Note: Gender is coded -1 (Women) and 1 (Men); * $p < .05$

Table 2. Relationship of Nonverbal Expressions to Observer Estimates of Allocation Strategies, Meritocracy and Egalitarian Values (Study 3)

		Observer estimates of Allocation Strategies		Observer estimates on Meritocracy and Egalitarianism scales	
		Merit-focused	Equality-focused	Meritocracy scale	Egalitarian scale
Actor Pride	β	.34*	-.14*	.11*	-.05
	SE β	.08	.06	.05	.04
	t	4.15	2.15	2.34	-1.50
Actor Joy	β	-.03	-.05	-.07	.03
	SE β	.10	.08	.06	.04
	t	.34	.68	1.23	.50
Partner Pride	β	-.17*	.13*	.02	.07
	SE β	.08	.06	.04	.04
	t	2.22	2.20	.50	1.96
Partner Joy	β	-.05	-.08	-.05	-.01
	SE β	.08	.06	.05	.04
	t	.56	1.17	-1.01	.21
Actor Pride x Actor Joy	β	-.01	.08	.04	-.09*
	SE β	.09	.07	.05	.04
	t	.13	1.26	.82	2.42
Gender	β	.18*	-.07	.10	-.16*
	SE β	.08	.06	.05	.08
	t	2.19	1.15	2.08	2.37
Target Liking	β	-.06	.14*	-.06	.08*
	SE β	.08	.06	.04	.04
	t	.80	2.33	1.50	2.37

Note: Gender is coded -1 (Women) and 1 (Men); * $p < .05$

Figure 1. Effects of Pride and Joy Displays on Targets' Values (Study 1)

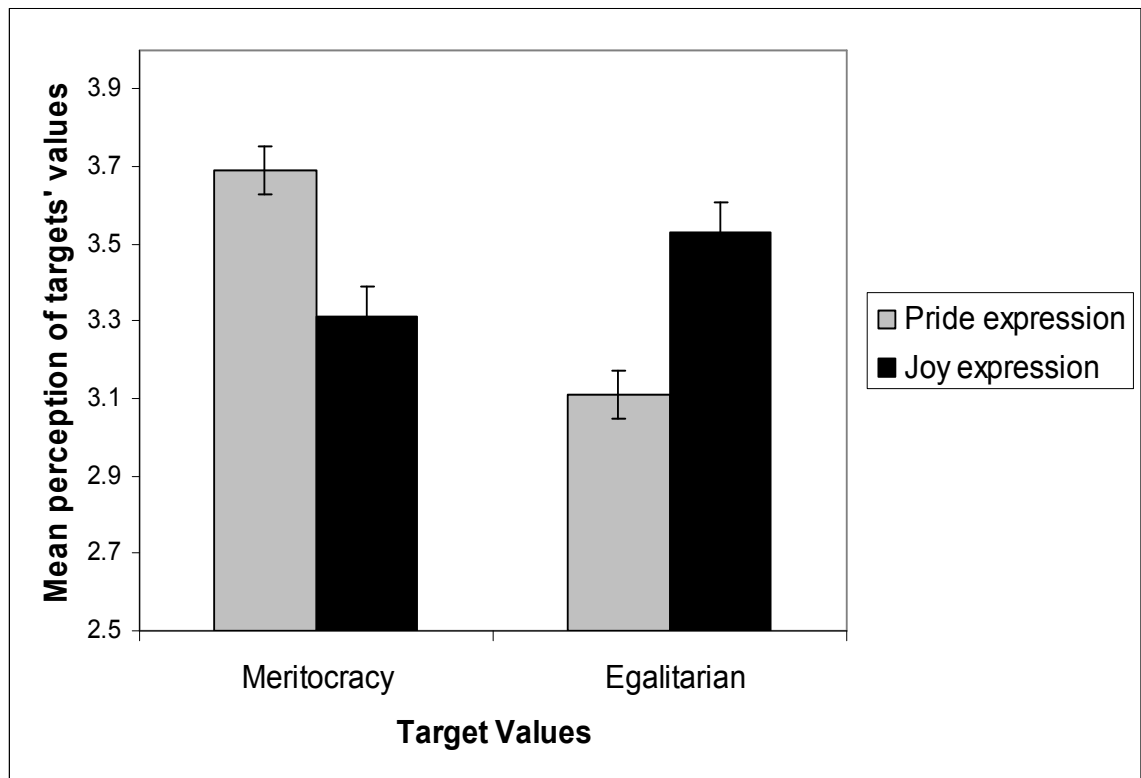


Figure 2. Effects of Obama Expression on Perceptions of Obama's values (Study 2)

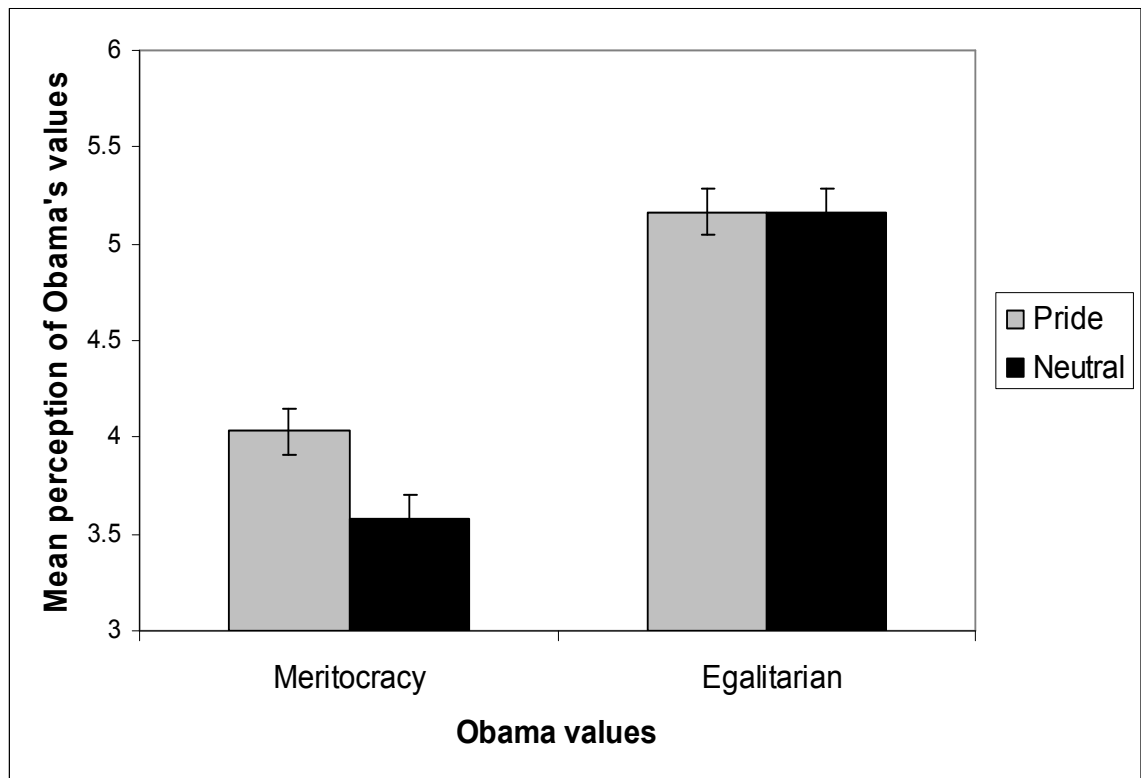


Figure 3. Observer Estimates of Target Participants' Egalitarianism as a Function of the Strength of Nonverbal Pride and Joy Expressions (Study 3)

