Research Report

Show Your Pride

Evidence for a Discrete Emotion Expression

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ABSTRACT—*Three experiments provide converging evidence that pride has a distinct, recognizable expression. Experiment 1 showed that judges can agree in identifying a posed expression as showing pride and can reliably distinguish pride expressions from expressions of related emotions such as happiness. Experiment 2 showed that judges can identify the pride expression when the task uses an open-ended response format that does not cue them with the label "pride." Experiment 3 showed that the pride expression includes a small smile, with head tilted slightly back, visibly expanded posture, and arms raised above the head or hands on hips. Overall, these findings challenge the assumption that all positive emotions share the same expression, and suggest that pride may be added to the pantheon of basic emotions generally viewed as evolved responses.*

Building on Darwin's (1872) seminal work on the expression of emotions, contemporary researchers have argued that emotions evolved, in part, to communicate needs that facilitate survival and reproduction, and that, consequently, each emotion should have a unique signal reflecting its evolutionary origins. Supporting this perspective, research has demonstrated that there is a universally recognized nonverbal expression for each of the so-called basic emotions: anger, disgust, fear, happiness, sadness, surprise, and possibly contempt and embarrassment (Ekman, 1992). Happiness is the only positively valenced emotion on this list, leading researchers to conclude that all positive emotions share the same expression (Ekman, 1992; Fredrickson & Branigan, 2001). Thus, evidence that pride has its own distinct expression would overturn this assumption and imply that pride may have evolved to serve a particular communicative function.

Pride is an important emotion that plays a critical role in many domains of psychological functioning (Tracy & Robins, in press). Feelings of pride reinforce prosocial behaviors such as achievement and caregiving. The loss of pride, in the form of humiliation or ego threats, can provoke aggression. The regulation of pride is intrinsically linked to the regulation and maintenance of self-esteem. In fact, pride is the emotion (along with shame) that gives self-esteem its affective kick (Brown & Marshall, 2001), and self-esteem in turn influences a wide range of intrapsychic and interpersonal processes.

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Specifically, feelings of pride may boost self-esteem and thereby alert an individual that his or her behavior (or self) is valued by others. The expression of pride may serve a complementary adaptive function, drawing attention to the individual and alerting the social group that he or she merits increased acceptance and status.

Despite its theoretical importance, pride has received relatively little empirical attention. Yet, in 1872, Darwin wrote, "Of all the complex emotions, pride, perhaps, is the most plainly expressed . . . a proud man exhibits his sense of superiority over others by holding his head and body erect" (p. 263). A handful of studies have indirectly addressed this possibility by examining the nonverbal behaviors shown after success experiences (Belsky & Domitrovich, 1997; Kasari, Sigman, Baumgartner, & Stipek, 1993; Lewis, Alessandri, & Sullivan, 1992; Stepper & Strack, 1993; Weisfeld & Beresford, 1982). The findings from these studies point to some possible components of a pride expression, including an expanded posture, upward or spread-out positioning of the arms, positioning of the head up and tilted back, and a smile. However, none of these studies tested whether pride has a recognizable nonverbal expression. This was the goal of the present research.

EXPERIMENT 1

Method

Judges
Fifty-six undergraduate students (87% women) participated for course credit.

Stimuli
Male and female targets posing expressions of pride, happiness, and surprise were photographed from the waist or shoulders up. Happiness and surprise were included because they are theoretically similar to pride and typically elicit the highest recognition rates of any basic emotions. The instructions for posing pride were based on previous research (Belsky & Domitrovich, 1997; Kasari et al., 1993; Lewis et al., 1992; Stepper & Strack, 1993; Weisfeld & Beresford, 1982); the instructions for posing happiness and surprise were based on the directed facial action task (DFA; Levenson, Carstensen, Friesen, & Ekman, 1991). We selected 10 photos that represented a variety of possible pride expressions and 19 photos that were good representations of happiness and surprise.

Procedure

Each photo was projected onto a large (4 × 6 ft.) screen for 30 s. Judges were told to choose from a list of options the emotion that "best matches the emotion expressed by the person in the photo." The options were "happiness," "pride," "surprise," and "no emotion."

Results and Discussion

All 10 potential pride expressions were identified as pride at greater-than-chance frequencies ($M = 83\%$, range = 73–95%, all $ps < .01$).[1] These frequencies were comparable to those for happiness ($M = 79\%$, range = 63–98%) and surprise ($M = 96\%$, range = 95–98%). Happiness and surprise photos were almost never identified as pride ($Ms = 5\%$ and 0%, respectively).

These findings suggest that individuals can agree on a pride expression and can distinguish it from happiness and surprise expressions.[2] However, Experiment 1 used a forced-choice response format, which may have inflated agreement by constraining responses (Russell, 1994). In Experiment 2, we examined whether judges can identify a pride expression when the task uses an open-ended response format that does not cue them with the label "pride."

EXPERIMENT 2

Method

Judges

Ninety-six undergraduate students (69% women) participated for course credit.

Stimuli

The six photos that were identified as pride with the highest frequencies in Experiment 1, as well as the six best happiness and three best surprise photos, were included as stimuli.

Procedure

Experiment 2 used the same procedure as Experiment 1, except that judges were asked an open-ended question, "Which emotion is being expressed in this photo?"

Results and Discussion

The open-ended format generated a range of responses. Eight undergraduate students (blind to the photos and the goals of the experiment) rated the extent to which each response was prototypical of pride using a 5-point Likert scale (α reliability = .92). Responses were classified as "pride related" if the mean prototypicality rating was greater than or equal to the midpoint of the scale (3.0), and as "not pride related" if the mean was less than the midpoint of the scale. For example, "proud," "triumphant," and "self-confident" were classified as pride related, whereas "happy" and "angry" were not. All six pride photos were identified as pride related at greater-than-chance frequencies

($M = 64\%$, range = 57–82%, $p < .01$).[3] These frequencies are similar to those found in previous studies of basic emotions that used an open-ended response format (range = 50–97%; Boucher & Carlson, 1980). Only 3% of responses to happiness photos and 1% of responses to surprise photos were classified as pride related.

EXPERIMENT 3

Together, Experiments 1 and 2 demonstrated that expressions identified as pride generally include some degree of smile, head tilt, and expanded posture, with the hands on the hips or the arms raised above the head. To better understand the precise features of the pride expression, in Experiment 3 we manipulated these potentially relevant components and examined the effects on pride recognition.

Method

Judges

One hundred seventy-eight undergraduate students (70% women) participated for course credit.

Stimuli

Male and female targets posed expressions of pride, happiness, surprise, and contempt. Each target posed eight pride expressions, crossing small versus large smile, head tilted slightly (15°) versus farther back (30°), and arms raised above the head versus hands on hips. Happiness, surprise, and contempt were posed using DFA instructions; however, bodily components were added for a second surprise expression and a second contempt expression. Specifically, in one version of the surprise expression, targets posed the facial muscle movements as specified by the DFA, and in the second version, they posed these same muscle movements but also raised their arms in front of them, with a slight bend at the elbows. Similarly, in one version of the contempt expression, targets posed the facial muscle movements as specified by the DFA, and in the second version, they posed the same muscle movements but also tilted their head slightly (about 15°) back. Two photographs were taken of each pose—one from the waist up (*upper body*) and one from the shoulders up (*head and shoulders*)—so that we could test whether pride recognition requires a visibly expanded posture. Thus, 16 potential pride expressions were available from each target. Each judge viewed 2 of these expressions as posed by all targets, so that smile intensity and head tilt were manipulated between subjects, and arm position and visible posture were manipulated within subjects.

Procedure

Each photo was projected onto a large screen for 30 s. For each photo, judges chose one of the following response options: "boredom," "contempt," "excitement," "happiness," "pride," "surprise," "none of these are correct," and "other: ___." Boredom, excitement, and contempt were added as options because these words were occasionally

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[1]Chance was conservatively set at 33% in all experiments.

[2]Judges' gender and ethnicity did not moderate the rate at which pride expressions were identified in this experiment or in Experiments 2 and 3, with the exception of a single photo in Experiment 2 that was recognized less well by men than by women.

[3]We also analyzed whether the continuous prototypicality ratings differed for the three categories of photos. The results were consistent with the results of the analysis using the dichotomous classification: Responses to pride photos were significantly more prototypical of pride than responses to happiness or surprise photos (standardized mean difference = 1.75 and 3.29, respectively, $ps < .01$).

applied to pride photos in Experiment 2. The "none of these are correct" option was added to improve upon the forced-choice format (Frank & Stennett, 2001).

Results

Two expressions received the highest frequencies of pride identification ($Ms = 74\%$ and 77%, averaged across targets, both $ps < .01$), and thus represent the most prototypical expressions of pride. These expressions included a small smile, with the head tilted slightly back, fully visible expanded posture (i.e., upper body), and either arms raised or hands on hips. The two best exemplars of these expressions, shown in Figure 1, were identified as pride by 87% and 89% of judges. Comparable frequencies were found for happiness ($M = 78\%$) and surprise ($M = 86\%$) expressions, and lower frequencies were found for contempt ($M = 35\%$) expressions.

However, identification rates (averaged across the targets) varied considerably across the 16 potential pride expressions (range = 23–77%), indicating that certain components are necessary for recognition of a pride expression. An analysis of variance (ANOVA) showed that pride identification was higher for expressions with (a) a small rather than a large smile, $F(1, 151) = 15.51$, $p < .01$; (b) head tilted slightly rather than far back, $F(1, 151) = 6.24$, $p < .05$; (c) arms raised rather than hands on the hips, $F(1, 151) = 29.98$, $p < .01$; and (d) a visibly expanded posture rather than only head and shoulders visible, $F(1, 151) = 192.29$, $p < .01$.[4] These main effects, except for the main effect of arm position, are consistent with the two most prototypical expressions shown in Figure 1.[5]

GENERAL DISCUSSION

These three experiments demonstrate that pride has a distinct, recognizable nonverbal expression. This expression can be distinguished from expressions of other positive emotions and states (e.g., happiness, excitement), as well as from expressions of negative emotions and states (e.g., contempt, boredom). The pride expression can be identified when judges use either a forced-choice or an open-ended (i.e.,

[4]We collected additional data to test whether pride can be recognized when targets show the bodily component of the pride expression with none or part of the facial components (e.g., a neutral expression). Forty-one undergraduate students viewed photos of targets posing eight pride expressions, crossing smile (none, small), head tilt (none, slight), and arm position (raised, hands on hips). Judges also viewed photos of targets posing anger, fear, happiness, sadness, and surprise. Consistent with our expectations, an ANOVA showed that pride identification was higher for expressions with (a) a small smile rather than no smile, $F(1, 38) = 35.30$, $p < .01$; (b) slight rather than no head tilt, $F(1, 38) = 68.00$, $p < .01$; and (c) arms raised rather than hands on hips, $F(1, 38) = 22.42$, $p < .01$. The only expressions recognized as pride at greater-than-chance frequencies (with chance set at 33%) were the two prototypical expressions identified in Experiment 3 (small smile, slight head tilt, arms raised or hands on hips); this pattern was reflected in a three-way interaction of smile, head tilt, and arm position, $F(1, 38) = 16.07$, $p < .01$.

[5]To test whether pride can be recognized from the face alone, we asked 85 undergraduate students to view cropped photos (showing only the face) of the two best pride expressions and all happiness, surprise, and contempt expressions from Experiment 3. Pride recognition was not greater than chance for any of the pride photos ($M = 24\%$; range = 11–38%). In all cases, identification rates were significantly lower for the face-only pride photos than for the uncropped upper-body photos, $ps < .01$. This finding, combined with the null finding for neutral facial expressions (i.e., no smile, no head tilt) described in footnote 4, suggests that both the face and the body are necessary for recognition of a pride expression.

Fig. 1. Prototypical pride expressions. The expression in the upper panel was identified as pride by 89% of judges; the expression in the lower panel was identified as pride by 87% of judges (see Experiment 3).

participants are not cued by the label "pride") response format, and when they are free to choose "no emotion," "none of these," and "other" as a response. Finally, the pride expression is as recognizable as expressions of basic emotions; across the three experiments, the pride-recognition rate was comparable to rates found previously for basic emotions (range = 69–97%; Ekman, Sorenson, & Friesen, 1969).

These findings have several broad implications. First, pride can be added to the pantheon of emotions that have distinct, recognizable expressions. This finding challenges the assumption that all positive emotions share the same nonverbal expression. More generally, the identification of a distinct signal raises the possibility that pride is an evolved response. If the pride expression is a product of natural

selection, then it may have evolved to serve a particular communicative function, perhaps to convey an individual's success to others and thereby promote social status. For example, the expanded posture associated with the expression may attract attention to the individual and create the impression of largeness (which conveys dominance), and the slight head tilt may allow the individual to gaze above the masses, conveying superiority.

A second broad implication of the present research is that nonverbal expressions of emotion are not restricted to the face. The prototypical pride expression involves nonfacial components: Pride recognition was significantly reduced when the expression was restricted to the head and shoulders, and was not greater than chance when the expression was restricted to the face (see footnote 5). However, body posture alone cannot signal pride, as the expression could not be recognized without the presence of the associated facial components (see footnote 4).

A third implication of the present findings is that they provide the basis for coding participants' feelings of pride from their observed nonverbal behavior. In other words, researchers who expect pride emotional responses in their experiments can assess the occurrence of such responses by coding for the presence or absence of the components of the pride expression. A nonverbal coding scheme will facilitate research on the antecedents, outcomes, and functions of pride in a wide range of contexts.

The present findings suggest several other directions for future research. First, studies are needed to better delineate the components of the expression, specifying the exact musculature and body movements involved.

Second, studies are needed to determine whether individuals experiencing pride in naturalistic settings display nonverbal behaviors consistent with the posed expression documented in the present research. It seems likely that this will be the case, because, as Ekman (1973) noted, it is unclear how judges could reach agreement on posed expressions if the poses do not represent expressions that occur spontaneously.

Third, studies are needed to explore the universality of the pride expression.[6] For example, can judges from a culture with minimal access to Western visual media recognize the expression? If so, this would provide further support for the hypothesis that pride is a product of natural selection.

Fourth, studies should examine the social outcomes of the pride expression (e.g., does the expression convey leadership abilities?). Such studies will shed light on the proximal functions of pride, which likely involve motivating prosocial behaviors, and on the more distal functions, which may involve communicating dominance and status. In general, we hope that by demonstrating that pride has a unique nonverbal expression, the present research will provide a foundation for future studies on this important emotion.

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[6]In another study, we found that 28 judges who were born, raised, and living in Italy showed high recognition for the pride expression ($M = 78\%$), suggesting that the expression generalizes at least across Western cultures.