

Original Article

# Pride, personality, and the evolutionary foundations of human social status

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## Abstract

Based on evolutionary logic, Henrich and Gil-White [Evolution and Human Behavior, 22(3), 165–196] distinguished between two routes to attaining social status in human societies: *dominance*, based on intimidation, and *prestige*, based on the possession of skills or expertise. Independently, emotion researchers Tracy and Robins [Journal of Personality and Social Psychology, 92(3), 506–525] demonstrated two distinct forms of pride: *hubristic* and *authentic*. Bridging these two lines of research, this paper examines whether hubristic and authentic pride, respectively, may be part of the affective-motivational suite of psychological adaptations underpinning the status-obtaining strategies of dominance and prestige. Support for this hypothesis emerged from two studies employing self-reports (Study 1), and self-and peer-reports of group members on collegiate athletic teams (Study 2). Results from both studies showed that hubristic pride is associated with dominance, whereas authentic pride is associated with prestige. Moreover, the two facets of pride are part of a larger suite of distinctive psychological traits uniquely associated with dominance or prestige. Specifically, dominance is positively associated with traits such as narcissism, aggression, and disagreeableness, whereas prestige is positively associated with traits such as genuine self-esteem, agreeableness, conscientiousness, achievement, advice-giving, and prosociality. Discussion focuses on the implications of these findings for our understanding of the evolutionary origins of pride and social status, and the interrelations among emotion, personality, and status attainment. © 2010 Elsevier Inc. All rights reserved.

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## 1. Pride and the evolution of social status

All human societies reveal status differences among individuals that influence patterns of conflict, resource allocation, and mating (Fried, 1967), and often facilitate coordination on group tasks (Bales, 1950; Berger, Rosenholtz & Zelditch, 1980; Ellis, 1995). Even the most egalitarian of human foragers reveal such status differences, despite the frequent presence of social norms that partially suppress them (Boehm, 1993; Lee, 1979; see discussion in Henrich and Gil-White 2001). High-status individuals tend to have disproportionate influence, such that social status can be defined as the degree of influence one possesses over resource allocations, conflicts, and group decisions (Berger et al., 1980). In contrast, low-status individuals often passively give up these benefits, deferring to higher status

group members. As a result, high status tends to promote higher fitness than low status, and a large body of evidence attests to a strong relation between social rank and fitness or well-being (e.g., Barkow, 1975; Cowlshaw & Dunbar, 1991; Hill, 1984).

In evolutionary accounts, emotions are fitness-maximizing affective mechanisms that coordinate a suite of cognitive, motivational, physiological, behavioral, and subjective feeling responses to recurrent environmental events of evolutionary significance (e.g., Cosmides & Tooby, 2000; Nesse & Ellsworth, 2009). Given that status competition has, in all likelihood, long been a fitness-relevant feature of human social life, humans may have evolved a motivational, affective, and ethological suite of psychological adaptations geared toward competing with other group members for social status, and signaling (self-perceived) relative status. The emotion of *pride* may be a major part of the affective suite of mechanisms that (a) motivates status-seeking efforts, (b) supplies psychological rewards and recalibrates psychological systems to sustain attained status, and (c) provides the affective substrate for signaling (via pride displays) status

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achievements or self-perceived status (Tracy, Shariff, & Cheng, in press). Thus, pride may represent a psychological adaptation that guides the selection of strategies (including cognitions, subjective feelings, and behaviors) from an organism's repertoire, and thereby facilitates the acquiring, sustaining, and signaling of social status (Tracy, Shariff, and Cheng, in press).

Several lines of psychological research are consistent with this perspective. First, a number of studies have demonstrated conceptual and experiential links between pride and status: (a) individuals intuitively associate pride with high status (Tiedens, Ellsworth, & Moskowitz, 2000), (b) dispositionally agentic individuals (i.e., those who typically seek and possess power and control) tend to feel greater pride than those low in agency (Anderson & Berdahl, 2002), and (c) individuals induced to feel pride tend to display high-status behaviors and are perceived by others as influential (Williams & DeSteno, 2009). Second, pride experiences have been found to motivate achievement and perseverance at difficult or tedious tasks, at least among American subjects (Verbeke, Belschak, & Bagozzi, 2004; Williams & DeSteno, 2008); consequent achievements are, in turn, rewarded with social approval, acceptance, and high status. Third, nonverbal displays of pride, which are universally recognized and shown in response to success (Tracy & Matsumoto, 2008; Tracy & Robins, 2008), send a rapidly and automatically perceived message of high status to other group members (Shariff & Tracy, 2009). This automatic association between the pride nonverbal expression and high status generalizes even to small-scale societies on Fiji's outer islands (Tracy, Shariff, Zhao, and Henrich, in prep). Among educated Western samples, pride has been shown to signal high status more strongly than any other emotion expression examined, and the high-status message sent by the pride expression is powerful enough to override contradicting contextual information in predicting implicit judgments of status (Shariff, Markusoff, & Tracy, in press; Shariff & Tracy, 2009). Thus, the accumulated evidence is consistent with the view that pride evolved as a mechanism for motivating behaviors oriented toward increasing social status and informing other group members of self-perceived status shifts.

One question that arises from this account, however, is why there exist two distinct facets of pride, only one of which is associated with socially valued achievements (e.g., Tangney, Wagner, & Gramzow, 1989; Tracy & Robins, 2004; 2007a). Studies have shown that pride is best characterized as consisting of a *hubristic* facet, marked by arrogance and conceit, and an *authentic* facet, fueled by feelings of accomplishment, confidence, and success. These two facets are conceptualized and experienced as distinct and independent, and are associated with highly divergent personality profiles (Tracy & Robins, 2007a). Hubristic pride is the more anti-social facet, associated with disagreeableness, neuroticism, and a lack of conscientiousness, as well as narcissism, problematic relationships, and poor mental health outcomes (Tracy, Cheng, Robins, & Trzes-

niewski, 2009). In contrast, authentic pride is the more prosocial, achievement-oriented facet, associated with the socially desirable Big Five personality traits of extraversion, agreeableness, and conscientiousness, high implicit and explicit self-esteem, satisfying interpersonal relationships, and positive mental health.

Given the notably negative personality correlates of hubristic pride, it is not immediately evident why this facet would have evolved. One possibility, though, is that both pride facets emerged to promote social status, but along different avenues.

## 2. Two evolved status strategies: prestige and dominance

Henrich and Gil-White (2001) proposed an evolutionary model articulating two distinct paths to attaining status in human societies: *dominance* and *prestige*. *Dominance* refers to the use of intimidation and coercion to attain a social status based largely on the effective induction of fear. In the dominance hierarchies that characterize many nonhuman species, social rank is determined on the basis of agonistic encounters (Trivers, 1985). In humans, dominance is not limited to physical conflict, but can be wielded by controlling costs and benefits in many domains, and is typically seen in individuals who control access to resources, mates, and well-being. Dominant individuals create fear in subordinates by taking or threatening to withhold resources. In turn, subordinates submit by complying with demands or providing material or social resources to safeguard other more valuable resources, such as their physical welfare, children, or livelihoods. Prestige, in contrast, refers to status granted to individuals who are recognized and respected for their skills, success or knowledge. According to Henrich and Gil-White (2001), prestige arose in evolutionary history when humans acquired the ability to acquire cultural information from other group members, because natural selection favored selectively attending to and learning from the most knowledgeable or skilled others. As a result, subordinate group members would be motivated to provide deference (e.g., mates, food, coalitional support) to prestigious individuals, who in turn permit followers access to copying their skills, strategies, and know-how.

Distinctions parallel to dominance and prestige have been made in anthropology (e.g., Krackle, 1978; Barkow, 1975; Chance & Jolly, 1970), psychology (e.g., Gilbert, Price, & Allan, 1995), and sociology (e.g., Kemper, 1990), but the framework adopted here has several advantages over these earlier models: (a) it explains why humans seem to demonstrate two notably different ethological patterns in subordinates (e.g., copying and deferring to leaders, or avoiding and fearing them), only one of which is paralleled in non-human primates, (b) it explains why certain socially attractive qualities (e.g., expertise and success) promote high status, (c) it can account for cultural differences in the traits and abilities that lead to high status (e.g., why athletic

ability is valued among adolescent boys but not academic scholars), and (d) it explains the differential patterns of imitation, memory, attention, and persuasion directed from subordinates toward different high-status individuals. In sum, by positing a cultural learning process, the dominance-prestige theory provides a basis for understanding the distal forces that shape preferences for social models and processes of social influence.

### 2.1. Which strategy to use?

Although both dominance and prestige are, in theory, viable strategies for acquiring high status, the effectiveness of each will vary depending on individual attributes (e.g., physical size, skills) and the situation in which it is used. Dominance-oriented behaviors (e.g., aggression, manipulativeness) can impose greater costs than benefits when individuals lack the capacity to intimidate others or enforce threats, or in social groups with norms or social structures that suppress coercive influence. Prestige, too, can be futile, when individuals are not perceived as possessors of valued cultural information, or in social groups structured largely around dominance hierarchies (e.g., prison populations).

However, as is the case for many psychological processes, conscious, deliberate analysis about which status strategy to pursue in a given situation may be costly, as such mental computations are inefficient, error-prone, and potentially hampered by metacognitive awareness (e.g., metacognitive doubts about one's competence at, or the social appropriateness of, performing the fitness-maximizing behavior). An automatic affective mechanism propelling the appropriate response in each context, occurring under the radar of any metacognition, would free valuable mental resources (Plutchik, 1980). Indeed, affect programs guided by automatic analyses of the relative costs and benefits of potential responses to events are thought to have evolved to promote quick behavioral and cognitive responses to recurrent, evolutionarily significant events (Cosmides & Tooby, 2000). From this perspective, pride may be the automatic affect program that allows individuals to cope most effectively with opportunities for status attainment, and the two facets of pride may have separately evolved to guide behaviors oriented more specifically toward the attainment of dominance or prestige. That is, hubristic pride may have evolved to motivate behaviors, thoughts, and feelings oriented toward attaining dominance, whereas authentic pride may have evolved to motivate behaviors, thoughts, and feelings oriented toward attaining prestige.

More specifically, hubristic pride may promote and sustain dominance through its subjective feelings of superiority and arrogance, which could provide the necessary mental preparedness to exert force and intimidate subordinates, and through its associated behavioral tendencies of aggression, hostility, and manipulation—which would facilitate the attainment of a dominant reputation. Indeed, individuals high in trait hubristic pride tend to report

a willingness to engage in anti-social behaviors and poorer interpersonal relationships (Tracy et al., 2009; see Supplementary Materials for more information on previous studies documenting these associations). These anti-social traits and behaviors may allow individuals dispositionally prone to hubristic pride to induce fear in subordinates, and maneuver their way up the dominance hierarchy.

In contrast, the subjective feelings of confidence and accomplishment that occur in authentic pride experiences may provide the mental preparedness for attaining prestige; these feelings may also serve as psychological reinforcement for socially valued achievements, given that authentic pride arises from accomplishments attributed to unstable, controllable behaviors, such as effort and hard work (Tracy & Robins, 2007a). Other studies have shown that such effort-based achievements promote greater perseverance on challenging tasks and desire for future success (Dweck, 1999; Verbeke et al., 2004; Williams & Desteno, 2008), both of which should lead to increased prestige. More broadly, individuals who tend to be confident, agreeable, hard-working, energetic, kind, empathic, non-dogmatic, and high in genuine self-esteem—the personality profile associated with trait authentic pride (Hart & Matsuba, 2007; Tracy et al., 2009; Tracy & Robins, 2007a)—would be most likely to become attractive social models. Competition for prestige should favor individuals who demonstrate knowledge and a willingness to share it but do not arrogate their authority. In fact, overly aggressive behaviors have been identified as attributes that can 'break a leader' in largely prestige-based hierarchies (Ames & Flynn, 2007). Yet, extremely prestigious individuals, swarmed by aspirants, may be adapted to experience some arrogance as an affective mechanism for "raising the deference price" that subordinates must pay to attain valued knowledge (Henrich & Gil-White, 2001). Notwithstanding this case, authentic pride may have evolved to facilitate the attainment of prestige by reinforcing effort and promoting accomplishment, while motivating and fostering agreeableness, confidence, and a sociability that cues a potential openness to sharing one's knowledge.

Although the hypothesized effects of each facet of pride on each form of status are predicted to occur through an on-line, state-level, causal process (i.e., via momentary, state experiences of hubristic and authentic pride), these effects may be more readily apparent at the trait level. Given that prestigious and dominant reputations develop over time from repeated interpersonal interactions, it is unclear that a single state experience of either facet of pride would substantially interact with an individual's current dominant or prestigious standing, to shape his/her longstanding reputation. Recent experimental studies suggest that individuals can very quickly perceive momentary expressers of pride as possessing high status (Shariff & Tracy, 2009; Williams & DeSteno, 2009), but it is unlikely that more complex judgments of dominance versus prestige can be made on this basis, particularly given evidence that hubristic and authentic pride cannot be distinguished from a

decontextualized nonverbal expression (Tracy & Robins, 2007b). Indeed, it is more likely that individuals who, due to stable personality characteristics (e.g., narcissism, self-esteem) or other genetically influenced traits (e.g., physical size) are chronically prone to experiencing one facet or the other, tend to repeatedly experience the suite of subjective feelings, associated cognitions, and motivations toward behavioral patterns that together promote a dominant or prestigious reputation in the eyes of community members. In other words, while the causal process from pride to status theoretically works at a momentary state level (e.g., the momentary experience of hubristic pride promotes the subjective feelings of grandiosity and behaviors of aggression needed to secure a dominant reputation), it is likely that individuals more typically develop a prestigious or dominant relationship with others by repeatedly experiencing a given pride facet, and thus frequently engaging in the motivated behaviors associated with each form of status.

Importantly, the causal dynamics in this model may be bidirectional. Individuals may possess traits such as physical size, narcissism, or aggressiveness that differentially predispose them to activate the suites of behaviors, cognitions, and emotions associated with dominance or prestige. Alternatively, differential experiences in using coercion versus succeeding in locally valued activities may differentially activate the dominance or prestige behavioral, cognitive, and affective suites, leading to differences in hubristic and authentic pride, as well as in related personality traits. Such differential state activations may, over the course of development, instill or create trait or trait-like patterns, though it remains plausible that substantial facultative flexibility remains.

Fully sorting out the details of this psychological bidirectional causality is beyond the scope of this article; instead, we aim to take a modest step toward empirically examining this model, by testing straightforward predictions regarding the relations between pride, other related traits and attributes, and the two forms of status. To substantiate their theory, Henrich and Gil-White (2001) reviewed findings from ethnography, psychology, ethology, sociology, and sociolinguistics, in light of 12 predictions derived from their theory. However, because the theory was developed temporally after the empirical findings, it is possible that the theory was shaped with foreknowledge of the findings, and that choice of supporting findings was selective. To our knowledge, only five subsequent empirical studies have examined the dominance-prestige distinction. First, psychologists have shown that dominance and prestige, assessed through self-reports, have divergent relations with trait aggression and basal testosterone levels (Johnson, Burk, and Kirkpatrick, 2007), and with a host of personality traits including agreeableness, conscientiousness, openness, and Machiavellianism (Buttermore, 2006). Second, in a study on evolved mating preferences, women were found to prefer prestigious over dominant men (Snyder, Kirkpatrick & Barrett, 2008). Third, anthropologists have found that among the Tsimane', a small-scale Amazonian

society, peer-ranked dominance is positively associated with physical size, and peer-ranked prestige with hunting ability, generosity, and number of allies (Reyes-Garcia et al., 2008; von Rueden, Gurven, & Kaplan, 2008). Together, these five research programs provide the first empirical support for the theory that dominance and prestige are distinct constructs. However, given the importance of this distinction to our understanding of group dynamics, cultural transmission, and social behavior, considerable work remains.

The contribution of the present research is twofold. First, we test the novel theory that the two facets of pride evolved to promote distinct forms of status. Previous studies examining the link between pride and status have focused exclusively on the association between undifferentiated pride (i.e., not distinguishing between hubristic and authentic) and undifferentiated status (i.e., not distinguishing between dominance and prestige; e.g., Shariff & Tracy, 2009; Tiedens et al., 2000; Williams & DeSteno, 2009), but have not examined more specific associations that require making distinctions within these broad categories. Second, building on the model of Henrich and Gil-White (2001), we test whether dominance and prestige, measured through both self- and peer-perceptions, show predicted divergent relations with a broad range of personality traits, competencies, and social abilities, most of which have previously been shown to have correspondingly distinct relations with hubristic and authentic pride (Tracy et al., 2009). Table 1 presents our specific predictions and the theoretical rationale for each.

Two studies tested the predictions presented in Table 1. In Study 1, participants reported dispositional levels of hubristic and authentic pride, dominance and prestige, and the relevant personality traits predicted to underlie these status patterns. In Study 2, participants were varsity-level athletes who reported dispositional levels of hubristic and authentic pride and the relevant traits, and were rated by their teammates on dominance, prestige, relevant skills and abilities (e.g., intellectual, social, and leadership abilities), and prosocial attributes.

### 3. Study 1

#### 3.1. Method

##### 3.1.1. Participants and procedure

One hundred ninety-one undergraduates (70% female) completed an on-line questionnaire in exchange for course credit.

##### 3.1.2. Measures

Trait levels of dominance and prestige ( $\alpha$ s=.83 and .80, respectively) were assessed using newly developed self-report scales, based on previous work by Buttermore (2006) (see Supplementary Materials for scale construction). Trait hubristic and authentic pride ( $\alpha$ s=.89 and .87, respectively) were assessed with the 14-item Hubristic and Authentic Pride-Proneness Scales (Tracy & Robins, 2007a). The Big

Table 1  
 Predicted psychological (emotional, trait, and attribute) differences between dominance and prestige

| Suite of psychological traits, emotions, and emergent phenomena                          | Predicted relation with each form of status |                            | Evolutionary explanation for prediction   |
|--|---|----------------------------|---|
|  | Dominance                                   | Prestige                   |   |
| Hubristic pride  | Positive                                    | Negative or zero           | This facet of pride is the emotional substrate that motivates the pursuit of the dominance status-seeking strategy.   |
| Authentic pride  | Negative or zero                            | Positive                   | This facet of pride is the emotional substrate that motivates the pursuit of the prestige status-seeking strategy.  |
| Genuine self-esteem <sup>a</sup>   | Negative or zero                            | Positive                   | Self-esteem reflects self-perceived social acceptance (Leary, Tambor, Terdal, and Downs, 1995). Group members seek out and accept prestigious individuals (those with skills or know-how), but revile and avoid those using coercion. Dominant individuals are unlikely to seek to increase their level of social inclusion or genuine self-esteem, given that acceptance and popularity are not commodities on which their status is based.  |
| Narcissistic self-aggrandizement <sup>b</sup>  | Positive                                    | Positive but weak, or zero | All high status individuals are likely to reveal some degree of narcissism, due to their ability to influence outcomes that serve their own interests. However, dominant individuals are particularly likely to use narcissistic behaviors of manipulation and coercion to exploit others. Prestigious individuals must, to some extent, suppress narcissistic tendencies of arrogance and hostility, to attract followers and avoid any aggressive behaviors that might cue dominance. |
| Social acceptance  | Negative or zero                            | Positive                   | Dominant individuals exercise forceful authority and power based on coercion. Consequently, they fail to develop positive interpersonal relationships. In contrast, followers seek proximity and access to prestigious individuals and their information, leading the prestigious to be socially accepted.  |
| Aggression   | Positive                                    | Negative or zero           | The centerpiece of the dominant's strategy is aggression, in its many forms (physical, emotional, etc.). Prestigious individuals must avoid aggression, to avoid being mistaken for a dominant and to maintain social attractiveness.   |
| Extraversion   | Positive                                    | Positive but weak, or zero | Dominant individuals benefit from assertiveness, energy, and the active seeking of opportunities to re-enforce their position over subordinates (who otherwise avoid them). In contrast, the prestigious are frequently approached by followers, and thus need not be particularly extraverted. However, introversion is highly disadvantageous in both cases.  |
| Agreeableness  | Negative                                    | Positive but weak          | Dominant individuals are forceful, manipulative, and narrowly (zero-sum) self-interested, reflecting high disagreeableness. Prestige demands the avoidance of disagreeableness, but does not require high agreeableness, because followers need to be pleasant and accommodating toward the prestigious, not vice-versa. Excessive agreeableness (i.e., conformity) would make the prestigious less useful to a learner seeking information.  |
| Conscientiousness  | Negative or zero                            | Positive                   | Prestige is the result of superior skills and expertise, which are typically developed through practice. Dominance is not based on acquired skill, and therefore does not demand high conscientiousness.  |
| Neuroticism  | Positive or zero                            | Negative                   | Adaptive dominant strategies include outbursts of unpredictable anger (inducing stress in subordinates), resulting from any actions that could be interpreted as threatening to their power; this may relate to a general tendency to experience negative affect and mood swings. The prestigious are rarely challenged or attacked by others, and need to be emotionally stable and less reactive to stress to retain attractiveness as a social model.                                |
| Openness to experience   | No prediction                               | No prediction              | There are no general predicted differences in openness between the two forms of status. An exception, however, is that openness may be more closely linked to prestige in cultures that emphasize creativity and innovation.  |
| Agency<br>Communion  | Positive<br>Negative                        | Positive<br>Positive       | All high status individuals exert power and influence, and thus are highly agentic. Central to dominance is inducing fear in others, achieved by unempathic and ruthless behaviors to coerce and intimidate. The prestigious have no authority or power to enforce decisions, but instead show empathy, kindness, and warmth toward followers to maintain respect and attract more followers.   |
| Advice-giving ability  | Zero  | Positive                   | Prestigious individuals are recognized as possessors of high quality skills, wisdom, and "copy-worthy" information, who are capable of offering advice in valued domains. Dominance is unrelated to offering wisdom or advice.  |
| Skills and expertise (intellectual/athletic ability or competence in any valued domains) | Negative or zero                            | Positive                   | Excelling in valued domains of activity (e.g., scholastics and intellect in student groups, athletics in athletic groups, hunting or story telling in hunter-gatherer societies) brings prestige. Dominance does not depend on achievement, skill, or knowledge in valued domains. A potential exception may arise from cases in which competence in aggression/intimidation is skill-based and locally valued.   |

Table 1 (continued)

| Suite of psychological traits, emotions, and emergent phenomena | Predicted relation with each form of status |          | Evolutionary explanation for prediction   |
|---|---|----------|---|
|   | Dominance                                   | Prestige |   |
| Social skills   | Positive but weak                           | Positive | All high status individuals are likely to have high social skills, due to their capacity to communicate their desires and wishes, and to exert influence. However, prestigious individuals benefit more from the ability to convey advice and transmit knowledge, which permits them to out-excel other prestigious models.   |
| Prosociality (altruism, cooperativeness, helpfulness, morality) | Negative                                    | Positive | For dominants, prosociality would mitigate the evoked fear among subordinates that confers their power. In contrast, the tendency of subordinates to copy prestigious individuals alters the prestigious' incentives because, if a prestigious individual cooperates (e.g., contributes to the group) others are likely to follow suit, increasing the prestigious individual's immediate payoff. If a prestigious individual defects, others are likely to defect, reducing any potential free-riding benefits for the prestigious individual. Dominants' behaviors are not copied, so any attempts at prosociality (cooperation or punishment) on their part will not result in increased prosociality in the group as a whole (Henrich, 2005). |
| Leadership ability  | Positive                                    | Positive | Dominance and prestige each represent a means of obtaining and exerting influence, so both are associated with assuming a leadership position.  |

<sup>a</sup> Self-esteem controlling for narcissism, which can be assessed by regressing self-esteem on narcissism and saving the residuals.

<sup>b</sup> Narcissism controlling for self-esteem, which can be assessed by regressing narcissism on self-esteem and saving the residuals.

Five factors of personality were assessed using the Big Five Aspects Scale (BFAS; DeYoung et al., 2007), which provides scores for each of the Big Five traits as well as two distinct aspects within each trait: extraversion ( $\alpha=.81$ ; enthusiasm and assertiveness,  $\alpha=.83$  and  $.87$ , respectively), agreeableness ( $\alpha=.81$ ; compassion and politeness,  $\alpha=.85$  and  $.75$ , respectively), conscientiousness ( $\alpha=.81$ ; industriousness and orderliness,  $\alpha=.82$  and  $.74$ , respectively), neuroticism ( $\alpha=.81$ ; withdrawal and volatility,  $\alpha=.81$  and  $.87$ , respectively), and openness to experience ( $\alpha=.81$ ; intellect and openness,  $\alpha=.84$  and  $.75$ , respectively). Aggression was assessed with the Aggression Questionnaire (AQ; Buss & Perry, 1992;  $\alpha=.91$ ); social acceptance with the Inclusionary Status Scale (Spivey, 1990;  $\alpha=.91$ ); self-esteem with the Rosenberg Self-Esteem scale (RSE; Rosenberg, 1965;  $\alpha=.89$ ); and narcissism with the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988;  $\alpha=.86$ ). Following Paulhus, Robins, Trzesniewski, and Tracy (2004), who demonstrated that self-esteem and narcissism are distinct but share variance in self-favorability, we computed separate variables to capture the unique variance in each by regressing self-esteem on narcissism, and vice-versa, and saving the standardized residuals. The resultant residualized variables can be conceptualized as the non-overlapping, uncontaminated constructs of genuine self-esteem and narcissistic self-aggrandizement. Finally, academic achievement was assessed via self-reported Grade Point Average (GPA).

### 3.2. Results and discussion

#### 3.2.1. Hubristic pride and dominance, and authentic pride and prestige

Consistent with predictions, trait hubristic pride was positively related to dominance ( $r=.48$ ,  $p<.001$ ), and trait authentic pride was positively related to prestige ( $r=.51$ ,  $p<.001$ ). Hubristic pride was negatively related to prestige

( $r=-.17$ ,  $p<.05$ ), suggesting that, consistent with our model, arrogance may generally lower the degree of respect one is granted. However, an unexpected positive association emerged between authentic pride and dominance ( $r=.19$ ), but this association was considerably weaker than that between hubristic pride and dominance ( $r=.48$ ;  $Z=3.52$ ,  $p<.001$ ), and may have been due to shared variance in self-perceived agency. The two facets of trait pride were statistically independent ( $r=.07$ , ns), as were dominance and prestige ( $r=.03$ , ns).

#### 3.2.2. Dominance, prestige, and related suite of traits and abilities

Table 2 presents correlations of the two forms of status with genuine self-esteem, narcissistic self-aggrandizement, social acceptance, aggression, the Big Five personality traits,

Table 2  
Correlations of dominance and prestige with theoretically related traits and attributes, Study 1

|   | Self-rated dominance | Self-rated prestige |
|---|----------------------|---------------------|
| Genuine self-esteem <sup>a</sup>              | -.16*                | .45**               |
| Narcissistic self-aggrandizement <sup>b</sup> | .56**                | .15*                |
| Social acceptance                             | -.16*                | .59**               |
| Aggression                                    | .55**                | -.38**              |
| Extraversion                                  | .20**                | .59**               |
| Agreeableness                                 | -.61*                | .27**               |
| Conscientiousness                             | .15*                 | .39**               |
| Neuroticism                                   | .13 <sup>†</sup>     | -.39**              |
| Openness                                      | .08                  | .43**               |
| GPA   | .08                  | .24**               |

Note.  $N=191$ .

<sup>†</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .

<sup>a</sup> Self-esteem controlling for narcissism, created by regressing self-esteem on narcissism and saving the standardized residuals.

<sup>b</sup> Narcissism controlling for self-esteem, created by regressing narcissism on self-esteem and saving the standardized residuals.

and GPA. As predicted in Table 1, dominance was negatively related to genuine self-esteem (controlling for narcissism) and social acceptance, and strongly positively related to narcissistic self-aggrandizement (controlling for self-esteem) and aggression; whereas prestige was strongly positively related to genuine self-esteem and social acceptance, and negatively to aggression. Also as predicted, a weak positive relation emerged between narcissistic self-aggrandizement and prestige, and a considerably stronger association emerged between narcissistic self-aggrandizement and dominance ( $r_s=.15$  vs.  $.56$ ,  $Z=-4.55$ ,  $p<.001$ ). Thus, although individuals high in narcissism may attain prestige—perhaps due to their strong sense of confidence and social popularity in short-term acquaintanceships (Paulhus & Morgan, 1997)—they are far more likely to attain dominance. Alternatively, individuals who achieve both forms of high status may become narcissistic, but prestigious individuals may seek to suppress such tendencies to avoid impairing their interpersonal relationships with followers.

For the most part, dominance and prestige also showed predicted relations with the Big Five traits (see Table 2). Prestigious individuals tended to be extraverted, agreeable, conscientious, emotionally stable, and open to experience. The positive association with openness, for which we had no prediction, may reflect the importance of intellectual curiosity and creativity as socially valued attributes among academically minded individuals (i.e., university students). In contrast, dominant individuals tended to be extraverted, disagreeable, and emotionally unstable (i.e., neurotic). Surprisingly, extraversion was less strongly associated with dominance than prestige, and dominant individuals were somewhat conscientious. These unexpected relations may be due to dominant individuals' propensity to self-inflate on these socially desirable traits emphasizing one's ability to command attention and experience achievement. However, the correlations with extraversion are further explicated by the more specific relations of dominance and prestige with the two sub-component aspects of extraversion: assertiveness and enthusiasm. Assertiveness was positively related to both dominance and prestige ( $r_s=.46$  and  $.56$ ,  $p_s<.001$ ), whereas enthusiasm was positively related to prestige ( $r=.45$ ,  $p<.001$ ), but trended toward a negative relation with dominance ( $r=-.11$ ,  $p=.13$ ). Previous research has demonstrated the importance of extraversion to status attainment (e.g., Anderson et al., 2001; Judge et al., 2002), but the present findings add nuance to this association by highlighting the different aspects of extraversion that underlie it; both dominance and prestige depend on assertiveness and agency, but only prestige is also associated with enthusiasm and friendliness. Finally, as predicted, prestige was positively associated with, and dominance unrelated to, GPA, consistent with our expectation that academic achievement is valued among university students.

Overall, these results are consistent with the expectation that individuals high in dominance are self-aggrandizing and

socially disliked group members who acquire influence through aggression, assertiveness, intimidation, and emotional volatility. In contrast, individuals high in prestige tend to be socially accepted, have genuine high self-esteem, and exhibit enthusiasm alongside their assertiveness, as well as conscientiousness, emotional stability, openness, and achievement. Both forms of high status are associated with narcissistic self-aggrandizement, but prestige less so. Thus, these results support our predictions, and provide evidence for the discriminant validity of dominance and prestige. Furthermore, the trait profiles of dominance and prestige that emerged largely replicate the trait profiles of hubristic and authentic pride found previously, consistent with the expectation that the two facets of pride—measured as dispositional traits—are differentially linked to these two cognitive and behavioral suites (Tracy et al., 2009; Tracy & Robins, 2007a).

A principal limitation of Study 1 is its reliance on self-report measures of status. Although previous research suggests that individuals are generally accurate perceivers of their own social status (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006), other studies suggest that the tendency to overestimate one's positive traits is prevalent (Taylor & Brown, 1988). Furthermore, pride-prone individuals may be particularly vulnerable to such biases, possibly leading to artificial inflation of the key correlations of interest. Thus, in Study 2, we assessed status via peer reports.

#### 4. Study 2

To capture the perceived distribution of status and abilities, which are more deterministic of status dynamics than individuals' own perceptions of their social rank, in Study 2 we asked peers to rate the status and abilities of group members. In previous studies that have measured group members' perceptions of the distribution of dominance and prestige within the group (e.g., Reyes-Garcia et al., 2008; von Rueden, Gurven, & Kaplan, 2008), both forms of status were assessed via single items, which, for prestige, asked participants to “list the names of all the important people” or decide whether each group member “is well-respected.” As these researchers noted, these brief measures may capture overall high status or official leadership, rather than prestige (see Reyes-Garcia et al., 2008). The present research is thus the first to use an empirically validated, multi-item scale developed based on factor analytic techniques to assess peer-perceptions of dominance and prestige. Study 2 also extends Study 1 by sampling individuals from naturalistic social groups: university-level varsity athletic teams. Athletic teams provide an ideal context for this research because teammates are long-term group members who spend an extensive amount of time together, making them well suited to serve as peer-raters on a variety of domains. In addition, team members typically

agree about the skills most important to the team's success (i. e., athletic skill and ability), so assessing perceptions of whether teammates possess such skills allows us to test predictions about the role of peer-perceived expertise in the attainment of prestige.

#### 4.1. Method

##### 4.1.1. Participants and procedure

Ninety-one male athletes from four university-level varsity athletic teams (baseball,  $n=33$ ; soccer,  $n=19$ ; volleyball,  $n=13$ ; rugby,  $n=26$ ) completed questionnaires in exchange for a lump-sum payment to the team. All participants were members of the team for at least 4 months, allowing sufficient time for acquaintanceships to develop and status relationships to stabilize. Participants provided self-reports on personality and emotional dispositions, and rated five randomly selected teammates on dominance, prestige, and theoretically relevant traits and abilities. Participants were instructed to complete the questionnaires privately and avoid discussing the study with teammates prior to its completion.

#### 4.2. Measures

##### 4.2.1. Self-reports

As in Study 1, trait hubristic and authentic pride were assessed with the Hubristic and Authentic Pride-Proneness scales ( $\alpha=.88$  and  $.78$ ); aggression, with the AQ ( $\alpha=.89$ ); social acceptance, with the Inclusionary Status Scale ( $\alpha=.78$ ); self-esteem, with the RSE ( $\alpha=.84$ ); and narcissism, with the NPI ( $\alpha=.86$ ). Genuine self-esteem and narcissistic self-aggrandizement scales were again computed by regressing self-esteem on narcissism, and vice-versa, and saving the standardized residuals. Big Five personality traits were assessed with the 44-item Big Five Inventory (BFI; John, Donahue, & Kentle, 1991), with scales measuring extraversion ( $\alpha=.84$ ), agreeableness ( $\alpha=.81$ ), conscientiousness ( $\alpha=.79$ ), neuroticism ( $\alpha=.74$ ), and openness to experience ( $\alpha=.76$ ). Agency and communion were assessed with eight items selected from the Revised Interpersonal Adjective Scales (Wiggins, Trapnell, & Phillips, 1988); these were the four items at each pole of the two major axes: "self-assured," "assertive," "self-confident," "dominant," "timid," "unauthoritative," "shy," and "unaggressive" (combined to form an agency scale, with the latter four items reverse-scored;  $\alpha=.85$ ) and "softhearted," "tender," "gentlehearted," "tenderhearted," "hardhearted," "unsympathetic," "coldhearted," and "warmthless" (combined to form a communion scale, with the latter four items reverse-scored;  $\alpha=.89$ ). GPA was again assessed to index academic achievement.

##### 4.2.2. Peer-reports

After completing all self-ratings, participants were told: "You will now be asked to provide your impressions and feelings about other members of your team... Think about this particular person as you are providing your responses." For each target, participants were presented with the eight-

item dominance and nine-item prestige scales, reworded to refer to a peer (see Supplementary Materials). Internal consistency  $\alpha$ s were  $.88$  and  $.85$  for peer-rated dominance and prestige, respectively, and inter-rater  $\alpha$ s were  $.78$  and  $.84$ , respectively. These high levels of inter-rater agreement suggest that individuals were able to reach consensus regarding their peers' dominance and prestige.

Judges also completed the Self-Attributes Questionnaire (Pelham & Swann, 1989) for each target, in which they were instructed to: "Rate your impressions about the activities and abilities of this particular person... relative to other members of your group." We added several traits to the original questionnaire to assess, in total: intellectual ability (inter-rater  $\alpha=.74$ ), social skills ( $\alpha=.78$ ), athletic ability ( $\alpha=.70$ ), leadership ability ( $\alpha=.80$ ), altruism ( $\alpha=.55$ ), cooperativeness ( $\alpha=.59$ ), helpfulness ( $\alpha=.55$ ), ethicality ( $\alpha=.55$ ), and morality ( $\alpha=.45$ ). Participants were also asked to indicate the likelihood that they would approach each of the five targets for advice in the following domains: school ( $\alpha=.59$ ), family ( $\alpha=.37$ ), friends ( $\alpha=.41$ ), romantic partners ( $\alpha=.38$ ), work ( $\alpha=.44$ ), sports ( $\alpha=.55$ ), and the target's area of expertise ( $\alpha=.48$ ). The low inter-rater agreement on these items likely reflects the fact that idiosyncratic factors such as friendships play an important role in determining who is sought for advice. However, the fact that any consensus emerged points to the importance of some underlying psychological construct in determining an individual's "advisorliness." To index each target's overall perceived advice-giving ability, we aggregated ratings across the seven domains (internal consistency  $\alpha=.87$ ; inter-rater  $\alpha=.61$ ).

#### 4.3. Results and discussion

##### 4.3.1. Hubristic pride and dominance, and authentic pride and prestige

Hierarchical linear models (see Supplementary Materials for model description) were estimated to account for the nesting of peer-ratings of dominance and prestige within perceivers and targets (Bryk & Raudenbush, 1992). As predicted, hubristic pride was positively related to dominance,  $b=.36$ ,  $z=3.03$ ,  $p<.01$ , whereas authentic pride was unrelated to dominance,  $b=.01$ ,  $z=.06$ , ns. In contrast, authentic pride was positively related to prestige,  $b=.33$ ,  $z=2.21$ ,  $p<.05$ , but hubristic pride was unrelated to prestige,  $b=-.01$ ,  $z=-.14$ , ns. Thus, replicating Study 1's findings based on self-ratings of status, individuals higher in hubristic pride also attained higher dominance in the eyes of their peers, and those higher in authentic pride attained higher peer-rated prestige. It is noteworthy that the unexpected weak positive relation between authentic pride and dominance that emerged in Study 1 did not emerge here, when dominance was based on peer-, rather than self-perceptions. Consistent with Study 1, the two facets of trait pride were statistically independent ( $r=-.01$ ), as were dominance and prestige (with team membership partialled;  $b=-.09$ ,  $z=-1.37$ , ns).

### 4.3.2. Dominance, prestige, and related suite of traits and abilities

Replicating Study 1 and consistent with predictions, dominance was positively related to narcissistic self-aggrandizement, aggression, extraversion, and disagreeableness, and prestige was positively related to genuine self-esteem, social acceptance, and conscientiousness (see Table 3). These patterns of correlations with extraversion and conscientiousness are more consistent with our predictions than those that emerged in Study 1, likely due to the use of peer-, rather than self-, ratings to measure status, and the more reliable and repeatedly validated measure of the Big Five traits (the BFI, instead of the BFAS used in Study 1). Also diverging from Study 1 but consistent with predictions was the null relation between narcissistic self-aggrandizement and prestige. Thus, though narcissists may sometimes tend to view themselves as prestigious, they are not viewed this way by other group members. As predicted, neuroticism was unrelated to dominance but showed a negative trend with prestige. In contrast to Study 1, no significant associations emerged for openness to experience, perhaps because creativity and intellectual curiosity are less valued among varsity athletes, who, here, were evaluating the social

status of individuals they knew largely in an athletic-team context. In general, the pattern of correlations found here, based on peer-reports of status, replicates that found in Study 1 using self-reports of status.

Also as predicted, both dominance and prestige were positively associated with agency. The relation between dominance and communion was in the predicted negative direction, although we did not find the predicted positive relation between prestige and communion ( $r=.05$ , ns). Replicating Study 1, GPA was positively related to prestige, and unrelated to dominance.

To further explore the suite of characteristics that underlie each form of status, we next examined their correlations with peer-ratings of expertise and advice-giving ability. As predicted, individuals perceived as prestigious were viewed as capable advice-providers, and as intellectually, athletically, and socially competent (see Table 3). They were also viewed as altruistic, cooperative, helpful, ethical, and moral, consistent with the expectation that prestigious individuals must demonstrate prosociality. In contrast, dominance was not significantly related to perceived advice-giving abilities, or intellectual or social skills, and was negatively related to all prosocial tendencies assessed. Somewhat surprisingly, individuals high in dominance were perceived as athletically talented; however the association between athletic skills and prestige ( $r=.57$ ) was significantly stronger than that with dominance ( $r=.29$ ;  $Z=2.28$ ,  $p<.05$ ). Nonetheless, this finding suggests that some level of athletic competence may be necessary to attain either form of status in the context of an athletic team, but is most central to prestige-based status. Finally, as expected, both dominance and prestige were positively correlated with leadership ability, suggesting that both forms of status represent a means of obtaining and exerting influence.

Overall, the findings of Study 2 are consistent with our predictions, and with findings from Study 1. Individuals high in dispositional hubristic pride attained greater dominance within their social group, whereas individuals high in dispositional authentic pride attained greater prestige. Dominance and prestige also were characterized by divergent profiles of personality traits, prosocial tendencies, and abilities. The consistency of findings across studies, obtained using different methods and samples, indicates the robustness of these effects, and suggests that findings from Study 1 are not likely to be artifacts of self-perceived biases or shared method variance.

## 5. General discussion

The goal of this research was to extend prior theoretical work hypothesizing two distinct avenues of human status, one rooted in dominance and the other in prestige—by deriving and testing predictions about the emotions, personality traits, social tendencies, and competencies that

Table 3

Correlations of peer-rated dominance and prestige with theoretically related traits, attributes, and competencies, Study 2

|   | Peer-rated dominance | Peer-rated prestige |
|---|----------------------|---------------------|
| Self-rated traits and attributes              |                      |                     |
| Genuine self-esteem <sup>a</sup>              | -.03                 | .24*                |
| Narcissistic self-aggrandizement <sup>b</sup> | .22*                 | .17                 |
| Social acceptance                             | .08                  | .29**               |
| Aggression                                    | .35**                | .03                 |
| Extraversion                                  | .29**                | .12                 |
| Agreeableness                                 | -.39**               | .15                 |
| Conscientiousness                             | -.13                 | .23*                |
| Neuroticism                                   | -.02                 | -.15                |
| Openness                                      | .13                  | .10                 |
| Agency  | .46**                | .39**               |
| Communion                                     | -.12                 | .05                 |
| GPA   | -.15                 | .19†                |
| Peer-rated abilities                          |                      |                     |
| Advice-giving                                 | .12                  | .56**               |
| Intellectual                                  | -.06                 | .37**               |
| Athletic                                      | .29**                | .57**               |
| Social skills                                 | .19†                 | .71**               |
| Altruism                                      | -.36**               | .36**               |
| Cooperativeness                               | -.54**               | .33**               |
| Helpfulness                                   | -.38**               | .39**               |
| Ethicality                                    | -.41**               | .26**               |
| Morality                                      | -.32**               | .31**               |
| Leadership                                    | .40**                | .73**               |

$N=91$ .

† $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .

<sup>a</sup> Self-esteem controlling for narcissism, created by regressing self-esteem on narcissism and saving the standardized residuals.

<sup>b</sup> Narcissism controlling for self-esteem, created by regressing narcissism on self-esteem and saving the standardized residuals.

underpin each of these status strategies. As a result, this research establishes a tentative link between two previously independent research programs: the evolutionary foundations of human status and the psychology of pride. Prior research on pride, also using undergraduates, has revealed two psychologically distinct forms of pride, which differ at both the state (i.e., momentary emotional response to an event) and trait (chronic, dispositional tendency to experience a particular emotion) levels. This previous work also demonstrated that both the chronic and momentary experience of each form of pride (i.e., trait and state hubristic and authentic pride) are associated with distinct personality dispositions. In the present research, using both self- and peer-reports of status, and assessing status as a dispositional trait and within the context of a specific social group, we found that individuals high in dispositional hubristic pride tend to view themselves, and be viewed by their peers, as dominant, whereas individuals high in dispositional authentic pride tend to view themselves and be viewed by peers as prestigious. We also found converging support across studies for the predicted suites of traits and abilities underlying dominance and prestige. Dominant individuals tend to be narcissistic, aggressive, extraverted, disagreeable, and agentic. In contrast, prestigious individuals tend to have high genuine self-esteem and be conscientious, socially accepted, agentic, intelligent, prosocial, and capable advisors.

In addition to providing the first empirical support for the predictions linking the two forms of status with the two facets of dispositional pride, as well as distinct personality traits, social skills, and competencies, our findings extend previous research in several ways. First, only a few previous studies have examined the determinants of dominance and prestige. In general, our findings replicate those of [Buttermore \(2006\)](#), [Johnson and colleagues \(2007\)](#), and [von Rueden and colleagues \(2008\)](#) in demonstrating distinct trait profiles for the two forms of status. However, the present research extends these previous studies by showing that dominance and prestige are associated with distinct, theoretically predicted personality profiles even when status is assessed using peer- rather than self-perceptions, and when dominance and prestige are measured using reliable, validated scales. This contribution is particularly important because an individual's social status, perhaps more than any other trait, is more validly assessed by asking his/her peers, given that status is the amount of influence conferred by group members. Furthermore, the use of peer-reports allows us to eliminate the possibility that differences in the personality profiles of dominant and prestigious individuals are due to socially desirable responding or other sources of shared method variance. Thus, our findings provide compelling evidence that: (a) dominance and prestige represent distinct ways of attaining and maintaining status in naturalistic groups; (b) the attainment of dominance versus prestige is associated with distinct sets of emotions and traits, and the two pride

dispositions are key components of these broader suites; and (c) personality traits, social skills, and abilities are strongly related to who attains social status and, more specifically, which form of status is attained.

More broadly, by demonstrating that dominance and prestige are distinct status-attainment behavioral strategies that can be reliably assessed from group members, this research provides some of the clearest empirical support for [Henrich and Gil-White's \(2001\)](#) conceptualization of group hierarchies. As a result, these findings have several implications for the literature on social status. First, they suggest that when researchers studying leadership, power, and status ask questions about the traits and behaviors that promote status, they should make the clarification: Which kind of status? Previous studies have defined status as general influence ([Anderson & Kilduff, 2009](#); [Littlepage, Schmidt, Whisler, & Frost, 1995](#)), importance ([Reyes-Garcia et al., 2008](#)), leadership ([Brunell et al., 2008](#); [Judge et al., 2002](#)), toughness ([Weisfeld & Beresford, 1982](#)), or respect ([Hardy & Van Vugt, 2006](#)), and, not surprisingly, have yielded discrepant and sometimes incompatible conclusions. Based on the present findings, researchers might fruitfully return to this previous literature and examine whether the status assessed was akin to dominance or prestige; this distinction may account for the divergent results that have emerged. For example, several studies have found that agreeableness and prosociality are unrelated to status ([Anderson et al., 2001](#); [Judge et al., 2002](#)), but others have shown that individuals who behave altruistically enjoy higher status ([Hardy & Van Vugt, 2006](#); [Willer, 2009](#)). The present research demonstrates that agreeableness is negatively related to dominance but positively related to prestige, thereby qualifying [Anderson and colleagues' \(2001\)](#) conclusion that “being nice, warm, and kind” does not lead to higher status. These traits clearly do matter in prestige-based contexts.

Second, our findings also shed light on longstanding debates about the role of narcissism and self-esteem in the attainment of status. Several studies have shown that narcissists emerge as leaders in social groups ([Brunell et al., 2008](#); [Rosenthal & Pittinsky, 2006](#)), but others have shown that narcissists have poor leadership skills and are disliked by their peers ([Harms, Wood, & Roberts, 2009](#)). The present findings suggest that narcissism, and hubristic pride, may promote status largely by increasing dominance, which does not require respect or social acceptance. In fact, previous studies suggesting that narcissism promotes aggression, particularly in response to ego-threats ([Baumeister, Smart, & Boden, 1996](#); [Bushman & Baumeister, 1998](#); [Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005](#)), are consistent with the present findings of an association between narcissism and dominance. Similarly, our research adds nuance to the previously noted association between self-esteem and high status. [Leary and colleagues \(1995\)](#) have argued that self-esteem functions as a “sociometer,” informing individuals of their relative status within a group,

and motivating the behaviors needed to maintain an acceptable level of status and group inclusion. Given the positive association between self-esteem and prestige, and the negative association between genuine self-esteem (controlling for shared variance with narcissism) and dominance, it is likely that self-esteem serves this informational function regarding prestige hierarchies, in particular. In fact, previous research has demonstrated that genuine self-esteem—controlling for narcissism—tends to be negatively associated with the anti-social and aggressive behaviors typical of dominant leaders (Donnellan et al., 2005; Paulhus et al., 2004). This is consistent with Barkow's (1975) account of self-esteem as an evolved adaptation for monitoring one's current level of prestige, and may help explain Leary and colleagues' finding that high social acceptance (i.e., being well-liked) and high agency are both critical to the maintenance of self-esteem (Leary, Cottrell, & Phillips, 2001). However, these studies have sampled predominantly North American populations, so future research is needed to examine the consequences of narcissism and self-esteem for status attainment in other populations.

Finally, while supporting the argument of Barkow (1975) that prestige-based hierarchies are distinct from fear-based hierarchies, the present research also raises questions for Barkow's contention that all human social hierarchies are prestige-based, having evolved (or "exapted") from earlier dominance hierarchies seen in other animals. Barkow suggested that as species "ascend the phylogenetic scale," status relations based purely on threat of force and appeasement become untenable, so such relations should not be found in human societies (p. 553). The present findings suggest that, in fact, human social status is characterized by both dominance and prestige, and both kinds of leaders are viewed by group members as agentic and capable of leadership. Those pursuing influence via prestige, rooted in admiration, may coexist in social groups with individuals competing for dominance, who rely on threat, coercion, and fear; and both sets of individuals may directly compete with each other for leadership and power. Humans may be unique in that merit-based institutional positions endowed with control of costs and benefits, such as president and CEO, can evoke either dominance- or prestige-based social strategies, or both simultaneously.

### 5.1. Limitations and future directions

One limitation of this research is that the correlational nature of both studies prevented us from directly addressing questions of causality—whether the experience of each facet of pride promotes behaviors that lead to a reputation of dominance or prestige. However, given that the impact of each facet of pride on status likely occurs over time (i.e., leadership reputations are shaped over many experiences), these causal relations may be difficult

to assess experimentally. It is not clear that a one-time experience of hubristic pride would lead to perceptions of dominance—but this is an important question for future research. Recent studies suggest that experimentally manipulated, state experiences of hubristic versus authentic pride have divergent effects on prejudicial beliefs and behaviors, indicating that these emotional experiences may elicit concurrent dominance and prestige-oriented interpersonal behaviors (i.e., state hubristic pride promotes hostility and outgroup derogation, whereas state authentic pride promotes outgroup favoritism; Ashton-James & Tracy, 2009). Thus, one of the most important future directions for this research is to directly test the causal model suggested by our theoretical account.

A second limitation of the present research is its reliance on North American undergraduates, especially given evidence for the psychological peculiarity of such samples (Henrich, Heine, and Norenzayan, *in press*). In addition, Study 2 was limited in its reliance on an all-male sample. It is thus particularly important that future studies seek to replicate these findings in diverse human populations, and include both genders, to examine whether the effects found here are indicative of universal human adaptations.

That said, it is worth noting that some elements of the broader theory from which this investigation derives have already been verified in diverse populations. Tracy and Matsumoto (2008) found that the pride nonverbal expression is spontaneously displayed in response to success across 36 nations that differ widely along important dimensions, including individualism vs. collectivism (Hofstede, 2001), secular-rational vs. traditional, and survival vs. self-expression (Inglehart & Norris, 2003). Tracy and Robins (2008) found that this same expression is reliably recognized across highly diverse populations, including one small-scale society in Burkina Faso. Other recent efforts suggest that these pride displays are implicitly associated with high status, both in individuals living on one of the outer islands in Fiji and Canadian university students (Shariff & Tracy, 2009; Tracy, Shariff, Zhao, & Henrich, *in prep*). Finally, in an anthropological study from a highly egalitarian population of forager-horticulturalists in the Bolivian Amazon (the Tsimane), von Rueden and colleagues (2008) found support for the basic prestige-dominance distinction consistent with broad ethnographic evidence summarized by Henrich and Gil-White (2001) and suggesting the existence of both prestige and dominance in small-scale human societies.

At the same time, alternative theoretical accounts for these data remain plausible. It is possible, for example, that the two dispositional pride facets are adaptations to selection pressures other than the need to maintain dominance and prestige. Hubristic pride may have evolved to facilitate mating; given evidence that narcissistic men tend to have multiple partners and more unrestricted sexual relationships (Reise & Wright, 1996; Rhodewalt & Eddings, 2002), hubristic pride may motivate the

acquisition of sexual partners, promoting increased reproductive fitness—at least in men. Similarly, authentic pride may have evolved for the more superordinate function of promoting positive interpersonal relationships, or “getting along,” with its associated gain in prestige merely a by-product. Nonetheless, we view the account presented here, based on the Henrich and Gil-White (2001) model, as the most parsimonious and compelling explanatory account of pride’s two facets.

Given that the present research was limited to long-term groups where status dynamics are fairly solidified, another important future direction is to examine the early formation of dominance and prestige hierarchies. In such contexts, initial judgments of traits such as intelligence and competence (prestige cues) may be misled by more noticeable traits, such as extraversion or (low) shyness (Paulhus & Morgan, 1997). If these more apparent traits are mistaken for indicators of prestige, the relation between authentic pride and prestige may be attenuated in early group formation. Indeed, recent research has found that highly agentic individuals, even those lacking competence, can attain influence by *appearing* competent in newly acquainted groups (Anderson & Kilduff, 2009), where they are presumably assumed to be prestigious (this research measured only generalized status).

In conclusion, the present research provides the first evidence that the two facets of pride might have arisen from the need to attain dominance and prestige, and that these two forms of status represent distinct avenues to social influence, associated with divergent personality and behavioral profiles.

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### Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.evolhumbehav.2010.02.004](https://doi.org/10.1016/j.evolhumbehav.2010.02.004).

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