A PARADOX OF PRIDE: HUBRISTIC PRIDE PREDICTS STRATEGIC DISHONESTY IN
RESPONSE TO STATUS THREATS

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A paradox of pride: Hubristic pride predicts strategic dishonesty in response to status threats

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Abstract

Hubristic pride predicts both anti-social, norm-violating behaviors and high social status. This raises the question: How might an anti-social emotion promote social status? We propose that that hubristically proud individuals' grandiose, inflated sense of self leads them to use strategic dishonesty to gain status after status threats. Through a series of six studies, we employ a deceptive experimental paradigm including a behavioral measure of dishonesty. Results reveal that hubristically proud individuals exaggerate their performance on a cognitive task when they believe they will subsequently work with a highly competent partner (i.e., when experiencing a status threat), but not after threats of low power, social exclusion, or inferiority to others that they will not directly encounter. Further analyses demonstrate that this effect is unique to hubristic pride and not due to shared variance with the dark triad traits. This investigation furthers our theoretical understanding of the functionality of hubristic pride; although dishonesty is always risky, when it pays off, it can result in high status and all of its consequent fitness benefits.

Lay Summary

People high in hubristic pride, the form of pride captured by feelings of arrogance and conceit, think of themselves as elite, superior individuals, but these perceptions are unlikely to be based in reality. In this present work, we test what happens when these people are in situations in which others are unlikely to treat them as the superior individuals that they think they are, which we refer to as status threats. We find that hubristically proud individuals are likely to cheat to enhance their perceived competence in response to status threats. This tendency is unique to status threats; hubristically proud individuals do not cheat to gain power, to avoid social exclusion, or in response to indications of inferiority that do not threaten their status. By doing so, this research helps explain when and why certain people are likely to cheat to get ahead in social hierarchies.

Preface

This thesis is an original, unpublished work by E. Mercadante, under the supervision of Dr. J. Tracy. I was responsible for developing theoretical hypotheses, conducting experiments, and analyzing data under Dr. Tracy's supervision. The experiments reported here were covered by UBC Ethics Certificate H17-02025.

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Dedication

To the UBC community and to my family.

Introduction

"I had a helluva season last year, and nobody gave a crap. Nobody. As much as I've complained about McGwire and Canseco and all of the bull with steroids, I'm tired of fighting it. I turn 35 this year. I've got three or four good seasons left, and I wanna get paid. I'm just gonna start using some hard-core stuff, and hopefully it won't hurt my body. Then I'll get out of the game and be done with it." – Attributed to Barry Bonds in "Love Me, Hate Me: Barry Bonds and the Making of an Antihero" by Jeff Pearlman

Prior to his infamous doping scandal, Barry Bonds spent more than a decade dominating Major League Baseball. He won the Most Valuable Player award three times and was named an All-Star in eight different seasons. Considering Bonds' achievement of nearly impossible levels of success, his eventual decision to cheat by doping with anabolic steroids is surprising. Why would Bonds, an established superstar in his sport, risk everything he had earned for the pursuit of marginally greater success?

The quotation above may provide some insight into this question. According to Pearlman, Bonds decided to use anabolic steroids because he believed he was not being adequately revered for his greatness. In other words, Bonds' motivation to cheat stemmed, somewhat ironically, from his feelings of pride in his talents and abilities. Bonds believed in himself, but felt frustrated by his failure to generate the public acclaim he thought he deserved. He cheated, therefore, not because he thought he was not good enough to succeed on his own merits, but because he believed he was *too* good, and not appropriately rewarded for it.

Bonds' actions are by no means anomalous. The prevalence of scandalous lying and cheating among highly talented individuals who first earned their success through hard work and natural ability, including athletes like Lance Armstrong and academic scholars like Diederick Stapel, suggests a widespread psychological phenomenon at play. We argue that these individuals—people who lie or cheat to increase their status or social standing—may be

motivated to do so by an excessive sense of pride combined with a deep-seated insecurity about their status compared to others.

In a series of six studies,¹ we tested whether feelings of pride lead individuals to engage in strategic dishonesty in order to convey undeserved positive impressions of themselves to others. Specifically, we hypothesized that individuals who are dispositionally prone to hubristic pride, a form of pride associated with feelings of arrogance and conceit, are willing to lie and cheat when doing so will allow them to gain status from their peers. Drawing on previous research showing that hubristic pride is positively associated with dishonesty, Machiavellianism, and other anti-social behaviors (Bureau, Ballerand, Ntourmanis, & Lafreniere, 2013; Tracy, Cheng, Robins, & Trzesniewski, 2009), along with evidence that pride functions to facilitate the attainment of social rank (Cheng, Tracy, & Henrich, 2010; Tracy, Shariff, & Cheng, 2010), we argue that hubristically proud individuals become willing to lie in pursuit of greater social status when they feel that their social rank is threatened.

Hubristic versus Authentic Pride

Previous research has identified two distinct facets of pride: authentic and hubristic (Tracy & Robins, 2007). Whereas authentic pride stems from successes attributed to controllable and unstable causes like hard work and prudent choices, and is best represented by feelings of accomplishment and confidence, hubristic pride stems from successes attributed to uncontrollable and stable causes like one's natural talents and abilities, and is better captured by feelings of arrogance and egotism. Interpersonally, hubristic pride has been shown to be positively associated with various psychologically maladaptive traits and behavioral tendencies,

¹We also conducted an additional study which is reported in the SOM rather than the main text due to several indications of poor data quality (see SOM3).

including disagreeableness, aggression, a tendency to commit petty crimes, poor relationship functioning, and prejudice against minority outgroup members (Ashton-James & Tracy, 2012; Tracy et al., 2009).

Individuals who are dispositionally high in hubristic pride also tend to display other anti-social personality traits like narcissism and Machiavellianism, and report engaging in immoral behaviors such as cheating in competitive leisure activities (Bureau, Ballerand, Ntourmanis, & Lafreniere, 2013; Tracy et al., 2009). However, these findings are based on correlations between various dispositional scales, so it remains unclear whether hubristic pride is a unique predictor of dishonest behavior, or if shared variance in some third-factor trait, like narcissism or disagreeableness, leads individuals to both experience hubristic pride and behave dishonestly. Furthermore, the factors that might cause hubristically proud individuals to behave in this manner are currently unclear. In particular, prior research has not addressed the question of whether hubristically proud individuals are indiscriminately dishonest (i.e., generally willing to lie or cheat across a range of situations) or if there are a specific set of contexts in which hubristic pride predicts dishonesty—and others where it does not.

Why Might Hubristic Pride Motivate Strategic Dishonesty?

Hubristically proud individuals tend to hold a grandiose, inflated self-concept, characterized by perceptions of self-superiority and the belief that one's accomplishments are the result of uncontrollable and stable traits rather than controllable and unstable actions or choices (Tracy & Robins, 2007). At the same time, they are prone to shame and social anxiety, report relatively weaker friendship ties and problematic relationships, and are likely to be insecurely attached to their romantic partners (Tracy & Robins, 2007; Tracy et al., 2009). In light of this seemingly contradictory personality profile, hubristic pride has been theorized to be a defensive

emotional response, which may function in part to protect individuals with fragile or unstable self-esteem from succumbing to implicit feelings of shame and low self-worth (Tracy & Robins, 2003; 2004; Tracy, Cheng, Martens, & Robins, 2011). In other words, the dispositional tendency to experience hubristic pride may emerge partly as the result of a regulatory process by which individuals suppress their feelings of shame and adopt an excessively positive sense of self-regard, often centered around one's status as an elite individual.

If this is the case, the feelings of superiority that characterize those high in hubristic pride are unlikely to be entirely based in accurate self-perceptions. Instead, hubristically proud individuals may develop an aggrandized, yet precarious, sense of self, whose sustenance requires regular validation via external indicators of excellence, such as respect or admiration from high-status peers. By acquiring positive feedback from others that matches their grandiose and inflated self-concept, individuals prone to hubristic pride can affirm their belief in their superiority, and more readily suppress their negative intrapsychic feelings and anxieties. Hubristic pride may therefore motivate individuals to advance their social status, not for objective benefits like increased access to resources or power, but for the subjective benefit of self-concept validation.

Beyond fostering a motivation to seek external indicators of high social rank, hubristically proud individuals' grandiose self-concept may also cause these individuals to feel entitled to these rewards. However, such elevated expectations may lead to a commensurately elevated likelihood of disappointment, as the external environment fails to meet these lofty expectations with sufficiently satisfying external praise or recognition (Grubbs & Exline, 2016). When such disappointments occur, the resultant incongruence between the way that hubristically proud individuals believe they deserve to be treated and the way they actually are treated may trigger a *status threat*, in the sense that their perceived social status—based on the reflected

appraisals of others—does not match their internal self-concept, raising the possibility that their self-concept is inaccurate. This threat may motivate these individuals to seek validation of their inflated self-concept by acquiring increased social status at any cost, including dishonest or otherwise immoral behaviors. In other words, when faced with a status threat, hubristically proud individuals may become willing to lie or cheat if doing so could provide a status boost, allowing them to meet the expectations of their grandiose self-concept and resolve any insecurity elicited by a discrepancy between their current social standing and their inflated sense of self-worth.

Crucially, according to this model both a status threat and the opportunity to achieve increased social status through dishonest means must be present for strategic dishonesty to occur. In the absence of a status threat, the lack of personal relevance should lead hubristically proud individuals to disengage from the situation; and without the possibility of achieving a status boost, hubristically proud individuals should not be motivated enough to risk the negative social consequences that can come from lying or cheating. This novel theoretical model is summarized visually in Figure 1.

This model is consistent with the notion that the ultimate evolutionary function of hubristic pride is to facilitate rank attainment (Cheng, Tracy, & Henrich, 2010; Tracy, Shariff, & Cheng, 2010). In fact, the model proposed here may help explain how this process works at a proximal level, such that people high in hubristic pride more closely track, and are especially sensitive to, status-relevant information due to their unique combination of entitlement and insecurity in the domain of status. As time goes on, this sensitivity should lead hubristically proud individuals to fairly frequently experience status threats, which engender the proximate goal of resolving personal insecurities, possibly by using strategic dishonesty to regain status. In

this view, the antisocial behaviors demonstrated by those high in hubristic pride are ultimately adaptive, in the sense of promoting increased status and consequent fitness benefits.

Several of these features suggest that this theorized process may be unique to hubristic pride, and distinguishable from processes that are thought to stem from related personality constructs, including the dark triad traits of psychopathy, Machiavellianism, and narcissism. The dark triad traits overlap in that all three are anti-social dispositions marked by self-centeredness, disagreeableness, and aggressiveness (Paulhus & Williams, 2002). Though positively related to each of these traits, hubristic pride is distinct from all three in several ways. First, psychopathic individuals experience very low anxiety; in contrast, previous research has shown that hubristic pride is positively related to both trait anxiety and attachment anxiety (Tracy et al., 2009). Similarly, Machiavellian individuals have a much more realistic self-concept than the grandiose, inflated self-concept characteristic of hubristically proud individuals (Christie & Geis, 1970).

Hubristic pride theoretically overlaps most with grandiose narcissism, but is nonetheless distinguishable from this complex trait in meaningful ways, primarily in that hubristic pride is overwhelmingly interpersonally maladaptive (Ashton-James & Tracy, 2012; Tracy et al., 2009) whereas grandiose narcissism has been shown to predict a number of adaptive social behaviors, such as making a positive first impression (Kufner, Nestler, & Back, 2013; Paulhus, 1998) and being perceived as attractive by potential romantic partners (Dufner, Rauthmann, Czarna, & Denissen, 2013). Narcissistic individuals also tend to have high self-esteem, whereas hubristically proud individuals tend to have low self-esteem; similarly, narcissistic individuals are less sensitive to rejection, and demonstrate less anxiety and social phobia compared to hubristically proud individuals (Tracy & Robins, 2007; Tracy et al., 2009). Taken together, these differences suggest that hubristically proud individuals may be more likely to encounter

situations that they view as threatening their social status, and, in turn, be more sensitive to these situations' potential consequences—that is, interpret them as status threats that must be reconciled—compared to narcissistic individuals. Hubristic pride may therefore uniquely predict strategic dishonesty meant to remedy this psychological discomfort.

Although previous studies have not tested whether hubristic pride promotes dishonest behavior after accounting for its overlap with the dark triad traits, several prior findings are consistent with the idea that hubristic pride should uniquely predict dishonesty in certain situations. Specifically, Jones and Paulhus (2017) investigated how the dark triad traits predict lying for monetary gain, and found that individuals high in psychopathy and narcissism demonstrated a tendency to overclaim knowledge (Paulhus, Harms, Bruce, & Lysy, 2003). In contrast, prior research has found that hubristic pride negatively predicted overclaiming (Tracy et al., 2009), suggesting that, unlike psychopathy and narcissism, hubristic pride does not elicit a chronic need to prove one's worth to oneself. Therefore, unlike narcissists and psychopaths who are likely to take advantage of any opportunity to broadcast greatness to themselves or others, individuals high in hubristic pride may do so more discriminately, primarily in situations where their relative social standing is in question as evidenced by the finding that they do report engaging in dishonesty during interpersonal competitions (i.e., knowingly breaking the rules in sports games to gain an undue advantage; Bureau et al., 2013). This difference underscores a core aspect of hubristic pride as it compares to other dark traits: hubristically proud individuals tend not to behave in antisocial or deceptive ways when their social status is not at stake.

The Present Research

Across six studies we employed multiple variations of a novel experimental procedure to test the hypothesis that individuals high in trait hubristic pride will use strategic dishonesty to

acquire status (i.e., increased social standing in the eyes of others) specifically in response to status threats. In three of these studies, we examined whether observed effects are unique to hubristic pride or might be attributed to shared variance with the dark triad traits of narcissism, psychopathy, and Machiavellianism.

For all of these studies, we developed an experimental procedure that allowed us to manipulate participants' social context so as to elicit a status threat and provide an opportunity for status acquisition. This procedure also gave participants an opportunity to engage in dishonest behavior without fear of being discovered or penalized. Specifically, participants completed an anagram-solving task while tracking their own performance, then reported the number of anagrams they solved correctly. In Studies 1, 2, and 3, we tested whether hubristically proud individuals would be more likely to lie about the number of anagrams they solved correctly when facing a status threat, consistent with our predictions, or whether they tended to lie regardless of the lie's potential implications for status acquisition. In these studies, we also varied the rewarding outcomes associated with reported high performance on the anagram task: (a) increased status in the form of respect and approval from a (fictitious) highly competent other participant (Studies 1 & 2) and (b) power over a (fictitious) other participant in a subsequent dyadic task (Studies 2 & 3).

In Studies 4, 5, and 6 we further test our theoretical model by varying the procedure so as to examine several possible mechanistic explanations for an association between hubristic pride and lying for the sake of status acquisition. One possibility is that hubristically proud individuals lie to appear more competent in order to elicit deference from a (fictitious) partner—in other words, to achieve power over their partner, ultimately resulting in resource control. We tested this possible account in Studies 4 and 5, by randomly assigning a leadership role to either the

participant or their (fictitious) partner—thus removing the possibility of power acquisition (Study 4)—and by making participants explicitly aware of the exact score they must report in order to attain power over their (fictitious) partner (Study 5), allowing us to directly test whether hubristically proud individuals lie for the sake of power acquisition.

A second potential explanation is that individuals high in hubristic pride lie in response to feelings of inferiority elicited by the presence of more competent or high-status others. In this account, the critical elicitor of dishonesty is not a status threat specifically but rather any indication of inferiority. In Study 6 we tested this account by manipulating the perceived competence of participants' partner, varying whether participants were (a) made to believe that they would be working with a highly competent partner, or (b) made aware that such highly competent people exist but not informed of their particular partner's level of competence. If hubristically proud people behave dishonestly in response to any felt inferiority, rather than—as we predict—more strategically in response to status threats and corresponding opportunities for status gains, we should see increased lying in both conditions. In contrast, if our account is correct, then increased lying should occur only when participants believe they are working with a highly competent partner—a situation that constitutes a status threat—but not when they simply are made aware that such a person exists.

In sum, the present research tests a novel theoretical model of the association between hubristic pride and dishonest behavior, which argues that individuals high in hubristic pride engage in strategic dishonesty after experiencing a status threat in order to attain increased status. This work is the first research to: (a) test whether trait hubristic pride is associated with deception using a behavioral measure of dishonesty; (b) examine specific effects of trait hubristic pride independent of the dark triad traits, with predictions derived from a theoretical model that

specifies differences among these traits, and (c) examine a specific mechanistic account that predicts both when and why people high in this disposition become likely to engage in the targeted behavior.

STUDY 1

In Study 1 we tested whether hubristically proud individuals are willing to lie to self-enhance, and if so, whether they do so indiscriminately across social situations or only in situations that constitute status threats. According to our model, hubristically proud individuals will lie to advance their status only when they face a status threat.

Method

Participants. Six hundred, thirty-two adults were recruited from Amazon Mechanical Turk (MTurk) to participate in the current between-subjects study. Following the criteria specified in our pre-registration (<https://osf.io/d2euh/>), 15 participants were excluded from analyses for failing an attention check, 43 for indicating suspicion of the deceptive experimental design, and 31 for receiving actual scores on the anagram task that made it impossible to effectively manipulate partner competence relative to the participant (see SOM1 for details on exclusions in all studies). This resulted in a final sample of 543 participants (55% female; age range = 18-73, Median = 34 years). A power analysis indicated that this between-subjects design would require 400 participants to detect a moderate effect of condition on the relationship between hubristic pride and dishonest behavior ($f = .20$) with 80% power. However, due to experimenter error, the study remained open on MTurk well after 400 participants had completed it, resulting in the larger-than-planned sample size.

Procedure. Participants believed they were participating in a study investigating how people track their own progress on tasks when working individually and with a partner. They

began by completing the Authentic and Hubristic Pride Scales (AHPS; Tracy & Robins, 2007; $\alpha = .92$ and $.91$, respectively) and the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .91$ and $.93$, respectively), both at the trait-level, by reporting how often they generally feel each of the items. Next, participants were given 5 minutes to complete as many of 40 anagrams as they could. Before beginning the anagram task, they were told that, later on in the study they would be randomly matched with another MTurk participant currently in the study, and they would work together with their partner to complete a similar task. As such, they were informed that “it is necessary that you keep careful track of the number of anagrams you complete in order to be able to provide your partner with an accurate score”. In reality, participants did not work in pairs at any point in the experiment, and no second task occurred.

After completing the anagram task, participants were randomly assigned to one of three experimental conditions. In the **highly competent partner condition**, participants learned that their partner reported correctly solving 34 of the 40 anagrams, which placed him/her in the 94th percentile of performance on this task. In the **incompetent partner condition**, participants learned that their partner reported correctly solving 8 of the 40 anagrams, which placed him/her in the 16th percentile of performance. In the **control condition**, participants did not learn any information about their partner’s performance on the anagram task. As such, status threat was manipulated between conditions via the partner’s competence, as we expected participants to feel that their status was threatened by the prospect of working with a highly competent partner but not by an incompetent partner nor when they were unaware of their partner’s level of competence. The control condition was included to test whether hubristically proud individuals tend to lie whenever they face the prospect of working with a peer, even if they do not know their status relative to this peer (i.e., no explicit status threat is present).

After viewing their condition-specific information, participants were asked to report their initials in order to communicate with their partner via instant message, along with the number of anagrams they solved correctly. This prompt provided participants with the opportunity to behave dishonestly by exaggerating their performance on the anagram task; this dishonest behavior could potentially boost the participant's status within the dyad. By comparing the effect of hubristic pride on lying across the three conditions, we were able to test whether hubristically proud individuals behave dishonestly specifically in response to a status threat (i.e., the highly competent partner condition only) or any time that doing so might boost their own status (all three conditions). Finally, participants reported demographic information and were probed for suspicion before being thanked and debriefed.

Results

To measure deception, the number of anagrams participants solved correctly was subtracted from the number they reported solving, such that positive scores indicate the extent to which participants lied to suggest performing better than they actually did. A fixed effects one-way ANOVA revealed a significant effect of condition on deception, $F(2,526) = 29.54, p < .001$. Subsequent *t*-tests indicated that participants lied about their score to a greater extent in the highly competent partner condition, ($M = 3.42, SD = 8.43$), than in the incompetent partner condition, ($M = -3.21, SD = 7.09, t = 7.98, d = .85, p < .001, 95\% \text{ CI: } [4.99, 8.26]$), and the control condition where no partner information was provided, ($M = -.88, SD = 8.96, t = 4.72, d = .49, p < .001, 95\% \text{ CI: } [2.51, 6.10]$). Participants also lied significantly more in the incompetent partner condition than in the control condition, but in this case they lied downward, to suggest that they had performed worse than they actually had, ($t = 2.77, d = .29, p < .01, 95\% \text{ CI: } [.67, 3.97]$).

We next examined deception as a function of condition, hubristic pride, and interaction terms between hubristic pride and each condition with the highly competent partner condition as the reference group, using multiple regression. Two interactions emerged, suggesting significant differences in the relationship between hubristic pride and deception among conditions, $\beta = -.22$, $t = -2.21$, $p < .05$; $\beta = -.35$, $t = -3.55$, $p < .001$. Decomposing these interactions showed that hubristic pride was associated with significantly greater self-enhancing lying among participants faced with a highly competent partner compared to those faced with an incompetent partner and those who lacked information about their partner's score; see Figure 2. In contrast, hubristic pride was not significantly associated with different levels of lying in the control vs. incompetent partner conditions, $\beta = -.14$, $t = 1.29$, $p = .20$. Examining the simple slopes for the relation between hubristic pride and lying in each of the three conditions revealed that hubristic pride predicted falsely overclaiming in the highly competent partner condition, $\beta = .20$, $t = 3.19$, $p < .01$, but not in the control condition, $\beta = -.01$, $t = -0.16$, $p = .86$. Somewhat surprisingly, hubristic pride also marginally predicted falsely reporting one's score in the incompetent partner condition—but in this case those high in hubristic pride demonstrated false modesty, underclaiming the number they actually solved, $\beta = -.15$, $t = -1.96$, $p = .051$.

Discussion

Consistent with our hypotheses, individuals high in hubristic pride were more likely to lie about doing better on a cognitive task than they actually did when they believed they would be working collaboratively with a highly competent partner, but not when they did not receive information about their partner's competence nor when they believed their partner to be incompetent. These results are consistent with our expectation that hubristically proud individuals engage in strategic dishonesty when they are faced with a status threat but not in

social situations where one's status is not threatened, even if lying in those situations could benefit one's social status. Somewhat surprisingly, hubristic pride was also marginally associated with increased lying when participants faced an incompetent partner –but overly modest lying, such that these individuals claimed to have solved fewer anagrams than they actually did. Although this latter result has potentially interesting implications, we subsequently attempted to replicate it in a pre-registered follow-up study (see <https://osf.io/ty39p/>; SOM2) and failed to find evidence of a similar effect, leading us to regard the small association observed between hubristic pride and underclaiming in the incompetent partner condition in Study 1 as spurious.

In conclusion, the results from Study 1 demonstrate that hubristically proud individuals strategically deceive others so as to appear more competent when they are faced with a status threat, but they do not lie indiscriminately even in situations where lying might benefit their status. In Study 2, we further test our theoretical model by investigating whether this pattern is specific to the status threat elicited by the presence of a more competent partner, or also occurs when individuals are faced with a similar yet distinct threat, that of losing power. Previous research has demonstrated that power and status, though related, are distinct constructs with divergent psychological effects (Anderson, Hildreth, & Howland, 2015). In Study 2 we also test whether hubristically proud individuals behave dishonestly only when there is an opportunity for a status gain, by including a condition in which participants did not believe they would subsequently work with a partner; this condition removed the opportunity to gain status in the dyad by lying about one's performance.

STUDY 2

In Study 2, we sought to replicate the key finding of Study 1, that hubristically proud individuals behave dishonestly in response to a status threat, and test whether it generalizes to the

experience of a different kind of threat, that of losing power. At an ultimate evolutionary level, gaining status is adaptive because it is instrumental to gaining power over resources and other group members (Tracy, Shariff, & Cheng, 2010). If power is the ultimate goal of hubristically proud individuals, then acquiring power might also be a salient proximate goal that motivates hubristically proud individuals to behave dishonestly to gain status. In fact, it is possible that these individuals' chronic focus on advancing their social status, as detailed in our theoretical model, may exist only because they recognize that high status will lead to power in the form of influence over others' social outcomes (Fiske & Berdahl, 2007). If this is the case, then participants in Study 1 may not have perceived the highly competent partner as a threat to their status because this person would be unlikely to respect or admire them, but rather as a threat to their power because this person would be unlikely to obey them during the dyadic task. Alternatively, if the goal of strategic dishonesty is more simply to gain social status by eliciting the respect and admiration of a highly competent individual, then we would not expect hubristically proud people to lie to gain status when they are not informed that their partner is highly competent (i.e., when there is no status threat), even if power is at stake.

Our pre-registered prediction for this study was that hubristically proud people would dishonestly exaggerate their scores on the anagram task in both conditions: when faced with the threat of being low status compared to a highly competent partner and when faced with the threat of being powerless, because of the high degree of conceptual overlap between power and status and the instrumentality of status for achieving power (see <https://osf.io/z6tr2/>).

Study 2 also included a third condition, in which participants did not believe that they would subsequently be working with a partner. We did not expect hubristic pride to predict

cheating in this last condition because social status and power were irrelevant; there was no status threat nor opportunity to gain status by lying.

Method

Participants. Four-hundred, five adults were recruited from MTurk to participate in the current between-subjects study. Following the criteria specified in our pre-registration (<https://osf.io/z6tr2/>), 37 participants were excluded from analyses for failing an attention check, 18 for indicating suspicion of the deceptive experimental design, and 2 for receiving actual scores on the anagram task that made it impossible to effectively manipulate partner competence in our highly-competent partner condition (see SOM1). This resulted in a final sample of 348 participants (49% female; age range = 19- 72, Median age = 34 years). This sample size was derived from a power analysis based on a conservative estimate of the effect size ($f = .175$) of the difference in the relationship between hubristic pride and dishonesty between the highly competent partner and control conditions in Study 1. Power was set to 80%.²

Procedure. As in Study 1, participants believed they were participating in a study investigating how people track their own progress on tasks when working individually and with a partner. They began by completing the Authentic and Hubristic Pride Scales (AHPS; Tracy & Robins, 2007; $\alpha = .93$ and $.92$, respectively) and the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .92$ and $.92$, respectively), both at the trait-level, by reporting how often they generally feel each of the different items. Next, participants were randomly assigned to one of three conditions and given condition-specific instructions for the

² After data collection was completed, we learned that this power analysis was incorrect because it was based on the goal of obtaining aimed to 80% power to detect the pre-specified effect size in a regression analysis with two continuous predictors, instead of one continuous predictor (hubristic pride) and one categorical predictor (condition). The correct power analysis, performed after realizing this error, showed that our sample size in fact provided 80% power to detect an effect of size $q = .375$ between conditions, which Cohen (1988) labeled an intermediate effect size.

same anagram task as in Study 1. We again included a **highly competent partner condition**, which was the same as in Study 1, such that participants were told that after completing the anagrams they would be randomly matched with another MTurk participant currently in the study and the pair would work together to complete a similar task.

We also included two new conditions. First, in the **power condition**, participants were given the initial same instructions as in the highly competent partner condition but were also told that the member of their dyad who reported the highest score on the individual anagram task would “be assigned to the role of LEADER and the other person will be the SUBORDINATE” for the second task and that “the LEADER will determine how the group approaches the second task, such as by splitting up the anagrams to be solved by each person, and will be able to send instructions to the SUBORDINATE via instant message.” In reality, participants did not work in pairs at any point in the experiment and no second task occurred. Finally, in the **intrinsic motivation condition**, participants were not told that they would be matched with another participant, but were still given instructions to carefully track their performance. In this condition, participants were told that “participants tend to find [the anagram task] both interesting and enjoyable for its own sake, as well as a fun challenge”. These instructions were intended to encourage participants to value their performance on this task and to treat it as challenge that might be diagnostic of their intelligence, which should engender a motivation to perform well for reasons unrelated to conscious strivings for status or power.

After viewing their condition-specific instructions, participants completed the same anagram task as in Study 1. Afterwards, they reported their initials and the number of anagrams they correctly solved. In the highly competent partner condition, prior to reporting their own score participants saw that their partner had reported correctly solving 34 of the 40 anagrams,

which placed him/her in the 94th percentile of performance on this task. In the power condition, participants were not provided with any information about their partner's score prior to reporting their own. Similarly, in the intrinsic motivation condition participants reported their score without any information about other participants' scores. Finally, participants reported demographic information and were probed for suspicion before being thanked and debriefed.

Results

To measure deception, the number of anagrams participants correctly solved was subtracted from the number they reported solving, such that positive scores indicate the extent to which participants lied to suggest performing better than they actually did. A fixed effects one-way ANOVA revealed a significant effect of condition on deception, $F(2,334) = 18.20, p < .001$. Subsequent t-tests indicated that participants lied about their score to a greater extent in the highly competent partner condition, ($M = 3.34, SD = 6.40$), than in the power condition, ($M = -.58, SD = 6.08, t = 4.56, d = .63, p < .001, 95\% CI:[2.23, 5.61]$) and in the intrinsic motivation condition where participants did not believe they were working with a partner ($M = -.87, SD = 4.90, t = 5.55, d = .74, p < .001, 95\% CI:[2.72, 5.71]$). No significant difference emerged between the power and intrinsic motivation condition, $t = .40, d = .05, p = .69$.

We next examined deception as a function of condition, hubristic pride, and interaction terms between hubristic pride and each condition with the intrinsic motivation condition as the reference group using multiple regression. Two interactions emerged, suggesting significant differences in the relationship between hubristic pride and deception among conditions, $\beta = .28, t = 2.47, p < .05; \beta = .36, t = 2.76, p < .01$. Decomposing these interactions revealed that, consistent with our pre-registered predictions, hubristic pride was associated with significantly greater lying in both the highly competent partner condition and the power condition, compared

with the intrinsic motivation condition. Examining the simple slopes for the relation between hubristic pride and lying in each of these conditions revealed that hubristic pride predicted falsely claiming to solve more anagrams than one actually did in the highly competent partner condition, $\beta = .42, t = 4.00, p < .001$, and in the power condition, $\beta = .34, t = 4.03, p < .001$, but not in the intrinsic motivation condition $\beta = .06, t = .78, p = .43$; see Figure 3.

Discussion

Consistent with the results of Study 1 and our hypothesis, hubristically proud individuals tended to strategically lie so as to suggest they performed better than they actually did when they faced a status threat in the form of being paired with a highly competent partner. Also consistent with our pre-registered prediction, we observed a similar tendency for hubristically proud participants to strategically lie when doing so would earn them power over a partner. Finally, also as predicted, hubristically proud people did not lie when they knew they were working alone. These results replicate the key finding of Study 1, that hubristic pride predicts lying in response to a status threat when doing so is strategic for acquiring status, and suggest that this tendency may generalize to the related threat of losing power and the related opportunity to acquire power over a peer.

In contrast, hubristic pride did not predict lying when participants knew they were working alone, suggesting that this anti-social behavior emerges among hubristically proud individuals only in social contexts that threaten either their status or their power. In other words, results thus far suggest that when faced with threats to their status or power, hubristically proud individuals use strategic dishonesty to attain greater status or a formal position of power, respectively, both of which may function to mitigate insecurities regarding the validity of their grandiose, inflated self-concept. It is clear that this dishonesty is strategic because when no threat

or opportunity to advance one's social rank was present, these individuals showed no particular tendency to self-enhance through deception.

In Study 3 we sought to directly replicate the finding that hubristically proud individuals lie in response to a power threat –given that this effect emerged in only one study thus far—and again compare it to a condition devoid of social hierarchy and its implications.

STUDY 3

Method

Participants. Two-hundred seventy-five adults were recruited from Amazon Mechanical Turk to participate in the current between-subjects study. Following the criteria specified in our pre-registration (<https://osf.io/zr7gm/>), 7 participants were excluded from analyses for failing an attention check, and 11 for indicating suspicion of the deceptive experimental design (see SOM1). This resulted in a final sample of 257 participants (51% female; age range = 22- 82, Median age = 33 years). This sample size was derived from a power analysis based on a conservative estimate of the effect size ($f = .2375$) of the difference in the relationship between hubristic pride and dishonesty between the power and control conditions in Study 2. Power was set to 80%.³

Procedure. As in Studies 1 and 2, participants believed they were participating in a study investigating how people track their own progress on tasks when working individually and with a

³ As in Study 2, after data collection was completed, we learned that this power analysis was incorrect because it was based on the goal of obtaining 80% power to detect the pre-specified effect size in a regression analysis with two continuous predictors, instead of one continuous predictor (hubristic pride) and one categorical predictor (condition). The correct power analysis, performed after realizing this error, showed that our sample size in fact provided 80% power to detect an effect of size $q = .365$ between conditions, which Cohen (1988) labeled an intermediate effect size.

partner. They began by completing 6-item versions of the Authentic and Hubristic Pride Scales⁴ (AHPS; Tracy & Robins, 2007; $\alpha = .93$ and $.94$, respectively) and the Positive & Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .90$ and $.95$, respectively), both at the trait-level, by reporting how often they generally feel each of the items. Next, participants were randomly assigned to either a **power condition** or an **intrinsic motivation condition**; these were identical to the power and intrinsic motivation conditions included in Study 2, respectively. The remainder of the study procedure was identical to Study 2.⁵

Results

To measure deception, the number of anagrams participants solved correctly was subtracted from the number they reported solving, such that positive scores indicate the extent to which participants lied to suggest performing better than they actually did. A fixed effects one-way ANOVA revealed no significant effect of condition on deception, $F(1, 246) = 1.07, p = .301$.

We next examined deception as a function of condition, hubristic pride, and interaction terms between hubristic pride and each condition using multiple regression. No significant interaction emerged, $\beta = -.01, t = -0.01, p = .92$. Given the results of Study 2 and our specific pre-registered predictions, we nonetheless examined simple slopes for the relation between hubristic pride and lying in each of the two conditions. Hubristic pride predicted falsely claiming to solve more anagrams than one actually did in the power condition, $\beta = .15, t = 2.01, p < .05$,

⁴ In this study, we also measured current feelings of pride at the end of the study, for exploratory purposes. To avoid using the same items twice, we split the Authentic and Hubristic Pride scales into two parts, so participants completed a random subset of 3 of the 7 items on each scale at the beginning of the study to assess their trait levels of authentic and hubristic pride.

⁵ For reasons relevant to separate, exploratory measures that participants completed after finishing Study 3, approximately twice as many participants completed the power condition ($N = 165$) as the intrinsic motivation condition ($N = 92$).

but—as was the case in Study 2— not in the intrinsic motivation condition, $\beta = .16$, $t = 1.28$, $p = .20$; see Figure 4.

Discussion

In contrast to Study 2, participants in Study 3 who were high in hubristic pride did not show significantly greater lying when faced with the threat of being powerless than when working alone, despite being slightly more likely to lie in the power condition than participants low in hubristic pride. Yet, this small effect in the power condition was almost exactly the same size as the effect in the intrinsic motivation condition; it was statistically significant (whereas the effect in the intrinsic motivation condition was not) due to a considerably larger sample in the power condition ($N = 165$) than in the intrinsic motivation condition ($N = 92$); see footnote 5.

These results raise some doubt about the result uncovered in Study 2, that hubristically proud individuals utilize strategic dishonesty specifically to mitigate the threat of powerlessness. Given that the power condition in Study 3 was considerably more strongly powered than the power condition in Study 2 ($Ns = 165$ vs. 105), one reasonable conclusion from the totality of these data is that the threat of being powerless does not reliably lead hubristically proud individuals to lie about their performance to a greater extent than they do when working alone—in contrast to the threat of being disrespected or unadmired by a highly competent peer (i.e., the threat of appearing low-status).

That said, given these inconsistent results across studies, the question of whether a desire for power elicits dishonesty from hubristically proud individuals remains ambiguous. To resolve this ambiguity, in Study 4 we adapted our paradigm to create new conditions in which participants were randomly assigned to be either powerful or powerless in a dyad, while simultaneously experiencing a status threat and having the opportunity for status gain (i.e.,

attaining a highly competent partner's respect and admiration) in both cases. This design allowed us to determine whether hubristically proud people will respond to status threats with strategic dishonesty even when these threats cannot affect their power throughout the experiment. If hubristic pride is associated with lying in these conditions, it would suggest that hubristically proud people are not specifically seeking to gain power by lying, but instead do so to gain social status.

STUDY 4

In Study 4, we further probed the previously observed distinction between how hubristically proud individuals respond to threats to their social status and how they respond to threats of being powerless by adding two new experimental conditions. In these conditions, participants were randomly assigned to either (a) have power over a highly competent partner, or (b) be subordinate to a highly competent partner. If gaining power is hubristically proud individuals' primary motivation for lying, then by randomly assigning power we should remove any motivation to lie, and in turn, no longer observe an association between hubristic pride and lying in either of these new conditions. In contrast, if hubristically proud individuals still lie to enhance their performance even when doing so cannot affect their subsequent power, we can conclude that the status threat elicited by partnering with a highly competent person is sufficient to elicit strategic dishonesty regardless of any eventual power outcome.

In both new conditions, participants were led to believe that they would be working with a highly competent partner, so both conditions included a status threat. However, the two conditions differed in another way: whether participants were likely to be concerned about social inclusion. When participants are given power over their highly competent partner, they may feel threatened because their leadership feels unwarranted, which intimates that their partner will

listen to them only because he/she has no choice. Nonetheless, their partner in this condition must interact with them to follow their directions, so inclusion is not at stake. Conversely, when participants are made the subordinate to their highly competent partner, they may feel threatened both because their partner will not respect them and because the partner may feel that he/she does not need their help and can ignore or even exclude them during the dyadic task. For these reasons, we expected these conditions to differ in participants' presumed levels of social inclusion. This design thus allows us to test another alternative explanation for the previously observed effects: if hubristically proud participants were lying to ensure that their partner would include them by considering their opinions during the dyadic task, then in this study these individuals should lie only when they have been assigned to the subordinate role, as this is the condition where they could be ignored while their partner completes the dyadic task alone.

Finally, to determine whether observed effects are specific to hubristic pride and not attributable to shared variance with related constructs, we measured the dark triad traits of psychopathy, Machiavellianism, and narcissism, and included these variables as covariates.

Method

Participants. Data were collected in three separate waves from three different samples, each of which competed different combinations of conditions as described below. In total, 1500 participants were recruited to participate in four between-subjects conditions in this study: **intrinsic motivation** (total $N = 237$), **power** (total $N = 118$), **leader** (total $N = 369$), and **subordinate** (total $N = 327$).

Sample 1. Six-hundred adults were recruited from Amazon Mechanical Turk to participate in this wave of data collection. Following the criteria specified in our pre-registration (<https://osf.io/na9us/>), 116 participants were excluded from analyses for failing an attention

check, 15 for indicating suspicion of the deceptive experimental design, and 15 for receiving actual scores on the anagram task that made it impossible to effectively manipulate partner competence in the leader and subordinate conditions (see SOM1), resulting in a final sample of 454 participants (57% female; age range = 18- 72, Median age = 31 years). In this sample, participants were randomly assigned to either the **intrinsic motivation, power, leader**, or **subordinate** condition, as described below.

Sample 2. Five-hundred adults were recruited from Amazon Mechanical Turk to participate in the current between-subjects study. Following the criteria specified in our pre-registration (<https://osf.io/z4afp/>), 116 participants were excluded from analyses for failing an attention check, 24 for indicating suspicion of the deceptive experimental design, and 25 for receiving actual scores that made it impossible to manipulate partner competence in the leader and subordinate conditions (see SOM1), resulting in a final sample of 335 participants (59% female; age range = 19- 75, Median age = 34 years). In this sample, participants were randomly assigned to either the **intrinsic motivation, leader**, or **subordinate** condition, as described below.

Sample 3. Four-hundred adults were recruited from Amazon Mechanical Turk to participate in the current between-subjects study. Following the criteria specified in our pre-registration (<https://osf.io/z4afp/>), 96 participants were excluded from analyses for failing an attention check, 24 for indicating suspicion of the deceptive experimental design, and 18 for receiving actual scores that made it impossible to manipulate partner competence in the leader and subordinate conditions (see SOM1), resulting in a final sample of 262 participants (54% female; age range = 19- 80, Median age = 35 years). In this sample, participants were randomly assigned to either the **leader** or **subordinate** condition.

Procedure. As in Studies 1-3, participants believed they were participating in a study investigating how people track their own progress on tasks when working individually and with a partner. They began by completing the Authentic and Hubristic Pride Scales (AHPs; Tracy & Robins, 2007; $\alpha = .92$ and $.90$, respectively) and the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .91$ and $.92$, respectively), both at the trait-level, by reporting how often they generally feel each of the different items. They also completed the Short Dark Triad scale, which measures the three dark triad traits of psychopathy, Machiavellianism, and narcissism (SD3; Jones & Paulhus, 2014; $\alpha = .77$, $.83$, and $.75$, respectively).⁶

Next, participants were randomly assigned to one of four experimental conditions. Two of these were the **power condition** and **intrinsic motivation condition** included in Studies 2 and 3. In addition, there were two new conditions: **leader of a highly competent partner** (henceforth referred to as the “leader condition”) and **subordinate to a highly competent partner** (henceforth the “subordinate condition”). In both of these conditions, participants received the same information as in the power condition in this and prior studies: that they would complete a second task after the anagram task in which one member of their dyad would serve as leader and would receive special privileges, and the other would serve as the subordinate. However, in contrast to the power condition where participants believed these roles would be awarded based on who reported the highest score on the anagram task, participants in the leader and subordinate conditions believed that these roles would be randomly assigned to themselves and their partner after the anagram task.

⁶ In Sample 1, participants also completed the Contingencies of Self-worth Approval from Others and Competition subscales (Crocker, Luhtanen, Cooper, & Bouvrette, 2003) at this time as an exploratory measure. We tested for moderation of our effects by each of these subscales but found no significant evidence of moderation. See SOM4 for these results.

After receiving their condition-specific information, participants completed the same anagram task as in all previous studies. Next, they reported the number of anagrams they correctly solved. For participants in the leader condition, before reporting their score they learned that they had “been assigned to the role of LEADER for the upcoming partner task. This means you will divide up the amount of work for the next task between yourself and your partner, the SUBORDINATE, and will send the SUBORDINATE instructions they must follow during the partner task.” They were also told that their partner, the subordinate, had reported correctly solving 34 of the 40 anagrams, which placed him/her in the 94th percentile. Similarly, participants in the subordinate condition learned that they had “been assigned to the role of SUBORDINATE for the upcoming partner task. This means the LEADER will divide up the amount of work between yourself and him/herself for the next task and will send you instructions you must follow during the partner task.” They were then provided with information identical to that received by participants in the leader condition, that their partner reported correctly solving 34 of the 40 anagrams, which placed him/her in the 94th percentile. In the power condition, participants were not provided with any information about their partner’s score. Similarly, in the intrinsic motivation condition participants reported their own score without any information about other participants’ scores.

Results

To measure deception, the number of anagrams participants solved correctly was subtracted from the number they reported solving, such that positive scores indicate the extent to which participants lied to suggest performing better than they actually did. To maximize statistical power, data from all three samples were combined in a multi-level model with observations nested within samples. A fixed effects two-way ANOVA revealed a significant

effect of condition on deception, $F(3,1023) = 32.59, p < .001$, and no significant effect of sample, $F(2,1023) = 1.38, p = .25$. Subsequent t-tests indicated that participants lied about their score to a greater extent in both the leader ($M = 4.10, SD = 6.92$) and subordinate conditions ($M = 3.29, SD = 7.01$) than in the power condition ($M = -0.81, SD = 4.50, ts = 8.88, 7.18, ds = .84, .70, ps < .001, 95\% CIs:[3.82, 6.00], [2.97,5.22]$, respectively) or the intrinsic motivation condition ($M = -0.17, SD = 5.57, ts = 8.27, 6.47, ds = .68, .55, ps < .001, 95\% CIs:[3.26, 5.29], [2.41,4.52]$, respectively)—in other words, participants lied more in those conditions where they faced a highly competent partner than in those where they either did not know their partner's competence or did not believe they had a partner. No significant differences emerged between the leader and subordinate conditions, $t = 1.52, d = .12, p = .13$ or between the power and intrinsic motivation conditions, $t = 1.15, d = .13, p = .25$.

To test our primary hypothesis, hierarchical regressions were then conducted in two steps with observations nested within samples. In step 1, deception was predicted by hubristic pride, condition, and interaction terms between hubristic pride and each condition with the intrinsic motivation condition serving as the reference group. In step 2, the three dark triad traits – narcissism, psychopathy, and Machiavellianism- were added to the model as covariates. In step 1, two interactions emerged suggesting significant differences in the relationship between hubristic pride and deception between conditions, $\beta = .21, t = 2.65, p < .01, \beta = .20, t = 2.58, p < .01$. Decomposing these interactions revealed that hubristic pride was associated with significantly greater lying in the leader condition and in the subordinate condition, compared to the intrinsic motivation condition. Hubristic pride was not associated with a greater tendency to lie in the power condition compared to the intrinsic motivation condition, $\beta = -.13, t = -1.05, p = .30$. Additionally, we conducted the same analysis with the power condition as the reference

group and again found two significant interactions, $\beta = .34, t = 2.82, p < .01, \beta = .33, t = 2.75, p < .01$. Decomposing these interactions revealed that hubristic pride was associated with significantly greater lying in the leader condition and in the subordinate condition, compared to the power condition.

Examining the simple slopes for the relation between hubristic pride and lying in each of these conditions revealed that hubristic pride significantly predicted falsely claiming to have solved more anagrams than one actually did in the leader condition, $\beta = .25, t = 4.85, p < .001$, and in the subordinate condition, $\beta = .24, t = 4.89, p < .001$. In contrast, hubristic pride did not significantly predict falsely claiming to have solved more anagrams than one actually did in the intrinsic motivation condition, $\beta = .04, t = 0.61, p = .55$, or in the power condition, $\beta = -.09, t = -0.86, p = .39$. The results of this multi-level model are depicted in Figure 5, and the results for each individual sample can be found in Table 1.

In step 2, the three dark triad traits of narcissism, psychopathy, and Machiavellianism were entered into the model as covariates. The interactions between hubristic pride and condition found in step 1 held controlling for these covariates, $\beta = .20, t = 2.52, p < .05, \beta = .18, t = 2.33, p < .05$. More specifically, after removing shared variance with the dark triad traits, hubristic pride predicted falsely claiming to solve more anagrams than one actually did in the leader condition, $\beta = .18, t = 3.43, p < .001$, and in the subordinate condition, $\beta = .17, t = 3.21, p < .01$, but not in the intrinsic motivation condition, $\beta = -.01, t = -0.23, p = .82$, nor in the power condition, $\beta = -.17, t = -1.59, p = .11$.

Internal Meta-Analysis of Power Condition. Because we found conflicting results concerning the relationship between hubristic pride and dishonesty in the power condition across studies, we next conducted an internal meta-analysis to examine the relationship between

hubristic pride and dishonesty in the power conditions included in Study 2, Study 3, and Study 4 Sample 1; total $N = 365$. To do so, we used the `meta()` package (Schwarzer, 2007) in the statistical software R (R Core Team, 2017) to calculate the meta-analytic correlation coefficient between hubristic pride and dishonesty in each condition, which uses the procedure described by Goh, Hall, and Rosenthal (2016). This meta-analysis revealed a small, non-significant relationship between hubristic pride and dishonesty across all three samples that completed the power condition ($r = .14, p = .30, 95\% \text{ CI} = [-.12, .38]$).

Discussion

In Study 4 we replicated the finding from Studies 2 and 3 that hubristic pride does not predict lying in the intrinsic motivation condition, in which participants knew they were working alone and therefore neither faced a status threat nor had an opportunity to enhance their status through dishonesty. We also failed to find a significant relationship between hubristic pride and lying in the power condition, suggesting that achieving power may not be the salient, proximate motivation that drives hubristically proud individuals to engage in strategic dishonesty. This conclusion is further supported by our internal meta-analysis of three independent samples that were assigned to this condition across studies, as well as the new conditions included in Study 4. Within the leader and subordinate conditions in this study, participants could not have been behaving according to a motivation to attain power because it was made clear to them that their performance would have no bearing on whether they attained power, and they were asked to report their score after learning their assigned role in the dyad. That hubristically proud individuals still engaged in systematic deception about their performance in these conditions indicates that this anti-social behavior is not driven by a desire for power, but rather that the status threat initiated by the presence of a highly competent partner is a sufficient motivator of

lying among these individuals. Furthermore, hubristically proud participants lied about their performance to a similar extent in these two conditions, suggesting that the desire to be included by a highly competent peer does not motivate strategic dishonesty. Participants assigned to be the leader of their dyad did not face any threat of exclusion, yet those high in hubristic pride still falsely claimed to solve more anagrams than they actually did.

These results also support our theoretical expectation that status threats motivate hubristically proud individuals to engage in strategic dishonesty as a way of boosting their status. Regardless of the formal power allotted to each participant, working with a highly competent partner always presents a threat to the participant's status because this partner is unlikely to respect and admire the participant given the participant's lower score.

Furthermore, hubristic pride remained a significant predictor of strategic dishonesty in the leader and subordinate conditions after removing shared variance with the dark triad traits. This pattern of results supports our claim that hubristic pride is specifically attuned to status, compared to the other dark triad traits, as described in our theoretical model. As such, these results are consistent with the idea that hubristic pride is a functional emotional disposition that motivates individuals to behave anti-socially in order to gain status.

Finally, although the accumulated evidence suggests that the opportunity to achieve power is not a sufficient motivator leading hubristically proud individuals to engage in strategic dishonesty, there is another alternative explanation that may account for the observed non-significant results in the power condition. Given that hubristically proud individuals hold a grandiose, inflated self-concept based around the belief that they are superior to most others, they may have chosen to report their scores honestly in the power condition because they assumed

that they had outperformed their partner legitimately, and could thus attain power without using dishonesty.

STUDY 5

In Study 5, we tested this alternative explanation by informing participants in the power condition of their fictitious partner's score immediately before they were asked to report their own score. If hubristically proud participants in previous studies chose not to lie in the power condition because they assumed that they had honestly outperformed their partner, then hubristically proud individuals in this study *should* lie to surpass their fictitious partner's score, but only in cases where they know that they scored below their partner.

Method

Participants. Data were collected in two separate waves from two different samples; participants in each sample completed one of the conditions as described below. In total, 800 participants were recruited from Amazon Mechanical Turk to participate in two between-subjects conditions in this study: **intrinsic motivation** (total $N = 268$) and **taking power** (total $N = 375$).

Sample 1. Six-hundred adults were recruited from Amazon Mechanical Turk to participate in this wave of data collection. Following the criteria specified in our pre-registration (<https://osf.io/cu3b4/>), 85 participants were excluded from analyses for failing an attention check and 18 for indicating suspicion of the deceptive experimental design (see SOM1 for details on exclusions in all studies), resulting in a final sample of 497 participants (61% female; age range = 18- 76, Median age = 34 years). Participants in Sample 1 were randomly assigned to either the **intrinsic motivation** or **taking power** condition.

Sample 2. Two-hundred adults were recruited from Amazon Mechanical Turk to participate in this wave of data collection. Following the criteria specified in our pre-registration (<https://osf.io/va68g/>), 43 participants were excluded from analyses for failing an attention check and 10 for indicating suspicion of the deceptive experimental design (see SOM1 for details on exclusions in all studies), resulting in a final sample of 147 participants (57% female; age range = 20- 71, Median age = 35 years). In this sample, all participants were assigned to the **taking power** condition.⁷

Procedure. As in Studies 1-4, participants believed they were participating in a study investigating how people track their own progress on tasks when working individually and with a partner. They began by completing the Authentic and Hubristic Pride Scales (AHPS; Tracy & Robins, 2007; $\alpha = .93$ and $.91$, respectively) and the Positive & Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .92$ and $.93$, respectively), both at the trait-level, by reporting how often they generally feel each of the different items. They also completed the Short Dark Triad scale, which measures the three dark triad traits of psychopathy, Machiavellianism, and narcissism, (SD3; Jones & Paulhus, 2014; $\alpha = .77$, $.80$, and $.74$, respectively).⁸

Next, participants were randomly assigned to one of two experimental conditions: **intrinsic motivation** or **taking power**. The intrinsic motivation condition was the same as in Studies 2, 3, and 4. The taking power condition was very similar to the power condition included

⁷ After analyzing the data from Sample 1, we found a small, non-significant effect approaching significance that we might not have had the power to detect at our specified alpha level ($\alpha = .05$), so we decided to collect more participants for the taking power condition to ensure that our failure to find a significant effect in this condition was not due its being underpowered. We chose not to add participants to the intrinsic condition because the pattern of results in this condition fit well with what we had observed in our previous studies.

⁸ In Sample 1 participants also completed the Psychological Entitlement Scale (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) at this time as an exploratory measure. The results from analyses with this measure are detailed under SOM5.

in Studies 2, 3, and 4. The only difference was that, after completing the anagram task and immediately before reporting their score, participants saw that their partner had reported correctly solving 21 of the 40 anagrams. In contrast to previous studies, participants did not see a percentile ranking for their partner's score, as our goal was not to explicitly manipulate partner competence. We set the fictitious partner's score at 21 because this was the actual mean score of participants on the anagram task across all previous studies, so we expected that approximately half the sample would outperform the fictitious partner while the other half would perform worse than the fictitious partner. This design therefore allowed us to test, in a quasi-experimental fashion, whether participants who outperformed their partner would be less likely to lie about their score than those who underperformed their partner, and whether this difference was related to hubristic pride. All participants in the taking power condition were also told that if they and their partner reported the same score on the anagram task, the leader and subordinate roles would be randomly assigned. Participants in both conditions then reported their score and demographic information before being thanked and debriefed.

Results

To measure deception, the number of anagrams participants solved correctly was subtracted from the number they reported solving, such that positive scores indicate the extent to which participants lied to suggest performing better than they actually did. Data from both samples were then combined in a multi-level model with observations nested within samples⁹. A fixed effects two-way ANOVA revealed a significant effect of condition on deception, $F(1,632)$

⁹ We removed a single outlier from the dataset because this participant's cook's distance score ($>.5$) demonstrated that it was strongly, disproportionately affecting the model for our primary hypothesis (Cook, 1977). No other participants' cook's distance scores approached this magnitude. This participant's score on the critical dependent variable (deception) was 8.16 standard deviations above the mean and no other participant's score was greater than 3.69 standard deviations above the mean, so including this observation greatly affected the general trend of results. Results with the outlier included can be found under SOM6.

= 4.25, $p < .05$, and no significant effect of sample, $F(1,632) = 0.08$, $p = .78$. A subsequent t-test indicated that participants lied to exaggerate their performance to a slightly greater extent in the taking power condition, ($M = 0.12$, $SD = 4.57$), than in the intrinsic motivation condition, ($M = -0.65$, $SD = 4.74$, $t = -2.05$, $d = .17$, $p < .05$, 95% CI = [-1.51, -0.03]).

We next created two quasi-experimental conditions within both conditions, based on participants' performance on the anagram task relative to the fictitious partner in the taking power condition. Within the taking power condition, 195 participants (52% of those in this condition) solved 21 or fewer anagrams, and 180 (48%) solved more than 21 anagrams. Within the intrinsic condition, 153 participants (57% of those in the intrinsic condition) solved 21 or fewer anagrams, and 115 (43%) solved more than 21 anagrams. Therefore, in addition to belonging to one of the two experimental conditions, participants also belonged to one of the two quasi-experimental conditions: inferior or superior to the fictitious partner in the power condition. We included participants who scored exactly 21 in the inferior condition because these individuals would still need to lie to guarantee becoming the leader.

To test our primary hypothesis, we first examined results for participants in the inferior quasi-experimental condition. A new binary variable was created to indicate whether participants lied to say they had solved more than 21 anagrams; inferior-condition participants were assigned a score of 1 on this variable if they falsely reported solving more than 21, and 0 if they did not falsely report solving more than 21. In the taking power condition, this variable represents whether participants lied to unjustly usurp the leader role, and in the intrinsic condition this variable represents participants' baseline tendency to exaggerate their score beyond this threshold when working alone. We conducted hierarchical logistic regressions in two steps. In step 1, lying to falsely claim solving more than 21 anagrams was regressed onto hubristic pride,

experimental condition, and interaction terms between hubristic pride and experimental condition. In step 2, the three dark triad traits – narcissism, psychopathy, and Machiavellianism – were added to the model as covariates. In step 1, no significant interaction emerged, indicating no significant difference in the relationship between hubristic pride and falsely claiming to have solved more than 21 anagrams between the intrinsic and power conditions, for participants in the inferior quasi-condition, $\beta = .41, z = 1.35, p = .18$. Including the dark triad covariates in step 2 did not significantly change this null result, $\beta = .39, z = 1.24, p = .22$.

We next examined deception continuously, as measured in previous studies (i.e., by subtracting participants' real score from their reported score), as a function of hubristic pride and condition within each quasi-condition. Hierarchical regressions were conducted in two steps. Beginning with the inferior quasi-condition, in step 1 deception was regressed onto hubristic pride, experimental condition, and interaction terms between hubristic pride and experimental condition. In step 2, the three dark triad traits – narcissism, psychopathy, and Machiavellianism – were added to the model as covariates. In step 1, no significant interaction emerged, indicating no significant difference in the relationship between hubristic pride and falsely claiming to have solved more anagrams than one actually did between the intrinsic motivation condition and the taking power condition for inferior quasi-condition participants, $\beta = .14, t = 1.29, p = .20$. Given our pre-registered predictions, we nonetheless decomposed this interaction, and found that, although not significantly different from the intrinsic condition, $\beta = .08, t = 0.87, p = .39$, hubristic pride positively predicted deception in the taking power condition among participants who actually scored 21 or below, $\beta = .22, t = 3.31, p < .01$. Including the dark triad traits as covariates did not significantly change the null interaction between hubristic pride and condition, $\beta = .12, t = 1.12, p = .26$, and the effect of hubristic pride predicting deception within the taking

power condition among these participants remained significant controlling for these covariates, $\beta = .15, t = 2.09, p < .05$.

The same hierarchical regression was next conducted for participants who outscored their fictitious partner. In step 1, no interaction emerged, indicating no significant difference in the relationship between hubristic pride and falsely claiming to have solved more anagrams than one actually did between the intrinsic and taking power conditions, for superior quasi-condition participants, $\beta = .15, t = 1.15, p = .25$. To maintain consistency with analyses conducted for those in the inferior condition, we nonetheless decomposed this interaction, and found that hubristic pride was not significantly associated with lying in either the taking power condition, $\beta = .003, t = 0.04, p = .97$, or the intrinsic motivation condition, $\beta = -.14, t = -1.35, p = .18$. In step 2, the three dark triad traits, narcissism, psychopathy, and Machiavellianism, were entered into the model as covariates. Including these covariates did not significantly change this null interaction between hubristic pride and experimental condition, $\beta = .14, t = 1.07, p = .28$.

Discussion

In Study 5 we tested an alternative explanation for the previously observed inconsistent results in the power condition across studies. The results of Study 5 indicate that hubristically proud participants did not tend to lie about their performance in order to usurp a powerful position in the dyad. Even when they knew the exact score they needed to report to take control, they were no more likely to do so than were hubristically proud participants who were working alone. This suggests that the desire to attain power does not motivate strategic dishonesty among hubristically proud individuals. Interestingly, we did see a significant relation between hubristic pride and lying within the taking power condition among those participants who actually scored below their partner; this result may be due to these individuals experiencing a status threat. In

this situation, participants know they will be working with someone more competent than themselves, thus initiating a status threat that can be resolved with strategic dishonesty to garner greater respect and admiration from the (fictitious) partner.

In conclusion, the results of Study 5, combined with the results of the previous studies in this investigation, strongly suggest that the desire to attain power is not a sufficient motivator for hubristically proud individuals to behave dishonestly. The findings reviewed thus far may therefore be better explained by an account centered around status threats and the motivation to boost one's status in response.

That said, an additional alternative explanation may explain these effects. We have argued that hubristically proud individuals lie about their performance in response to the status threat they experience from the knowledge that they will be working with a highly competent partner. Yet, it is possible that they may feel similarly threatened by the mere awareness of their inferiority to another person, regardless of whether they will be working with that person and thus face the threat of being low status in that dyadic relationship. If this is the case, then being paired with a highly competent partner would not be a necessary condition to lead hubristically proud individuals to lie; instead, simply knowing that other people who have completed the task outperformed them may be sufficient. Addressing this possibility is critical for determining whether hubristic pride activates a willingness to lie or cheat in response to feelings of inferiority in general, versus threats to one's status in a particular situation. Given our theoretical account of hubristic pride as an emotion that functions specifically to facilitate the attainment of social rank, we predicted that individuals high in this emotional disposition would not lie in response to felt inferiority unless those feelings were directly tied to imminent lower status; this prediction was preregistered at <https://osf.io/uda2n/>.

We tested this hypothesis in Study 6 by comparing participants' behavior in the highly competent partner condition included in Studies 1 and 2 with that in a new condition in which participants were unaware of their partner's score but were told that previous participants in the experiment had performed extremely well on the task. If hubristically proud participants lie only in response to the status threat of being paired with a highly competent partner, we should replicate our previous findings of lying in the highly competent partner condition and find significantly less lying among these individuals in the new general inferiority condition.

STUDY 6

Method

Participants. Five-hundred adults were recruited from Amazon Mechanical Turk to participate in this wave of data collection. Following the criteria specified in our pre-registration (<https://osf.io/uda2n/>), 108 participants were excluded from analyses for failing an attention check, 29 for indicating suspicion of the deceptive experimental design and 28 for receiving actual scores that made it impossible to manipulate partner/previous participants' competence (see SOM1), resulting in a final sample of 335 participants (58% female; age range = 19- 81, Median age = 34 years).

Procedure. As in Studies 1-5, participants believed they were participating in a study investigating how people track their own progress on tasks when working individually and with a partner. They began by completing the Authentic and Hubristic Pride Scales (AHPS; Tracy & Robins, 2007; $\alpha = .93$ and $.92$, respectively) and the Positive & Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .92$ and $.92$, respectively), both at the trait-level, by reporting how often they generally feel each of the different items. They also completed the Short Dark Triad scale, which measures the three dark triad traits of psychopathy,

Machiavellianism, and narcissism (SD3; Jones & Paulhus, 2014; $\alpha = .81, .83$, and $.82$, respectively). Next, participants were randomly assigned to one of two experimental conditions: **aware of highly competent performers** (henceforth referred to as the “aware of condition”) or **working with a highly competent partner** (henceforth referred to as the “working with condition”).

As in Study 1, in both conditions participants were informed that they would be matched with another Mturk participant to complete a collaborative task later on in the study. However, unlike in Study 1, prior to the anagram task participants were given information about previous participants’ performance on the anagram task. In the “aware of” condition, in addition to being told about the average participant’s score, participants were also informed that “the top performers correctly solve around 34 of the 40 anagrams”. Then, participants in this condition completed the anagram task and, upon completion, reported their score without seeing any information about their partner’s score. In the “working with” condition, prior to the anagram task, participants were informed that the average participant tends to correctly solve about 21 anagrams in this task in order to keep the two conditions as similar as possible. Then, participants in this condition completed the anagram task and, prior to reporting their score, saw that their partner had correctly solved 34 of the 40 anagrams, which placed him/her in the 94th percentile of performance on the task. Participants then reported their score and demographic information before being thanked and debriefed.

Results

To measure deception, the number of anagrams participants solved correctly was subtracted from the number they reported solving, such that positive scores indicate the extent to which participants lied to suggest performing better than they actually did. A fixed effects one-

way ANOVA revealed a significant effect of condition on deception, $F(1,320) = 16.87, p < .001$. A subsequent t-test indicated that participants lied about their score to a greater extent in the *working with* condition ($M = 2.69, SD = 4.72$) than in the *aware of* condition ($M = .62, SD = 4.31, t = 4.11, d = .46, p < .001, 95\% CI = [1.08, 3.06]$).

We then conducted multiple regressions in two steps. In step 1, deception was predicted as a function of hubristic pride, condition, and an interaction term between hubristic pride and condition. In step 2, the dark triad traits of narcissism, psychopathy, and Machiavellianism were added to the model as covariates. In step 1, a marginally significant interaction emerged, suggesting a small difference in the relationship between hubristic pride and lying in the two conditions, $\beta = .20, t = 1.85, p = .065$. Decomposing this interaction showed that hubristic pride was associated with marginally greater lying among participants faced with a highly competent partner compared to those faced with a partner of unknown competence but who were aware that such high performers had completed the task previously. Examining the simple slopes for the relation between hubristic pride and lying in each condition revealed that hubristic pride predicted falsely overclaiming in the *working with* condition, $\beta = .19, t = 2.50, p < .05$, but not in the *aware of* condition, $\beta = -.01, t = -0.17, p = .87$; see Figure 6.

In step 2, the three dark triad traits were added into the model as covariates. Including these covariates revealed a significant interaction between hubristic pride and condition predicting deception, $\beta = .21, t = 1.99, p < .05$. Decomposing this interaction showed that hubristic pride was associated with significantly greater lying among participants faced with a highly competent partner compared to those faced with a partner of unknown competence but who were aware that such high performers had participated in the task previously. Examining the simple slopes for the relation between hubristic pride and lying in each condition showed that

hubristic pride was non-significantly associated with falsely overclaiming in the working with condition, $\beta = .10$, $t = 1.25$, $p = .21$, and non-significantly associated with falsely *under*claiming in the aware of condition, $\beta = -.11$, $t = -1.24$, $p = .21$.

Discussion

In Study 6, we tested an alternative explanation for the relationship between hubristic pride and falsely claiming to have solved more anagrams than one actually did when paired with a highly competent partner. The results of Study 6 show that hubristically proud participants did not tend to lie about their performance when they simply were aware that others had outperformed them in the past, but they were slightly more likely to lie when they believed they would work with a highly competent partner. Furthermore, they were significantly more likely to do so than those low in hubristic pride. In addition, after removing shared variance between hubristic pride and the dark triad traits, we found that hubristically proud participants were significantly more likely to exaggerate their score when they believed they were working with a highly competent partner compared with when they knew highly competent people had completed the task in the past. This pattern suggests that the tendency to respond to status threats with strategic dishonesty is unique to hubristic pride and cannot be explained by its conceptual overlap with the dark triad traits.

The results of this study suggest that hubristically proud individuals do not reliably lie to self-enhance in response to any indication of inferiority. Instead, these individuals appear to be particularly attuned to indications of inferiority that threaten their status. These results thus support our theoretical expectation that hubristically proud individuals utilize strategic dishonesty to boost their own status in response to status threats, but do not engage in behavioral

dishonesty when their status has not been explicitly threatened, even if their ego might have been.

GENERAL DISCUSSION

The present research is the first to examine the situational factors that elicit dishonest behavior from hubristically proud individuals. Based on a novel theoretical model, we hypothesized that hubristic pride would be associated with a selective tendency to lie when doing so offered an opportunity for status gains, but only in response to feeling that one's own status was threatened. Using a behavioral measure of dishonesty, we found consistent support for this hypothesis across six studies. By modifying the experimental manipulations included in these studies, we further found that this tendency is distinct to status threats, and does not occur in response to the threat of being powerless, socially excluded, or generally inferior to others. Furthermore, the observed effects of hubristic pride on strategic dishonesty cannot be attributed to shared variance with the dark triad traits of psychopathy, Machiavellianism, or narcissism.

More specifically, in Study 1 we found that trait hubristic pride predicted exaggerating one's performance on a cognitive task, but only when participants believed they would subsequently work with a highly competent partner—evoking a threat to their status—and not when they believed they would work with an incompetent partner or were not aware of their partner's competence. In Studies 2, 3, 4, and 5, we found that hubristic pride was not associated with dishonest behavior when participants did not believe they would subsequently work in pairs, indicating that these individuals do not lie to self-enhance indiscriminately. These four studies also suggested that hubristic pride is not reliably or robustly associated with lying for the sake of attaining power over a peer; although several of these studies provided conflicting results on this issue, an internal meta-analysis of Studies 2, 3, and 4 revealed a null association between

hubristic pride and dishonesty under these particular conditions. Further supporting this conclusion, in Study 4 we found that hubristically proud individuals exaggerated their performance in response to a status threat even when they believed that the leadership role in the subsequent partner task had already been randomly assigned, thus removing the possibility of attaining power. Similarly, in Study 5 hubristically proud participants did not lie to attain power even when they knew exactly how much lying would be required to do so. Finally, in Study 6 we found that hubristic pride did not lead to lying when participants were made to feel inferior to others but did not face a status threat; that is, when they knew that others outperformed them but did not expect to meet or work with these others.

Together, these results support our theoretical account of when and why hubristically proud individuals strategically exaggerate their competence to gain higher social status than they actually deserve. Due to their grandiose, inflated self-concept, these individuals likely feel entitled to high status because they view themselves as superior, elite individuals. However, because this belief is not grounded in objective reality, they often encounter situations in which their status does not match their self-concept, leading them to experience status threats. Here, we operationalized these threats as learning that one's partner in an upcoming collaborative task is more competent than the self. When experiencing this kind of threat, hubristically proud individuals utilize strategic dishonesty to appear more competent than they are, in order to gain status in the form of their peer's respect or admiration.

The present research demonstrates that this motivation is distinct to the desire for greater status, and that hubristically proud individuals do not reliably use dishonesty to attain power over a peer, ensure that they are included by a peer, or as a non-strategic but perhaps emotionally comforting response to any indication of their inferiority to others. These findings are therefore

consistent with the notion that hubristic pride evolved to motivate status-seeking behavior (Cheng, Tracy, & Henrich, 2010; Tracy, Shariff, & Cheng, 2010). This ultimate evolutionary function may manifest as a chronic focus on status dynamics within groups and a unique sensitivity to one's own status relative to others in their environment. Their willingness to counter status threats with strategic dishonesty may provide hubristically proud individuals with an advantage in status competitions over others who are less willing to behave immorally. If successful, this dishonesty might ultimately beget numerous fitness benefits that come with high social rank, including material gains like a greater proportion of group resources, and social gains like fewer socially imposed constraints on one's actions (Henrich & Gil-White, 2001; von Rueden & van Vugt, 2015). These findings may therefore clarify why hubristic pride was selected for during human evolution, despite its known associations with maladaptive intra- and interpersonal traits and behaviors (Tracy et al., 2009).

Furthermore, the current findings provide new evidence of important distinctions between hubristic pride and the dark triad traits. Despite considerable conceptual and empirical overlap among these traits and both authentic and hubristic pride (Paulhus & Williams, 2002; Tracy et al., 2009), the relationship between hubristic pride and strategic dishonesty in response to status threats remained statistically significant when including the dark triad traits as covariates. These results thus suggest that hubristic pride may be more specifically calibrated to status concerns, and responsive to status threats, compared with these three dark traits. Whereas the dark triad traits have been shown to predict anti-social behaviors in a variety of contexts, such as cheating for monetary rewards (Jones & Paulhus, 2017) and behaving selfishly in economic games (Moshagen, Hilbig, & Zettler, 2018), hubristic pride may specifically lead to anti-social behaviors in the pursuit of social status when one's status has been threatened.

Limitations and Future Directions

There are several limitations to the present research which should be addressed in future work. First, our main conclusions here are based on correlational results, thus preventing us from drawing strong conclusions about the causal role of hubristic pride in eliciting strategic dishonesty. Future research is therefore needed to manipulate state hubristic pride and test whether similar effects emerge in response to status threats. However, given that our theoretical model is focused on the chronic experience of hubristic pride, wherein individuals have adopted a tendency to behave dishonestly after status threats as a way of validating their grandiose, inflated self-concept, it is not clear that a person who is momentarily experiencing hubristic pride but is not generally prone to this emotion would behave in the same way. Repeated life experiences affect the development of the self-concept (Markus, 1977), so we expect that the general tendency to experience hubristic pride over time, as was measured in the present research, would more reliably promote the development of a hubristically proud self-concept and corresponding strategic dishonesty in response to status threats.

Another limitation of the present research is that all of these studies were conducted online. However, we would expect this limitation to, for the most part, work against our expected effects; the status dynamics hypothesized to drive these effects should be considerably less salient when participants know they will interact with each other only via instant message, compared to face-to-face interactions in a laboratory or real-world context. Although previous research has shown that people try to gain and maintain social status similarly in laboratory and online contexts (e.g., Case, Bae, & Maner, 2018), it is possible that the consequences of a status threat like facing the disrespect of a high-status peer would be more severe in face-to-face groups than online. Nevertheless, the online design used here might have increased our likelihood of

detecting effects for other reasons, such as the ease of lying in an anonymous online context and the reduced risk of getting caught.

An additional limitation of the present research is that all of our participants were American MTurk workers, which makes this research suffer from the same limitations as other studies conducted exclusively with WEIRD populations (Henrich, Heine, & Norenzayan, 2010). On one hand, considering that expressing pride has somewhat different connotations across cultures (Tracy, Shariff, Zhao, & Henrich, 2013), it is possible that our results would not generalize across cultures. On the other hand, prior research has found that the two-factor structure of pride generalizes across North American and several East Asian cultures, and hubristic pride has a similar set of correlates in these other populations (Shi et al., 2015), so it is also possible that our results would generalize across a wide range of cultural contexts.

An additional important future direction is to investigate how the behavioral tendencies toward strategic dishonesty observed here play out in real world contexts. In the opening of this paper, we highlighted several examples of fairly extreme and scandalous dishonesty involving Barry Bonds, Lance Armstrong, and Diederick Stapel, but the observed effects are likely to also apply to more mundane dishonest behaviors, such as lying on a resume or cheating on an exam. These kinds of behaviors can cause problems in society via the misallocation of status and resources, so better understanding the kinds of people who are likely to commit such transgressions may lead to a better understanding of how to prevent their consequences.

In conclusion, the current research provides the first evidence that trait hubristic pride is uniquely associated with dishonest behavior and supports a theoretical model explaining exactly when and why this behavior occurs. This research builds upon previous theories suggesting that hubristic pride functions to promote social rank attainment by demonstrating a specific anti-

social yet functional behavioral tendency that may allow hubristically proud individuals to reach a high level of social status and reap the benefits that come with it.

Figure 1. A visual representation of our novel theoretical model outlining how and when hubristic pride leads to dishonesty.

Figure 2. Interaction between hubristic pride and experimental condition predicting lying, Study 1. Standardized betas for hubristic pride predicting lying in each condition are reported above each line.

Figure 3. Interaction between hubristic pride and experimental condition predicting lying, Study 2. Standardized betas for hubristic pride predicting lying in each condition are reported above each line.

Figure 4. Relation between hubristic pride and experimental condition predicting lying, Study 3. Standardized betas for hubristic pride predicting lying in each condition are reported on the right of each line.

Figure 5. Interaction between hubristic pride and experimental condition predicting lying, Study 4. Standardized betas for hubristic pride predicting lying in each condition are reported on the right of each line.

Figure 6. Interaction between hubristic pride and experimental condition predicting lying, Study 6. Standardized betas for hubristic pride predicting lying in each condition are reported above each line.

Table 1

Relationships (Standardized Betas) between Hubristic Pride and Lying in each condition, separately by sub-sample, Study 4.

Sample	Condition			
	Intrinsic Motivation	Power	Leader	Subordinate
Sample 1 ($n=454$)	-.05 (-.10)	-.10 (-.20)	.35*** ^a (.28*** ^a)	.01 (-.09)
Sample 2 ($n=335$)	.11 (.05)	NA	.26** (.18 [^])	.29*** (.24**)
Sample 3 ($n=262$)	NA	NA	.17 [^] (.13)	.26** (.19*)

Notes. Betas in parentheses represent the relationships (standardized betas) between hubristic pride and lying controlling for the dark triad traits. Significance represents the difference from the Intrinsic Motivation Condition.

[^] $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

^aSignificantly different from Intrinsic Motivation condition

References

- Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin*, 141(3), 574–601.
- Ashton-James C., & Tracy, J. L. (2012). Pride and Prejudice: How Feelings About the Self Influence Judgments of Others. *Personality and Social Psychology Bulletin*, 38(4), 466–476.
- Bureau, J. S., Vallerand, R. J., Ntoumanis, N., & Lafrenière, M.-A. K. (2013). On passion and moral behavior in achievement settings: The mediating role of pride. *Motivation and Emotion*, 37(1), 121–133.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, 75(1), 219–229.
- Campbell, W. K., Bonacci, A. M., Shelton, J., Exline, J. J., & Bushman, B. J. (2004). Psychological entitlement: Interpersonal consequences and validation of a self-report measure. *Journal of Personality Assessment*, 83(1), 29–45.
- Case, C. R., Bae, K. K., & Maner, J. K. (2018). To lead or to be liked: When prestige-oriented leaders prioritize popularity over performance. *Journal of Personality and Social Psychology*, 115(4), 657–676.
- Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary foundations of human social status. *Evolution and Human Behavior*, 31(5), 334–347.
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2. Auflage)*. Hillsdale, NJ: Erlbaum.

- Cook, R.D. (1977) Detection of Influential Observation in Linear Regression, *Technometrics*, 19(1), 15-18
- Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrette, A. (2003). Contingencies of self-worth in college students: theory and measurement. *Journal of Personality and Social Psychology*, 85(5), 894–908.
- Dufner, M., Rauthmann, J. F., Czarna, A. Z., & Denissen, J. J. A. (2013). Are Narcissists Sexy? Zeroing in on the Effect of Narcissism on Short-Term Mate Appeal. *Personality and Social Psychology Bulletin*, 39(7), 870–882.
- Goh, J. X., Hall, J. A., & Rosenthal, R. (2016). Mini Meta-Analysis of Your Own Studies: Some Arguments on Why and a Primer on How. *Social and Personality Psychology Compass*, 10(10), 535–549.
- Grubbs, J. B., & Exline, J. J. (2016). Trait entitlement: A cognitive-personality source of vulnerability to psychological distress. *Psychological Bulletin*, 142(11), 1204–1226.
- Henrich, J., & Gil-White, F. J. (2001). The evolution of prestige: freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, 22(3), 165–196.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature*, 466(7302), 29.
- Horton, R. S., & Sedikides, C. (2009). Narcissistic responding to ego threat: When the status of the evaluator matters. *Journal of Personality*, 77(5), 1493–1525.
- Jones, D. N., & Paulhus, D. L. (2010). Different Provocations Trigger Aggression in Narcissists and Psychopaths. *Social Psychological and Personality Science*, 1(1), 12–18.

- Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3): A Brief Measure of Dark Personality Traits. *Assessment*, 21(1), 28–41.
- Jones, D. N., & Paulhus, D. L. (2017). Duplicity among the dark triad: Three faces of deceit. *Journal of Personality and Social Psychology*, 113(2), 329–342.
- Küfner, A. C. P., Nestler, S., & Back, M. D. (2013). The two pathways to being an (un-)popular narcissist. *Journal of Personality*, 81(2), 184–195.
- Lukaszewski, A. W., Simmons, Z. L., Anderson, C., & Roney, J. R. (2016). The role of physical formidability in human social status allocation. *Journal of Personality and Social Psychology*, 110(3), 385–406.
- Mahadevan, N., Gregg, A. P., & Sedikides, C. (2019). Is self-regard a sociometer or a hierometer? Self-esteem tracks status and inclusion, narcissism tracks status. *Journal of Personality and Social Psychology*, 116(3), 444–466.
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35(2), 63–78.
- Moshagen, M., Hilbig, B. E., & Zettler, I. (2018). The dark core of personality. *Psychological Review*.
- Paulhus, D., Harms, P., Nadine Bruce, M., & C Lysy, D. (2003). The Over-Claiming Technique: Measuring Self-Enhancement Independent of Ability. *Journal of Personality and Social Psychology*, 84, 890–904.
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 74(5), 1197–1208.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556–563.

- Pearlman, J. (2006, March 27). A look at why Barry Bonds turned to steroids. Retrieved May 9, 2019, from ESPN.com website: <http://www.espn.com/espnmag/story?id=3680260>
- Shi, Y., Chung, J. M., Cheng, J. T., Tracy, J. L., Robins, R. W., Chen, X., & Zheng, Y. (2015). Cross-cultural evidence for the two-facet structure of pride. *Journal of Research in Personality*, 55, 61–74.
- Tracy, J. L., Cheng, J. T., Martens, J., & Robins, R. (2011). The affective core of narcissism: Inflated by pride, deflated by shame. *Handbook of Narcissism and Narcissistic Personality Disorder*, 330–343.
- Tracy, J. L., Cheng, J. T., Robins, R. W., & Trzesniewski, K. H. (2009). Authentic and Hubristic Pride: The Affective Core of Self-esteem and Narcissism. *Self and Identity*, 8(2–3), 196–213.
- Tracy, J. L., & Robins, R. W. (2003). “Death of a (Narcissistic) Salesman:” An Integrative Model of Fragile Self-Esteem: Comment. *Psychological Inquiry*, 14(1), 57–62.
- Tracy, J. L., & Robins, R. W. (2004). Putting the Self into Self-Conscious Emotions: A Theoretical Model. *Psychological Inquiry*, 15(2), 103–125.
- Tracy, J. L., & Robins, R. W. (2007). The psychological structure of pride: A tale of two facets. *Journal of Personality and Social Psychology*, 92(3), 506–525.
- Tracy, J.L., Shariff, A., & Cheng, J.T. (2010). A Naturalist’s View of Pride. *Emotion Review*, 2, 163–177.
- Tracy, J. L., Shariff, A. F., Zhao, W., & Henrich, J. (2013). Cross-cultural evidence that the nonverbal expression of pride is an automatic status signal. *Journal of Experimental Psychology: General*, 142(1), 163–180.

- Twenge, J. M., & Campbell, W. K. (2003). “Isn’t It Fun to Get the Respect That We’re Going to Deserve?” Narcissism, Social Rejection, and Aggression. *Personality and Social Psychology Bulletin*, 29(2), 261–272.
- Van Vugt, M. (2006). Evolutionary Origins of Leadership and Followership. *Personality and Social Psychology Review*, 10(4), 354–371.
- von Rueden, C., & van Vugt, M. (2015). Leadership in small-scale societies: Some implications for theory, research, and practice. *The Leadership Quarterly*, 26(6), 978–990.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070.