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The Performance of Narcissists Rises and Falls With Perceived Opportunity for Glory

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Narcissists consider themselves to be exceptional performers, but past research has found no consistent relationship between narcissism and performance. The present research tested the hypothesis that the relationship between subclinical narcissism and performance is moderated by a motivational factor: perceived self-enhancement opportunity. Four experiments were conducted, each using different manipulations of self-enhancement opportunity and different performance tasks. In each study, narcissists performed better when self-enhancement opportunity was high rather than low. In contrast, the performance of participants with low narcissism was relatively unaffected by self-enhancement opportunity. Other findings suggested that narcissists' self-enhancement motivation stems more from a desire to garner admiration than from a desire to self-evaluate. Implications and directions for future research are discussed.

Andre, a pass receiver for his football team, has a reputation as a flashy player who makes difficult, spectacular plays at crucial times in important games. When the stakes are high and the spotlight is bright, Andre is at his best. Andre has also developed a reputation as a malcontent who complains when the ball is not thrown to him. On one infamous occasion, Andre nearly started a fight with his quarterback for throwing the ball to another player—even though the pass was caught for a touchdown that won the game. Andre also has a penchant for blowing easy plays, especially during practice and in games that are relatively insignificant. One of his teammates once explained to a reporter, "Andre is a real pain in the neck. He's chronically late to practice, he struts around like he's God's gift to football, and I don't think I've ever seen him throw a decent block for another player. But when the game is on the line, we're all happy to have Andre on our team." Why does Andre only perform well when the circumstances are most challenging? What can account for Andre's lack of consideration for his coach and fellow teammates? The present research offers an explanation: Andre might be a narcissist.[1]

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The present investigation examines the effects of narcissism on task performance. We hypothesized that narcissism can be either advantageous or detrimental to performance, depending on the situational context. Specifically, we reasoned that the effects of narcissism on task performance should be moderated by perceived self-enhancement opportunity. Narcissists crave opportunities for self-enhancement, and some tasks offer more self-enhancement value than others. Narcissists should perform well when task success will be taken as an impressive sign of personal superiority. However, when task success will be unimpressive, narcissists should perform relatively poorly. In comparison, the performance of people with low levels of narcissism should be less affected by perceived self-enhancement opportunity.

Narcissism and Performance

In Greek mythology, Narcissus was a young man who fell in love with his own reflection in a pool and ultimately perished as a result of his self-absorption. In the terminology of modern clinical psychology, such excessive and dysfunctional self-love is characteristic of people with narcissistic personality disorder (see *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. [*DSM-IV*]; American Psychiatric Association, 1994). According to *DSM-IV* classification, people with narcissistic personality disorder exhibit an exaggerated sense of self-importance and uniqueness, arrogance, an unreasonable sense of entitlement, exploitative tendencies, empathy deficits, and a need for excessive admiration.

The concept of narcissism has been extended from the restricted domain of mental illness to encompass many tendencies among ostensibly normal individuals. Empirical research on subclinical narcissism has flourished since the creation of the NPI (Raskin &

[1] We use the terms *narcissists* and *high narcissists* to refer to people with relatively high scores on the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; Raskin & Terry, 1988), a measure of subclinical narcissism. The term *low narcissists* refers to people with relatively low scores on the NPI.

Hall, 1979; Raskin & Terry, 1988), a self-report questionnaire that has become the standard measure of narcissism in normal populations. Empirical research using the NPI has shown that narcissistic people think highly of themselves and their abilities (Emmons, 1984; Gabriel, Critelli, & Ee, 1994; John & Robins, 1994; Raskin, Novacek, & Hogan, 1991a; Robins & Beer, 2001). This research also shows that narcissists have unusually high self-expectations (Farwell & Wohlwend-Lloyd, 1998) and an exaggerated sense of personal control over their world (Dhavale, 2000; Watson, Sawrie, & Biderman, 1991). High levels of self-confidence and self-efficacy have been linked with high achievement in past research (e.g., Bandura, 1977; Baumeister, Hamilton, & Tice, 1985; Feather, 1966, 1968; Tuckman & Sexton, 1992; see Pajares, 1997, for a review), so it is plausible that narcissism could facilitate performance success.

To be sure, one might expect a positive correlation between performance and narcissism even if narcissism did not produce self-fulfilling expectancies of success. Performance success could foster narcissism. A history of performance success should gradually boost one's self-regard (Felson, 1993), which could fuel the development of narcissism. High performers might continue to perform well even as their levels of narcissism grow.

Thus, there are good theoretical grounds for predicting that narcissists might outperform other people in general. Past studies examining possible links between narcissism and performance have produced conflicting results, however. Gabriel et al. (1994) found that narcissism was positively correlated with self-reported intelligence, but they found no correlation between narcissism and actual performance on an intelligence test. John and Robins (1994) found that narcissistic participants thought they performed quite well on a group interaction task, but observer evaluations indicated that narcissists performed no better or worse than others. Robins and John (1997) asked study participants to present a convincing oral argument to a group of people. People with high scores on narcissism rated their performances much higher than low scorers rated their performances. However, objective measures revealed no difference in the quality of presentations given by high and low narcissists. Raskin (1980) found that narcissism was positively correlated with both self-reported creativity and performance on an objective creativity test. Farwell and Wohlwend-Lloyd (1998) conducted two studies in which narcissistic students were more likely than their peers to overestimate their future and current course grades. Narcissism and course grades were positively correlated in one study, but no correlation between narcissism and course grades was found in the other study. In sum, past research has demonstrated that narcissists consider themselves to be exceptional performers, but the actual performance of narcissists in past studies has often been no better than that of other people.

The Importance of Self-Enhancement Opportunity

The preceding section reveals a discrepancy. Theoretical grounds and narcissists' self-appraisals suggest that narcissism ought to improve performance, but most studies of actual performance quality have failed to find any benefit of narcissism. One possible explanation for this discrepancy is that narcissism simply makes mediocre performers think they are superior to others. The failure of confidence and self-fulfilling expectancies of success to produce any actual performance improvement would be somewhat surprising, but otherwise this explanation could account for the discrepancy between subjective and objective benefits.

The present investigation, however, is based on a more complex theory about the effects of narcissism on performance. We reasoned that the performance level of narcissists might rise or fall depending on the situational opportunity for self-enhancement. We define a performance situation as having high self-enhancement opportunity to the extent that successful performance will be interpreted as an indication that the performer has impressively high levels of skills, talents, or other desirable traits. In other words, self-enhancement opportunity denotes the degree to which one can potentially win glory by performing well.

Most people seek to self-enhance to some degree, but narcissists are especially zealous in their pursuit of personal glory (e.g., Campbell, Reeder, Sedikides, & Elliot, 2000; John & Robins, 1994; Morf & Rhodewalt, 2001; Robins & Beer, 2001). Because narcissists are so obsessed with self-enhancement, they should be keenly aware that some performance tasks offer more potential for self-enhancement than others. When narcissists perceive that a performance task offers no opportunity for self-enhancement, their motivation to perform that task should be reduced, and their performance may suffer.

At least three factors determine whether a performance is self-enhancing for the performer: (a) the quality of the performance, (b) audience characteristics, and (c) the diagnosticity of the performance task. The first factor is obvious: The self-enhancement value of performance increases with the quality of the performance. There is no glory to be gained by performing at a low level. The self-enhancement potential of a performance is also influenced by audience characteristics. A great public performance should be more self-enhancing than an equally great private performance. Moreover, a great performance witnessed by people whose opinions are valued by the performer should be more self-enhancing than a great performance witnessed by people the performer does not respect. Still, even a successful performance in front of a respected audience may not necessarily be self-enhancing. For the performance to be self-enhancing, it must be diagnostic of special achievement. Task success is not diagnostic of achievement when success is assumed or expected. Thus, challenging tasks offer more potential for self-enhancement than unchallenging tasks.

The Impact of Challenge Level

When the task goal is introduced as a difficult challenge that people rarely achieve, narcissists should view this performance task as an excellent opportunity to demonstrate their superiority over others. Just as the mythical Narcissus was obsessed with observing his own reflected beauty, modern-day narcissists crave chances to observe their reflected greatness (Robins & John, 1997). As discussed earlier, difficult goal achievement is more diagnostic of exceptional ability than easy goal achievement. Narcissists' motivation to achieve difficult goals should be especially strong because they are more concerned with self-enhancement than other people (e.g., Campbell et al., 2000; John & Robins, 1994; Paulhus, 1998). Furthermore, narcissists' inflated self-views should give them confidence that they can succeed at tasks at which most others have failed. This combination of high motivation and high self-confidence should help their performance on

challenging tasks. In contrast, high performance on an unchallenging task is not indicative of high ability, so narcissists may have relatively little motivation to exert themselves on such tasks. Narcissists' high self-expectations could even be detrimental to performance on unchallenging tasks. If narcissists believe task success is common, they may take it for granted.

People who are not narcissistic are less concerned about self-enhancement than narcissists, so their motivation and performance should be less affected by the self-enhancement opportunity presented by the task goal. If the difficulty of a challenge has any effect on the performance of low narcissists, the effect should be in the opposite direction of the predicted effect of challenge level on the performance of narcissists. The motivation of low narcissists should vary little as a function of challenge level, but their confidence and performance could suffer if they consider the task goal to be too challenging. When the task goal is unchallenging, low narcissists should have some confidence in their ability to succeed, but they should be less likely than narcissists to assume success.

One reason why past studies have found no evidence of a relationship between narcissism and performance may be that the performance goals used in these studies were not challenging or unchallenging enough to reveal performance differences based on levels of narcissism. Although no previous research has directly addressed the relationship among narcissism, task challenge, and performance, past research on achievement motivation provides indirect support for the present hypotheses. Atkinson (1958) and Kukla (1972, 1974) demonstrated that confidence in one's abilities helps performance on difficult tasks and hurts performance on easy tasks. This performance pattern is apparently a function of motivation: Meyer (1987) found that people with very high self-rated ability reported that they would invest more effort on tasks of high difficulty than on tasks of low difficulty, whereas people with very low self-rated ability reported that they would invest more effort on tasks of low difficulty than on tasks of high difficulty. In addition, Trope (1979) found that persons with high perceived ability have a particularly strong preference for tasks of high diagnosticity, and, as he noted, difficult tasks are especially diagnostic for high ability levels. Narcissists clearly think highly of their abilities, so they should prefer and invest more effort on highly difficult tasks.

The Impact of Audience Evaluation

The self-enhancement value of high performance should increase when an audience observes the performance. In general, people are more motivated to perform when others can evaluate their individual performance. For example, people exert less individual effort toward a group goal when the individual contributions of group members are unidentifiable, a phenomenon known as social loafing (e.g., Latane, Williams, & Harkins, 1979; Williams, Harkins, & Latane, 1981; see Karau & Williams, 1993, for a review). On collective group tasks, where the performances of individual group members are indistinguishable, potential for individual self-enhancement is limited because the glory associated with exceptional group performance is diffused among group members. If narcissists are strongly motivated to self-enhance, as past research suggests, they should be far more motivated to perform individual tasks than collective tasks. Thus, narcissists' self-serving orientation could lead them to exhibit more social loafing than less narcissistic people exhibit.

The relationship between narcissism and social loafing has not been explored, but recent research has shown that people who perceive themselves as better than others are more prone to social loafing than those who consider themselves average (Charbonnier, Huguet, Brauer, & Monteil, 1998; Huguet, Charbonnier, & Monteil, 1999). In addition, Sanna (1992) found that people with high self-efficacy performed well when their performance was being evaluated but that they performed poorly when they did not expect their performance to be evaluated. People with low self-efficacy showed the opposite pattern of performance. Narcissists consistently rate themselves as better than others (e.g., Farwell & Wohlwend-Lloyd, 1998; Gabriel et al., 1994; John & Robins, 1994; Raskin, 1980; Robins & John, 1997), and they have high self-efficacy (e.g., Farwell & Wohlwend-Lloyd, 1998; Watson et al., 1991), so they too should perform best in the presence of an evaluative audience.

Present Investigation

In the present research, we examined the impact of self-enhancement opportunity on performance in four experiments. The central hypothesis was that objective performance quality depends on an interaction of narcissism and self-enhancement opportunity. More precisely, we expected that high narcissists would perform better when the opportunity for self-enhancement was high and salient than when no such opportunity was present, whereas low narcissists would exhibit either no difference or the opposite pattern.

To ensure that results were not an artifact of one kind of performance or procedure, we designed the four experiments to use four different performance tasks and four different manipulations of self-enhancement opportunity. In Experiment 1, participants performed a game that tested physical coordination. We manipulated self-enhancement opportunity by informing participants that the amount of practice time they received gave them a performance advantage or disadvantage compared with other participants. In Experiment 2, participants solved math problems. We manipulated self-enhancement opportunity by rewarding participants for outperforming 50% (low opportunity) or 95% (high opportunity) of past participants. Participants in Experiment 3 performed a dart-throwing task. We manipulated self-enhancement opportunity by making cash rewards contingent on performance for some participants but not for others. Experiment 4 used a social loafing idea-generation procedure to test the performance of narcissists. We manipulated self-enhancement opportunity by varying the public identifiability of individual group members. In each of the four experiments, we predicted that narcissists would perform well in the high self-enhancement opportunity condition but not in the low self-enhancement opportunity condition.

Experiment 1

Experiment 1 provides an initial test of the hypothesis that self-enhancement opportunity moderates the performance of narcissists. In Experiment 1, participants were first given a performance task requiring physical coordination to establish a baseline

of performance ability. No performance incentives were offered, and no information about task difficulty was provided. After this pretest was completed, participants were offered the chance to win money by improving their performance in a posttest. Half the participants were led to believe that few people were able to reach the improvement goals, and the rarity of success carried the implication that the performer could garner considerable prestige by reaching the goal. The other half of the participants were informed that the performance goals were easily reached by most performers, which signified that the task did not present much opportunity for self-enhancement. We expected that participants with high narcissism scores would show more performance improvement than participants with low narcissism scores when the improvement goals were highly challenging. In contrast, we expected that people with high narcissism scores would improve less than persons with low narcissism scores when the improvement goals were relatively unchallenging.

Method

Participants. Forty-nine introductory psychology students (37 male, 12 female) participated individually for course credit.

Procedure. After completing the 40-item NPI (Raskin & Hall, 1979; Raskin & Terry, 1988), participants played a modified version of Operation, a commercially available game of skill that requires players to extract 12 different objects from holes using tweezers without making errors (i.e., sounding a buzzer by touching the sides of the holes). Participants were instructed to work as quickly and as accurately as possible. They were given a maximum of three attempts to extract each object without making an error. If all three attempts resulted in errors, the participant was instructed to move on to the next object. Each attempt was timed by the (male) experimenter.

After completing the game, participants were told that they would soon play the same game again, but this time they would be playing for money. To make $5, participants had to (a) successfully extract at least as many objects in Round 2 as they did in Round 1, (b) be at least 5% faster overall in Round 2 than they were in Round 1, and (c) make at least 5% fewer mistakes in Round 2 than they did in Round 1. To make $10, participants had to (a) successfully extract at least as many objects in Round 2 as they did in Round 1, (b) be at least 25% faster overall in Round 2 than they were in Round 1, and (c) make at least 25% fewer mistakes in Round 2 than they did in Round 1.

After participants indicated that they understood the payout criteria, the experimenter informed them that they would receive 5 min of practice time before playing the game again. Participants in the high challenge condition were told that players were randomly assigned either 5 or 15 min of practice. The experimenter then sympathetically explained that players with 15 min of practice were far more likely to win money. The experimenter added that only 25%–30% of players with 5 min of practice made any money and that only 5% of these players made $10. Participants in the low challenge condition were told that players were randomly assigned either 5 min of practice time or no practice time. The experimenter then told these participants that they were fortunate because players who received practice time were far more likely to win money. The experimenter added that 80%–85% of players who received practice time made at least $5 and that 50% of these players made $10.

The experimenter left the room during the 5 min provided for practice. When the practice time expired, the experimenter returned to the room to begin Round 2. After completing Round 2, participants were paid, debriefed, and dismissed.

Results

Personality measure. NPI scores ranged from 2 to 35 ($M = 16.02$, $SD = 7.73$; Cronbach's $\alpha = .88$).[2]

Performance improvement. Participants were significantly faster in completing the game in Round 2 ($M = 174.20$ s, $SD = 66.91$) than in Round 1 ($M = 221.31$ s, $SD = 67.46$), $t(48) = 5.36$, $p < .001$. Participants also made significantly fewer errors in Round 2 ($M = 8.92$, $SD = 5.28$) compared with Round 1 ($M = 13.39$, $SD = 5.96$), $t(48) = 7.22$, $p < .001$. Thus, on average, people improved on the second performance.

A hierarchical regression model was used to test the predicted effects of challenge level and narcissism on performance improvement scores. The two predictors, challenge level and narcissism, were entered as main effects in Step 1 of the regression.[3] The Challenge Level × Narcissism interaction (i.e., product term) was entered in Step 2. To account for the possibility that some participants sacrificed accuracy for speed or vice versa, we created a single measure of performance improvement by standardizing and combining speed and accuracy improvement scores for each participant.

The Step 1 analyses revealed a significant main effect for challenge level, $\beta = .34$, $t(46) = 2.41$, $p < .05$. Participants demonstrated more task improvement when the performance goal was difficult ($M = 0.49$, $SD = 1.73$) than they did when the performance goal was easy ($M = -0.58$, $SD = 1.29$). Narcissism, by itself, was unrelated to task improvement, $\beta = .03$, $t(46) = 0.19$, *ns*.

The central prediction involved an interaction between narcissism and self-enhancement opportunity (i.e., challenge). Supporting that prediction, Step 2 of the regression revealed a significant interaction between challenge level and narcissism, $\beta = .34$, $t(45) = 2.55$, $p < .05$. Tests of simple slopes (Aiken & West, 1991) showed that participants with high narcissism scores improved more in the high challenge condition (predicted value [*PV*] = 1.33) than in the low challenge condition ($PV = -0.84$), $t(45) = 3.57$, $p < .01$, r (effect size) = .47.[4] In contrast, the performance improvement of participants with low narcissism scores was similar in both challenge conditions (high challenge $PV = -0.14$; low challenge $PV = -0.12$), $t(45) = 0.02$, *ns*, $r = .00$ (see Figure 1).

Accuracy and speed improvement scores were also included separately as dependent variables in the regression model. The predicted interaction between challenge level and narcissism approached significance with accuracy improvement as the dependent variable, $\beta = .29$, $t(45) = 2.02$, $p = .05$, and with speed improvement as the dependent variable, $\beta = .25$, $t(45) = 1.77$, $p < .09$. Tests of simple slopes revealed that participants with high

[2] The 40-item version of the NPI used in the present research can be divided into seven subcomponents (Raskin & Terry, 1988). Across our four experiments, total NPI scores predicted performance more consistently than single component scores. For the sake of brevity and clarity, we report total NPI scores only.

[3] Following Aiken and West (1991), we centered continuous predictor variables (i.e., personality scores) in all regression analyses.

[4] Predicted values represent estimates derived from regression slopes for hypothetical individuals 1 standard deviation above (high narcissists) or 1 standard deviation below (low narcissists) the NPI mean.

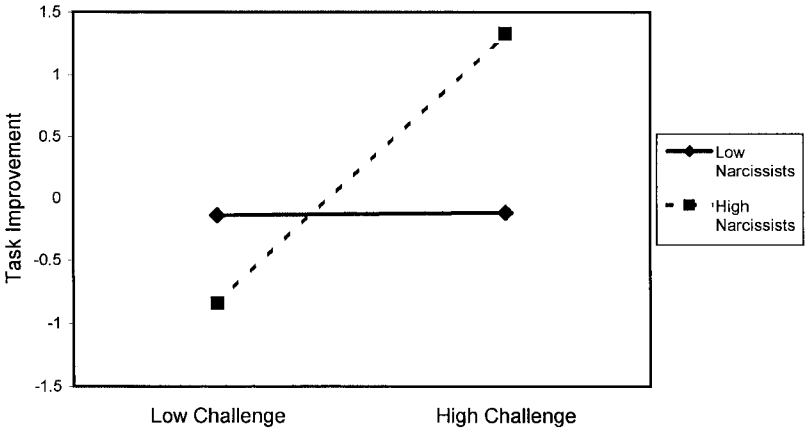

Figure 1. Interactive effects of challenge level and narcissism on Operation game performance (Experiment 1). Lines represent simple slopes derived from regression equations. High narcissists are hypothetical individuals 1 standard deviation above the Narcissistic Personality Inventory (NPI) mean. Low narcissists are hypothetical individuals 1 standard deviation below the NPI mean.

narcissism scores improved their accuracy more in the high challenge condition ($PV = 0.43$) compared with the low challenge condition ($PV = -0.64$), $t(45) = 2.89$, $p < .01$, $r = .40$. High narcissists also improved their speed more in the high challenge condition ($PV = 0.62$) than in the low challenge condition ($PV = -0.52$), $t(45) = 2.99$, $p < .01$, $r = .41$. Level of challenge had little effect on low narcissists' accuracy improvement (high challenge $PV = -0.10$; low challenge $PV = -0.24$), $t(45) = 0.38$, *ns*, $r = .05$, or speed improvement (high challenge $PV = 0.10$; low challenge $PV = -0.02$), $t(45) = 0.31$, *ns*, $r = .04$. Thus, when speed and accuracy were analyzed separately, the results were similar to those from the main performance measure (on the basis of a combination of speed and accuracy).

Absolute performance. We conducted further analyses to determine whether the absolute performance of high and low narcissists differed in Round 1 or in Round 2. In Round 1 (prechallenge level manipulation), narcissism was unrelated to a performance measure that combined speed and accuracy, $r(47) = .03$, *ns*. Narcissism was also unrelated to this performance measure in Round 2, $r(47) = .02$, *ns*. An additional regression analysis examining the interactive effects of challenge level and narcissism on Round 2 performance (combining speed and accuracy) found no significant main effects or interaction.

Discussion

The results of Experiment 1 support the hypothesis that the relationship between narcissism and performance is moderated by the opportunity for self-enhancement, which in this case consisted of the degree of challenge implied by how rare versus how common it was for other people to reach the goal. Persons with high narcissism scores rose to the challenge and performed best when task success was thought to be difficult to achieve, but they performed relatively poorly when task success was thought to be unchallenging. These results are consistent with the hypothesis that narcissists perform best when high performance will be self-enhancing. Experiment 1 also supports the hypothesis that the performance of low narcissists is less affected by self-enhancement opportunity than the performance of high narcissists.

Experiment 2

Experiment 2 examines whether the effects found in Experiment 1 generalize to a different performance task. In Experiment 1, the performance task tested physical coordination. In Experiment 2, math problems were used as the performance task to provide a test of cognitive rather than physical performance. The prediction was again that people with high narcissism scores would perform better when they had an opportunity for self-enhancement than when they did not, unlike people with low narcissism scores.

In addition to providing a conceptual replication with different procedures and measures, Experiment 2 undertook to distinguish the effects of narcissism from those of self-esteem. A moderate, positive correlation between narcissism and self-esteem has consistently been found in past studies (e.g., Emmons, 1984; Heatherton & Vohs, 2000; Morf & Rhodewalt, 1993; Raskin et al., 1991b). Like narcissists, people with high self-esteem generally believe that they have high ability and expect to perform well (e.g., Dutton & Brown, 1997). This leaves open the possibility that the results of Experiment 1 could be better explained in terms of self-esteem differences rather than differences in narcissism. Experiment 2 included a measure of self-esteem in addition to the narcissism measure so the unique contribution of each personality factor could be assessed.

Method

Participants. Seventy-one introductory psychology students (40 male, 31 female) participated individually for course credit.

Procedure. Participants completed the NPI and a 26-item self-esteem scale, a version of the Janis and Field (1959) Feelings of Inadequacy scale modified by Fleming and Courtney (1984). Participants received a total of 80 addition, subtraction, and multiplication problems and were told to try to solve as many as they could in the 5 min provided (Round 1).

When Round 1 was completed, the experimenter (both male and female experimenters conducted Experiment 2) told participants that they would be given the same math task again (Round 2). The problems in Round 2 were similar to the problems in Round 1. Before beginning Round 2, participants were told that they would receive $3 if they could meet the payout criterion. Participants assigned to the low challenge condition were told that they would be paid if they could solve more problems than 50% of past participants. The performance criterion in the low challenge condition was set at 50% instead of a lower (easier) percentage to avoid creating a situation in which failure was diagnostic of inferior performance. We feared that less confident participants might choke under the pressure of trying to avoid the humiliation of performing at a truly inferior level (e.g., Baumeister, 1984). Participants assigned to the high challenge condition were told that they would be paid if they could solve more problems than 95% of past participants. The experimenter explained that he or she would not be able to tell exactly how the participant's performance compared with the performance of past participants. In other words, participants understood that they (and the experimenter) would only know whether they performed better than the 95th percentile criterion; scores in the 85th percentile were indistinguishable from scores in the 15th percentile. After completing Round 2, participants were paid, debriefed, and dismissed.

Results

Personality measures. NPI scores ranged from 0 to 28 ($M = 13.61$, $SD = 6.73$; Cronbach's $\alpha = .84$). Self-esteem scores ranged from 47 to 144 ($M = 95.51$, $SD = 20.82$; Cronbach's $\alpha = .90$). Narcissism and self-esteem scores were significantly correlated, $r(69) = .50$, $p < .001$.

Performance improvement. Participants solved significantly more problems in Round 2 ($M = 38.03$, $SD = 13.17$) than in Round 1 ($M = 32.79$, $SD = 11.70$), $t(70) = 7.08$, $p < .001$. Participants gave few incorrect responses ($M = 2.49$ in Round 1; $M = 2.83$ in Round 2), so response errors were not considered in any analyses.

A hierarchical multiple regression model was used to examine the effects of challenge level, narcissism, and self-esteem on performance improvement scores. Following the approach of Kernis and Sun (1994), we conducted the regression in three steps to examine the unique impact of narcissism and self-esteem on the dependent variable. In Step 1 of the regression, the predictor variables of challenge level, narcissism, and self-esteem were entered as main effects. In Step 2, the 3 two-way interactions (Challenge Level × Narcissism, Challenge Level × Self-Esteem, Narcissism × Self-Esteem) were added. In Step 3, the three-way (Challenge Level × Narcissism × Self-Esteem) interaction was added to the model. The dependent variable was a performance improvement score calculated by subtracting the number of math problems solved in Round 1 from the number of problems solved in Round 2.

The Step 1 analyses found no statistically significant main effects for challenge level, narcissism, or self-esteem (βs $< .08$, ts < 1.00, *ns*). The Step 2 analyses showed no significant interactions between challenge level and self-esteem or between narcissism and self-esteem (βs $< .21$, ts < 1.10, *ns*). The three-way interaction tested in Step 3 of the regression model was also not significant, $\beta = .02$, $t(63) = 0.06$, *ns*. Thus, self-esteem, by itself or in combination with the other variables, had little impact on performance improvement scores.

However, the expected interaction between challenge level and narcissism was significant, $\beta = .45$, $t(64) = 2.21$, $p < .05$. Tests of the simple slopes showed that participants with high narcissism scores improved more in the high challenge condition ($PV = 8.02$) than in the low challenge condition ($PV = 0.82$), $t(64) = 2.21$, $p < .05$, $r = .26$. In contrast, participants with low narcissism scores improved more in the low challenge condition ($PV = 10.25$) than in the high challenge condition ($PV = 2.90$), $t(64) = -1.86$, $p < .10$, $r = -.22$ (see Figure 2).

Absolute performance. Further analyses were conducted to determine whether the absolute performance of high and low narcissists differed in either Round 1 or Round 2. A partial correlation analysis controlling for the effects of self-esteem found

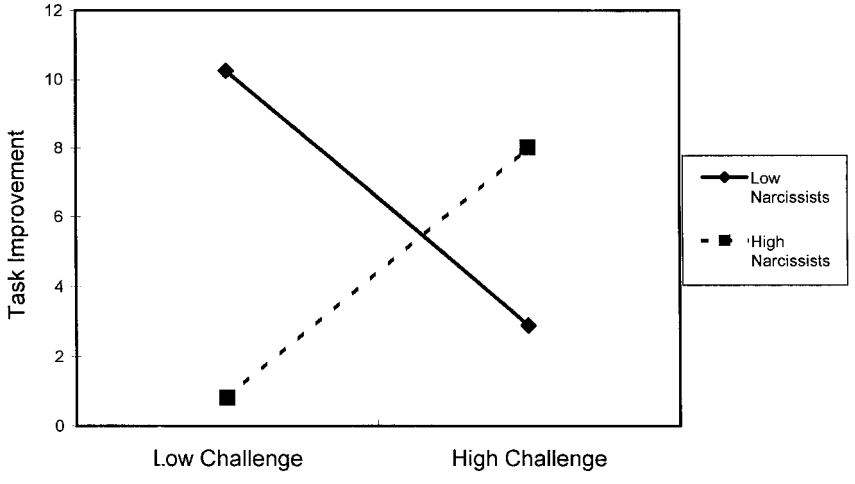

Figure 2. Interactive effects of challenge level and narcissism on math problem performance (Experiment 2). Lines represent simple slopes derived from regression equations. High narcissists are hypothetical individuals 1 standard deviation above the Narcissistic Personality Inventory (NPI) mean. Low narcissists are hypothetical individuals 1 standard deviation below the NPI mean.

a negative but nonsignificant relationship between narcissism and performance in Round 1 (prechallenge level manipulation), $r(68) = -.17$, *ns*, and in Round 2, $r(68) = -.16$, *ns*. In other words, people with higher narcissism scores tended to solve fewer problems, but not to a statistically significant degree. A regression analysis examining the interactive effects of challenge level, narcissism, and self-esteem on Round 2 performance revealed no significant main effects or interactions.

Discussion

The results of Experiment 2 closely mirror the results of Experiment 1. When the task goal was described as highly difficult to achieve, high narcissists tended to rise to the challenge and improve their performance. When the task goal was thought to be relatively easy to achieve, high narcissists did not show much performance improvement. The results also indicate that it was narcissism, not self-esteem, that predicted performance improvement in the face of challenging and unchallenging goals. As in Experiment 1, the performance of low narcissists was less affected by the challenge level manipulation than the performance of high narcissists. Indeed, people with low scores on narcissism performed worse under challenge than in the absence of challenge—just the opposite of what people with high narcissism did.

Experiment 3

Experiments 1 and 2 examined how high and low narcissists performed in response to challenging and unchallenging performance goals. We varied the level of challenge (i.e., goal difficulty) in these two studies by providing false feedback about the success/failure rate of past participants. Experiment 3 examines how narcissists respond to a different sort of challenge: explicit performance pressure. Baumeister (1984) defined performance pressure in terms of the importance of doing well, including what costs and benefits are contingent on the quality of performance. To create high pressure in Experiment 3, we told participants that they could have a cash reward if they performed well. We also told them that poor performance would indicate that they were the sort of people who choke under pressure, a pattern that is generally regarded as an undesirable trait. It was also implied that performing well would reveal them to be the sort of people who can succeed under pressure, which is generally considered a positive attribute. In the low pressure condition, no money was contingent on performance, nor was anything said to suggest that performance would signify something good or bad. Thus, the high pressure condition offered participants the greatest opportunity for self-enhancement, but this condition also promised the greatest penalty for failure.

We expected that narcissists would perform better under pressure than when no pressure was applied. Narcissists should be confident in their ability to succeed under pressure, and their motivation should be high because of the desirable implications of success. High pressure tasks should appeal to narcissists because the pressure magnifies the glory of success. High pressure also magnifies the cost of failure, insofar as failure is associated with inability to perform under pressure, but the success-expecting narcissists are unlikely to dwell on the possibility of a negative outcome. Motivation to avoid failure and the anxiety that normally accompanies this motivation typically harm performance on skill tasks like those used in Experiments 1 and 2 (e.g., Elliot & McGregor, 1999, 2001). In contrast, people who are motivated to attain performance success rather than to avoid failure typically do not show elevated anxiety, and their motivation helps their performance achievement (e.g., Elliot & McGregor, 1999, 2001). We argue that past research on narcissists' high expectancies and the results of the first two experiments suggest that narcissists are motivated to achieve glorifying success, not to avoid unflattering failure.

However, the results of the first two experiments do not completely rule out the possibility that narcissists are indeed prone to fears of failure and choking under pressure. It could be argued that narcissists performed better in the high challenge conditions because the low likelihood of success made the implications of failure unthreatening. In contrast, narcissists may have performed less well (i.e., choked) in the low challenge conditions because they felt more pressure to avoid failure. Experiment 3 addresses this alternative explanation by providing a direct test of narcissists' ability to perform under pressure.

Method

Participants. Fifty-four introductory psychology students (34 male, 20 female) participated individually for course credit.

Procedure. At the beginning of the experiment, participants completed the NPI and the Fleming and Courtney (1984) self-esteem scale used in Experiment 2. One participant did not complete the self-esteem questionnaire, so this participant was only included in analyses that did not involve self-esteem.

After participants completed the personality measures, the (male) experimenter introduced the dart-throwing task. The goal of the dart-throwing task was to land each dart as close to the center of the board as possible. Each participant made 20 practice throws at his or her own pace. After participants finished the practice throws, the experimenter asked participants to throw 10 more darts (Round 1). The experimenter explained that he would now be recording the location of each throw and that participants should wait for his verbal signal before throwing the next dart to give him time to record the previous throw.

The experimental manipulation was introduced immediately following Round 1. In the high pressure version, the experimenter tallied up the number of points that participants received and explained the scoring system. The dart board was divided into different zones marked by concentric circles. Darts that landed in the center of the board were assigned a score of 1, darts that missed the board completely were assigned a score of 8, and darts that landed in between these two zones received a score corresponding to the zone they landed in. In other words, the goal was to accumulate as few points as possible.

After explaining the scoring system, the experimenter informed each participant in the high pressure condition of his or her score and explained that the score entitled the participant to $5 cash. At this point, the experimenter pulled a $5 bill from his pocket and placed the money on a table between the participant and the dart board. After pausing a moment to let the good news sink in, the experimenter said,

> This money is yours to keep . . . as long as you can simply repeat or improve upon your performance. As long as you receive the same number of points or fewer in the next round, you can keep the money. If you do worse, that is, if you end up with more points than you did in the first round, I will take back the money.

After asking the participant if he or she had any questions, the experimenter said,

> You've already demonstrated your ability to perform at a certain level. There is no real reason why you shouldn't be able to perform this well again, but sometimes people choke under pressure. The purpose of this research is to study who chokes and who doesn't choke under pressure.

After participants indicated that they understood the task and the stakes, they threw 10 more darts (Round 2).

In the low pressure condition, after completing Round 1, participants were simply told that they would now throw another 10 darts and that their goal was to try to do as well or better in Round 2. No mention was made of performance scores, performance pressure, or money. After completing Round 2, participants were paid, debriefed, and dismissed.

Results

Personality measures. NPI scores ranged from 3 to 34 ($M = 15.74$, $SD = 8.33$; Cronbach's $\alpha = .90$). Self-esteem scores ranged from 48 to 127 ($M = 90.60$, $SD = 19.15$; Cronbach's $\alpha = .87$). Narcissism and self-esteem scores were significantly correlated, $r(51) = .44$, $p < .01$.

Performance improvement. Overall, participants performed significantly better on the dart-throwing task in Round 2 ($M = 44.35$, $SD = 5.93$) than in Round 1 ($M = 46.10$, $SD = 5.04$), $t(53) = 2.94$, $p < .01$ (on this task, lower scores indicate better performance). A hierarchical regression model was used to examine the effects of performance pressure, narcissism, and self-esteem on performance improvement. Following the Kernis and Sun (1994) procedure used in Experiment 2, we conducted the regression analyses in three steps to examine how narcissism and self-esteem uniquely moderated the effect of performance pressure on task improvement. In Step 1, the predictor variables of performance pressure, narcissism, and self-esteem were entered as main effects. In Step 2, the 3 two-way interactions (Performance Pressure × Narcissism, Performance Pressure × Self-Esteem, Narcissism × Self-Esteem) were added. In Step 3, the three-way interaction (Performance Pressure × Narcissism × Self-Esteem) was added to the model. The dependent measure was an improvement score calculated by subtracting posttest scores from pretest scores (positive scores indicate performance improvement).

The Step 1 analyses found no statistically significant main effects for performance pressure, narcissism, or self-esteem (βs $< .07$, ts < 1.00, *ns*). The Step 2 analyses showed no significant interactions between performance pressure and self-esteem or between narcissism and self-esteem (βs $< .20$, ts < 1.30, ps $> .23$). The three-way interaction tested in Step 3 was also not significant, $\beta = .08$, $t(45) = 0.38$, *ns*. Thus, self-esteem, by itself or in combination with the other variables, had minimal impact on performance improvement scores.

However, the expected interaction between performance pressure and narcissism approached significance, $\beta = .32$, $t(46) = 1.74$, $p < .05$. (A one-tailed probability criterion was used because this was a replication of the patterns found in the first two studies. Two-tailed probability was less than .09.) Tests of the simple slopes for high and low narcissists were nonsignificant, but the pattern of interaction replicated the results of Experiment 2: Participants with high narcissism scores improved more in the high pressure condition ($PV = 4.63$) than in the low pressure condition ($PV = 1.58$), $t(46) = 1.54$, *ns*, $r = .22$, whereas participants with low narcissism scores showed slightly less improvement in the high pressure condition ($PV = -0.94$) compared with the low pressure condition ($PV = 1.85$), $t(46) = -1.20$, *ns*, $r = -.17$ (see Figure 3).

Absolute performance. We conducted further analyses to determine whether the absolute performance of high and low narcissists differed in either Round 1 or Round 2. A partial correlation analysis controlling for the effects of self-esteem found a positive relationship between narcissism and performance in Round 1 (preperformance pressure manipulation), $r(50) = .43$, $p < .01$, and in Round 2 (postperformance pressure manipulation), $r(50) = .40$, $p < .01$ (two-tailed probabilities were used for these supplementary analyses because they were not simply replications). A re-

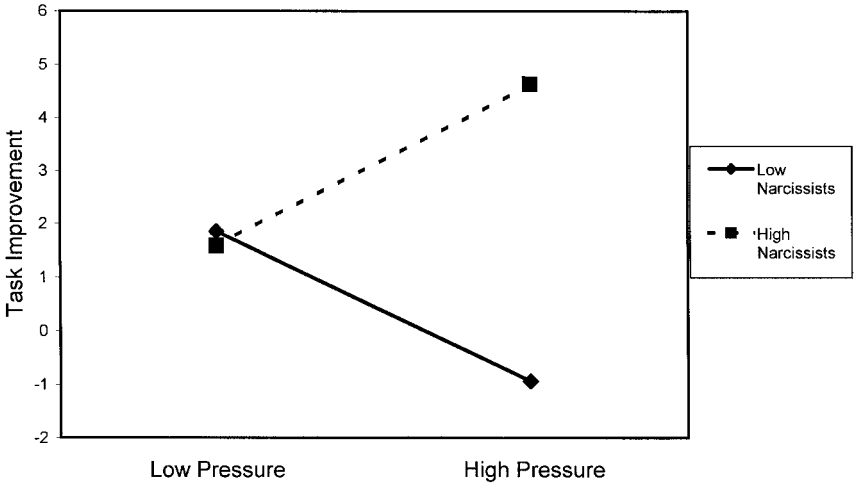

Figure 3. Interactive effects of performance pressure and narcissism on dart-throwing performance (Experiment 3). Lines represent simple slopes derived from regression equations. High narcissists are hypothetical individuals 1 standard deviation above the Narcissistic Personality Inventory (NPI) mean. Low narcissists are hypothetical individuals 1 standard deviation below the NPI mean.

gression analysis examining the interactive effects of challenge level, narcissism, and self-esteem on Round 2 performance revealed only one statistically significant effect: the main effect for narcissism described by the above partial correlation.

Discussion

In Experiment 3, as in Experiments 1 and 2, narcissists showed more performance improvement after being challenged than they did when no challenge was issued. The performance of low narcissists was less affected by the performance pressure manipulation. These findings support the hypothesis that the relationship between narcissism and performance is moderated by self-enhancement opportunity. Self-esteem, by itself or in combination with the other variables, had no impact on performance improvement, as was the case in Experiment 2. Experiment 3 also refutes the notion that narcissists are more motivated to avoid failure than to seek success. If narcissists were concerned about failure, their skill task performance should have suffered in the high pressure condition. Instead, narcissists thrived under pressure.

When viewed in isolation, the results of Experiment 3 might be regarded as unconvincing because the interactive effects of narcissism and challenge level on performance improvement were only marginally significant (using a two-tailed test). When we used a one-tailed test appropriate for replications, however, the results corroborated the pattern of results found in the first two experiments.

Experiment 4

Experiments 1, 2, and 3 provide converging evidence that narcissists perform best when the task goal is challenging. High performance on challenging tasks is more self-glorifying than is high performance on unchallenging tasks, so these results are consistent with the hypothesis that the performance of narcissists is moderated by self-enhancement opportunity. Experiment 4 sought to extend this pattern of findings into the realm of social loafing. Social loafing was identified by Latane et al. (1979), who showed that people often reduce their effort on a group task when individual contribution cannot be identified. In other words, many people exert high effort when their contribution to a group task will be individually identified (so that they can receive credit or blame)—but they put forth less effort when no one will know how much they contributed (see also Szymanski & Harkins, 1987).

Our first three studies have revealed narcissists to be highly oriented toward personal glorification in their task performance. They do their best when they have an opportunity to gain individual self-enhancement, and otherwise they seem to perform poorly. Hence, we hypothesized that they would be highly prone to social loafing when individual contributions to a group task are indistinguishable (because submerging the individual performance in the group removes any opportunity for individual self-enhancement). In addition, narcissists should put forth high effort when individual contributions will be recognized, because they want other members of the group to regard them as stellar performers. People who are low in narcissism should be less likely to alter their effort level as a function of whether individual contributions will be identifiable. Although past work has generally not found links between personality traits and social loafing (see Karau & Williams, 1993), narcissism seemed a promising candidate.

The issue of identifying individual performance levels brings up another important theoretical distinction involving the motives of narcissists. Are they mainly concerned with proving their ostensible superiority to themselves, or to others? Put another way, would social loafing be eliminated if narcissists received confidential feedback about the quality of their performance, so they could evaluate themselves against norms and standards privately, or would it only vanish if their individual performance feedback were to be known to everyone? This difference corresponds to the distinction between public and private motivations, as studied in self-presentation research (Baumeister, 1982, 1986; Leary, 1995; Schlenker, 1980).

Both predictions were plausible on a priori theoretical grounds. Some past work has indeed shown that social loafing can be reduced or eliminated if people have the opportunity to compare their individual performance against social standards, even without having other people know how they did (Szymanski & Harkins, 1987). That pattern suggests that the decisive factor is people's own private concern with thinking well of themselves. Some work on narcissism has likewise emphasized that narcissists are mainly concerned with their private self-image rather than with self-presentation. Several studies have concluded that the NPI is unrelated to measures of impression management (Auerbach, 1984; Paulhus, 1998; Paulhus & John, 1998; Raskin et al., 1991a, 1991b). Indeed, the original myth of Narcissus depicted a man who was indifferent to the admiration of others, even that of a would-be girlfriend (Echo), for he loved only himself. The correlation of narcissism with unstable self-esteem (Rhodewalt, Madrian, & Cheney, 1998; Rhodewalt & Morf, 1998) might also be interpreted as suggesting that private self-regard is of considerable importance to narcissists.

Alternatively, one could plausibly propose that narcissists think so well of themselves that they do not care to prove their worth to themselves, and their efforts at self-enhancement require an audience of potential admirers. Morf and Rhodewalt (2001) have characterized the central motivation of narcissists as seeking the approval and admiration, though not necessarily the liking, of other people. Raskin et al. (1991a, 1991b) proposed that the self-enhancement displayed by narcissists is not self-presentation but rather a form of self-deception that serves as a buffer against psychological threat. If this explanation is accurate, narcissists should have confidence (whether justified or not) in their ability to outperform others, and they may not feel compelled to prove their ability to themselves. Narcissists' self-enhancement seeking may simply reflect their desire to self-promote by showing off their talents to the world. Narcissism has been linked with exhibitionism in past research (e.g., Emmons, 1984; Raskin et al., 1991a). Perhaps narcissists are legitimately self-confident, and their preference for potentially self-enhancing performance tasks stems from a desire to grandstand rather than a need to alleviate private insecurities.

To distinguish between these motivations, Experiment 4 used two different conditions that might potentially eliminate social loafing through performance feedback. In one of them, performance feedback was provided confidentially to individual performers but not to the group. If social loafing among narcissists was reduced in this condition, one would infer that narcissists are

motivated to confirm their superiority to themselves. In the other condition, individual performance feedback about all performers was to be made available to everyone in the group. If narcissists exerted themselves only in this condition, one would conclude that their self-enhancement motivation is mainly self-presentational, in the sense that they mainly seek the admiration of others.

Method

Participants. Seventy-four introductory psychology students (43 female, 31 male) participated in same-sex groups of 3–6 people per experiment session.

Procedure. Participants were seated at desks separated by partitions that prevented them from viewing each other's writing. At the beginning of the experiment, participants completed the NPI and the Fleming and Courtney (1984) self-esteem scale used in Experiments 2 and 3. Next, participants were told that they would soon begin a brainstorming task requiring them to list uses for a particular object. The (male) experimenter informed participants that their goal was to solve more problems as a group than 75% of past participant groups of comparable size. No information was provided about the level of performance required to exceed the 75% criterion, and no performance incentive was offered.

The experimenter explained that the study was designed to examine creativity in group settings by measuring the quantity of responses rather than the quality of responses. Participants were told that ordinary, mundane ideas were perfectly acceptable but redundant responses would not be counted. They were instructed to avoid communicating with other participants during the time provided for idea generation. When participants indicated that they understood the instructions, the experimenter gave them 12 min to list uses for a knife (e.g., Harkins & Petty, 1982; Harkins, White, & Utman, 2000). After completing a manipulation check, participants were debriefed and dismissed.

Experiment manipulations. Before beginning the idea generation task, the experimenter provided additional information to participants. The content of this information was determined by the experimental condition to which participants in each experimental session were randomly assigned. All participants within the same experiment session were placed in one of three experiment conditions: (a) no evaluation, (b) self-evaluation, or (c) public evaluation.

In the no-evaluation condition, the experimenter explained that neither he nor anyone else would know how any particular participant performed. The experimenter displayed a box with a slot cut into the top and explained that participants would fold their idea lists and place them with the other participants' ideas in the box on completion of the task, ostensibly to maintain confidentiality by preventing the experimenter and other participants from being able to identify the author of each list. Thus, each participant in the no-evaluation condition believed that his or her individual performance would not be identifiable to the experimenter or to other participants. Furthermore, these participants did not expect to receive information about how they performed relative to other participants, so they could not evaluate their own performance. In reality, the paper on which participants wrote their ideas was subtly marked with tiny tick marks on the edges of the paper (one for the participant in Position 1, two for the participant in Position 2, etc.), so the experimenter could tell which ideas were provided by each participant. Of the three experiment conditions, the no-evaluation condition offered the least opportunity for self-enhancement.

The communal idea box procedure used in the no-evaluation condition was also used in the self-evaluation condition to assure participants that their idea lists could not be traced to their authors by the experimenter or by anyone else. Thus, participants in the self-evaluation condition believed that their performance would not be identifiable to others. However, participants in the self-evaluation condition did expect to be told the total number of ideas generated by their group, the total number of ideas listed by individual group members (but no information about who did what), and the breakdown of past participants' performances. Thus, this condition offered no opportunity for public self-promotion, but it did offer the opportunity for self-evaluation.

Participants in the public evaluation condition also expected to receive the chance to self-evaluate by learning how other participants performed. However, these participants were told that their idea generation performance would be revealed to the experimenter and to the other participants in their group. Participants in the public evaluation condition watched the experimenter post a dry-erase marker board containing the first names of all the participants in that session. The experimenter informed these participants that the number of ideas generated by each participant would be posted on the board when the task was completed. Thus, participants in the public evaluation condition were given the opportunity to self-evaluate and self-promote, so this condition offered more chance for self-enhancement than the no-evaluation or self-evaluation conditions.

Results

Personality measures. NPI scores ranged from 1 to 30 ($M = 14.11$, $SD = 6.61$; Cronbach's $\alpha = .83$). Self-esteem scores ranged from 40 to 152 ($M = 98.85$, $SD = 22.92$; Cronbach's $\alpha = .93$). Narcissism and self-esteem scores were significantly correlated, $r(72) = .35$, $p < .01$.

Idea generation. Overall, participants generated an average of 23.78 ideas. A hierarchical regression model was used to examine the effects of experiment condition and narcissism on idea generation performance. Step 1 included the predictor variables of evaluation condition (dummy coded), narcissism, and self-esteem, which was used as a covariate. The interaction between evaluation condition and narcissism was entered in Step 2. The Step 1 analyses showed no significant effects for narcissism as a main effect, $F(1, 69) = 0.36$, *ns*, $r = .07$, or self-esteem as a covariate, $F(1, 69) = 1.04$, *ns*, $r = .11$, but the main effect of evaluation condition was statistically significant, $F(2, 69) = 3.53$, $p < .05$, $r = .30$.[5] The classic social loafing effect was replicated: Participants generated more ideas in the public evaluation condition ($M = 27.28$, $SD = 9.21$) than in the private evaluation ($M = 22.23$, $SD = 7.73$) or no-evaluation ($M = 21.74$, $SD = 7.29$) conditions.

The main effect of evaluation condition was qualified by a significant interaction between evaluation condition and narcissism, $F(2, 67) = 7.33$, $p = .001$, $r = .40$. Tests of simple slopes revealed that narcissists generated significantly more ideas than other participants in the public evaluation condition (high narcissist $PV = 42.20$; low narcissist $PV = 15.08$), $t(67) = 3.56$, $p = .001$, $r = .40$. Narcissism was not significantly related to idea generation in the no-evaluation condition (high narcissist $PV = 20.85$; low narcissist $PV = 22.29$), $t(67) = -0.23$, *ns*, $r = -.03$. Narcissism also failed to predict performance in the self-evaluation condition, and in fact the trend was in the opposite direction, with high narcissists performing worse than low narcis-

[5] For Experiments 1–3, we used *t* values and betas to report effects from regression analyses. We were unable to use *t* and beta statistics to describe the evaluation condition variable in Experiment 4 because this predictor consisted of three categories dummy coded into two separate variables. We used *F* instead of *t* and correlations instead of betas to report the effect of evaluation condition. To facilitate comparisons between the effect of evaluation condition and other effects, we used *F*s and correlations to describe all effects from the main regression model for Experiment 4.

sists (high narcissist $PV = 17.11$; low narcissist $PV = 26.87$), $t(67) = -1.52$, $p = .13$, $r = -.18$ (see Figure 4).

Discussion

The results of Experiment 4 provide more evidence that narcissists perform best when high performance is self-enhancing. Narcissists performed better when their creativity test performance could be evaluated by others, compared with their performance when others could not identify their output. In contrast, low narcissists performed similarly regardless of self-enhancement opportunity.

Experiment 4 replicates the social loafing phenomenon: Participants loafed more (i.e., performed less well) when their individual contributions could not be observed and evaluated by others. In fact, the social loafing effect found in Experiment 4 was entirely due to the performance of narcissists. Low narcissists exhibited no signs of social loafing, which is consistent with the findings of Charbonnier et al. (1998) and Huguet et al. (1999), who demonstrated that people who see themselves as average are less prone to social loafing. Although high narcissists performed better than low narcissists when individual performance could be publicly evaluated, it is notable that their performance did not differ significantly from low narcissists' performance when no evaluation was possible, although the self-evaluation condition did show a trend toward poorer performance by narcissists.

The results of Experiment 4 also suggest that narcissists' motivation to excel at potentially self-enhancing performance tasks derives from self-presentational exhibitionism rather than a desire to self-validate. Narcissists' relatively poor (lazy) performance suggests that they are not very motivated by the chance to privately compare their performance with others' performances. In contrast, they performed at a high level in the public evaluation condition, consistent with the view that they are mainly motivated by the chance to garner the approval and admiration of others. These findings are also consistent with recent research showing that social loafing is more likely to be eliminated by the potential for public evaluation than by the potential for self-evaluation (Harkins, 2000; Harkins et al., 2000). To be sure, Experiment 4 did not include a condition in which participants expected public evaluation but did not expect opportunity for private evaluation. This leaves open the possibility that social loafing is only reduced by a combination of self-presentational and self-evaluation motives. However, the fact that self-evaluation motives alone (in the private self-evaluation condition) yielded a trend in the opposite direction renders this interpretation less plausible. The most parsimonious conclusion to be drawn from Experiment 4 is that narcissists are motivated mainly by the opportunity to enhance the favorability of how they appear to others and are not much concerned with boosting their own private view of themselves.

Several features of Experiment 4 deserve comment. Unlike the preceding studies, its findings involve absolute performance rather than change in performance from a pretest baseline. Also unlike the preceding studies, its measure of performance was a relatively pure measure of effort, with almost no element of skill. Skill and effort performance processes may be quite different (e.g., Baumeister, 1984; Baumeister, Hutton, & Cairns, 1990). Effort tasks are most directly affected by motivation, so the results of Experiment 4 may be regarded as most revealing about the motivations of narcissists. Experiment 4 was the only one of the four experiments to show that narcissists outperformed other people in absolute terms (when self-enhancement opportunity was high), and the apparently greater strength of this finding in Experiment 4 seems to imply that narcissists are indeed especially strongly motivated to perform well so as to look good.

Meta-Analyses

The main hypotheses in each of the present four experiments were essentially the same. In all four studies, an interaction between narcissism and self-enhancement opportunity was predicted. High narcissists were expected to perform better in the high

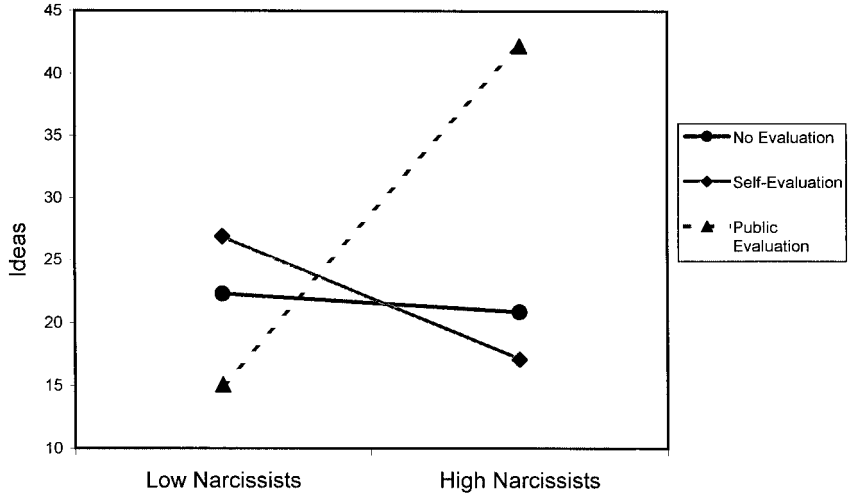

Figure 4. Interactive effects of evaluation condition and narcissism on idea generation performance (Experiment 4). Lines represent simple slopes derived from regression equations. High narcissists are hypothetical individuals 1 standard deviation above the Narcissistic Personality Inventory (NPI) mean. Low narcissists are hypothetical individuals 1 standard deviation below the NPI mean.

self-enhancement opportunity conditions than they did in the low self-enhancement opportunity conditions. Low narcissists were expected to perform similarly regardless of self-enhancement condition. Because the hypotheses for each experiment were similar, we conducted analyses to determine the combined probabilities and combined effect sizes for the simple slopes for high and low narcissists that were derived from the interactions between narcissism and self-enhancement opportunity. For Experiments 1–3, the simple slope probabilities and effect sizes were taken from the results of the regression analyses that used performance improvement as the dependent variable. In the case of Experiment 1, this included the results from the analysis that used combined speed and accuracy improvement as the dependent variable. For Experiment 4, the simple slope probabilities and effect sizes were taken from the results of a regression analysis that used a two-level public evaluation versus no-evaluation condition predictor variable.[6]

The combined probability for the simple slopes of high narcissists was significant (weighted $Z = 4.61$, $p < .001$, one-tailed, weighted $r = .35$), indicating that narcissists performed better when their performance task was potentially self-enhancing. The combined probability for the simple slopes of low narcissists was marginally significant (weighted $Z = -1.36$, $p < .09$, one-tailed, weighted $r = -.10$), but the effect was in the opposite direction from the effect for high narcissists (Table 1). Low narcissists performed slightly better in the low self-enhancement opportunity conditions than they did in the high self-enhancement opportunity conditions.

An additional meta-analysis was conducted to test whether high narcissists performed differently than low narcissists overall (across all conditions) in the four studies. For each of the four experiments, probabilities and effect sizes were derived from the correlation between narcissism and a performance measure. For Experiments 1–3, the performance measure consisted of Round 2 (postmanipulation) performance. In the case of Experiment 1, this performance measure combined speed and accuracy. In Experiments 2–4, the correlation analyses controlled for self-esteem. The results of this meta-analysis reveal that narcissism was not significantly related to overall performance across the four experiments (weighted $Z = .81$, *ns*, weighted $r = .06$).

General Discussion

Narcissists think of themselves as superior performers, and they enjoy displaying their talents (e.g., Raskin et al., 1991a). High expectancies and high motivation generally benefit performance, but narcissists have typically performed no differently than others in past research. The results of the present research suggest that narcissism does indeed predict performance, but the relationship between narcissism and performance is moderated by a situational factor: perceived self-enhancement opportunity. The self-enhancement value of high performance varies according to factors such as task difficulty and the presence or absence of an evaluative audience. These differences are quite relevant to the narcissistic motivation of garnering the admiration of other people (Morf & Rhodewalt, 2001).

The present investigation found that the performance of narcissists was highly sensitive to changes in self-enhancement opportunities. In four separate studies that manipulated self-enhancement opportunity, narcissists consistently performed better when high performance would be self-enhancing than when it would not be. Narcissists performed well when the task goal was challenging (Experiments 1 and 2), when performance pressure was induced (Experiment 3), and when their performance could be evaluated by others (Experiment 4). In contrast, low narcissists performed no better in the high self-enhancement opportunity conditions than they did in the low self-enhancement opportunity conditions, and occasionally they showed trends in the opposite direction (Experiments 2 and 3). Overall, manipulations of perceived self-enhancement opportunity had less influence on the performance of low narcissists than on the performance of high narcissists.

Past research has shown that narcissists are more concerned with self-enhancement than others (Campbell et al., 2000; John & Robins, 1994). This concern with self-enhancement can motivate the narcissist to put forth maximum effort in situations that present an opportunity for self-enhancement. In the present studies, high confidence and high effort did appear to benefit narcissists in such circumstances. Increased effort seems the most likely mediating mechanism, insofar as Experiment 4 included the measure of task performance that was most purely a function of effort, and Experiment 4 also yielded the most substantial margin by which narcissists outperformed other people in the self-enhancement condition.

The other side of the motivational coin is that narcissists seem to withhold effort when the situation does not offer the promise of self-enhancement for top performers. Across all conditions in all experiments, we did not find that narcissists outperformed other people. Any advantage they obtained in the high self-enhancement opportunity conditions was offset by relatively poor performance in the control (low self-enhancement) conditions. As we noted in the introduction, previous studies have largely failed to show differences in quality of task performance as a function of narcissism, as long as performance was measured objectively. Our results are consistent with that finding, because there was no main effect for narcissism across the studies. The apparent null findings may, however, conceal opposite trends in different circumstances. Like Andre in the example with which we began this article, narcissists may shine during grand moments but furnish substandard efforts when the spotlight is off.

The motivational orientation of narcissists was further clarified in Experiment 4. The findings of the first three studies, showing that narcissists perform especially well in high-pressure and potentially glorious situations, could be interpreted as reflecting a desire either to prove something to themselves or to garner the admiration and respect of others (i.e., the experimenters). Experiment 4 separated these two motives by offering one condition in which feedback about the quality of performance would be known only to the self and another in which it would be made public.

[6] These meta-analyses were conducted to compare the performance of narcissists in high and low self-enhancement opportunity conditions across studies. In Experiment 4, the public evaluation condition offered the greatest opportunity for self-enhancement, whereas the no-evaluation condition offered the least opportunity for self-enhancement. Opportunity for self-enhancement in the self-evaluation condition was comparatively moderate (not high or low), so this condition was omitted from the meta-analyses.

Table 1
Meta-Analyses of Relationship Between Self-Enhancement Opportunity and Performance for High and Low Narcissists: Experiments 1–4

Narcissism	Exp. 1 *r*	Exp. 2 *r*	Exp. 3 *r*	Exp. 4 *r*	Weighted *Z*	Weighted *r*
High	.47	.26	.22	.47	4.61**	.35
Low	.00	−.22	−.17	.06	−1.36†	−.10

Note. A positive value indicates better performance with high self-enhancement opportunity. A negative value indicates better performance with low self-enhancement opportunity. Exp. = Experiment.
† $p < .09$, one-tailed. ** $p < .001$, one-tailed.

Narcissists performed relatively poorly when feedback would be known only to themselves, but they outperformed everyone else when the feedback was anticipated to be made public. These findings suggest that narcissists are mainly motivated to win the admiration of others rather than to prove something (in this case, creative ability) to themselves. In fact, they seemed remarkably indifferent to the prospect of proving their talents to themselves. Only the prospect of public approbation elicited their best efforts. To be sure, it is difficult to make an absolute distinction between seeking public and private esteem, as Tetlock and Manstead (1985) argued. Making a good impression on others could be considered a powerful, effective means of proving something to oneself. Still, to the extent that one can distinguish between impressing oneself and impressing others, our data suggest that narcissists are mainly interested in impressing others. It would be unreasonable to claim that narcissists are utterly indifferent to private self-regard, but they appear to have a particularly strong desire to garner the admiration of others.

In interpreting our results, it is important to remember that Experiments 1–3 evaluated final performance levels against each individual's own pretest baseline. Individual differences in ability were thus factored out. The findings of these experiments do not, however, conceal any consistent baseline difference in performance level as a function of narcissism. In Experiment 1, the correlation between narcissism and pretest performance was negligible. Narcissism was negatively correlated with pretest performance in Experiment 2, but in Experiment 3 (using a different kind of task), narcissism was positively correlated with pretest performance. Thus, the present research confirms that narcissism scores, by themselves, are poor predictors of performance and that the baseline level of performance of narcissists may be either better or worse than that of others, depending on the task and other possible circumstances. Analyzing posttest scores alone likewise yields a mixed picture, and, indeed, high narcissists did not always outperform low narcissists in the high self-enhancement opportunity conditions. In Experiments 1 and 2, high and low narcissists performed similarly on the postmanipulation task regardless of self-enhancement condition. High narcissists in the high self-enhancement opportunity conditions performed better than high narcissists in the low self-enhancement opportunity conditions, but they did not perform better than low narcissists. In Experiment 3, high narcissists threw darts better than low narcissists in the high self-enhancement condition, but they also threw better in the low self-enhancement condition. Only in Experiment 4 did high narcissists outperform low narcissists when public self-enhancement was possible. In summary, one can conclude from the present studies that self-enhancement opportunity facilitates the performance of high narcissists but not low narcissists. However, the present research does not provide conclusive evidence that narcissists outperform others when high performance is self-enhancing or that narcissists perform worse than others when high performance is not self-enhancing. Narcissism predicts performance only when the influence of perceived self-enhancement opportunity is considered.

Implications

In the present studies, narcissists performed better when the performance task was made more difficult or stressful, but low narcissists did not perform better under these circumstances. This finding implies that narcissistic personality characteristics may be adaptive in certain performance domains. Narcissists should be drawn to and should thrive in high pressure, high profile professions in which the rewards for success and the costs of failure are magnified. Narcissists may seek high pressure, high profile jobs because their self-confidence and desire for glory may overwhelm their fears of failure. For people with low levels of narcissism who are less self-confident and less driven by self-enhancement needs, the threat of failure may outweigh the prospect of success and personal glory.

Past research indicates that narcissists' chronic self-confidence is often unjustified (e.g., Farwell & Wohlwend-Lloyd, 1998; John & Robins, 1994; Robins & John, 1997). In such cases, narcissists' glory seeking may result in dramatic performance failure. However, the performance benefits of high self-confidence (Bandura, 1977; Baumeister et al., 1985; Tuckman & Sexton, 1992) should help narcissists to achieve individual performance success more often than failure when their motivation to succeed is high.

Although narcissism may sometimes be advantageous to performance, it may be harmful to performance at other times. The present research suggests that narcissists perform below their abilities when the task goal is not self-enhancing. In comparison, the performance of low narcissists does not seem adversely affected by low self-enhancement opportunity. Narcissists may respond well to performance challenges, but their performance suffers in the absence of performance challenges.

Future Directions

The results of the present four studies are consistent with our predictions about how cognitive (self-confidence) and motivational (desire for self-enhancement) aspects of the narcissistic personality influence performance. However, our research does not provide direct tests of the specific processes responsible for the

obtained effects. Additional studies using different procedures are needed to better isolate the cognitive, motivational, and affective mechanisms that influence narcissists' performance.

Gender is one factor worth examining more closely in future research. Across the present four studies, gender did not reliably predict narcissists' performance, but our studies lacked sufficient power to detect subtle or complex gender effects.[7] It is clear that narcissism is not a uniquely male or female phenomenon, but recent research has highlighted gender differences in the structure of narcissism (e.g., Tschanz, Morf, & Turner, 1998) and the motivational orientation of narcissists (Morf, Weir, & Davidov, 2000). These findings suggest that gender may also moderate the relationship between narcissism and performance.

Future research should also investigate how narcissists perform after receiving negative feedback. In most domains of performance, people encounter setbacks in their quest to achieve goals. To become a proficient performer, one must overcome and learn from mistakes and failures. Narcissists struggle to cope with failure. Past research suggests that narcissists become angry (Rhodewalt & Morf, 1998), hostile and aggressive (Bushman & Baumeister, 1998; Smalley & Stake, 1996), and derogatory (Kernis & Sun, 1994; Morf & Rhodewalt, 1993) when given failure feedback. No one enjoys failure, but narcissists find performance failure especially aversive because it calls their superiority into question. Self-perceived superiority is a key component of narcissists' self-esteem (Raskin & Terry, 1988; Paulhus, 1998). When narcissists' grandiose self-views are threatened, they aggressively defend their self-esteem by attempting to reassert their superior status (Raskin et al., 1991a, 1991b).

Past research indicates that people with high self-esteem show more task persistence after receiving failure feedback than people with low self-esteem (e.g., Shrauger & Sorman, 1977; Tafarodi & Vu, 1997). Narcissists may be more persistent in the face of failure than other people with high self-esteem. People with high self-esteem can cope with performance failure by taking solace in other positive aspects of their life, such as their relationships with others. In contrast, narcissists' feelings of self-worth are contingent on their ability to show their superiority and garner admiration. They are less concerned than others about being cared for or liked (Campbell, Rudich, & Sedikides, in press). To deflect the self-esteem blow of performance failure, narcissists should persist at their task to prove that their failure was a fluke. At times, narcissists' persistence after failure should be rewarded with performance success. In other situations, narcissists' excessive persistence will only lead to more frustrating failures, especially when their self-perceptions of ability dramatically overestimate their true talent.

The present research addresses factors that influence performance on individual tasks. Narcissism may also play an important role in predicting team performance, defined in the present discussion as the outcome of interaction and collaboration between two or more group members. Several of the defining characteristics of narcissism suggest that narcissists would be lousy teammates. Narcissists certainly do not fit the stereotype of selfless team players. Narcissists lack empathy (Watson, Grisham, Trotter, & Biderman, 1984), so it is not surprising that they exploit others in striving for self-enhancement (Campbell et al., 2000). Narcissists are domineering in their personal interactions (Morf & Rhodewalt, 1993; Raskin et al., 1991b), partly because they assume they are better than others (Campbell et al., in press). In team domains, individual contributions to team goals are often difficult to recognize; when this is the case, narcissistic team members should perform below their abilities, as demonstrated in Experiment 4. These aversive interpersonal qualities do not endear narcissists to the people they spend time with (Paulhus, 1998), so the presence of a narcissist in a team environment could easily lead to counterproductive resentment and conflict.

Although the negative aspects of narcissism in interactive group environments are obvious, narcissism may actually benefit team performance in some circumstances. Consider the group dynamics of decision making. When a group of people meets to make a decision or develop a plan, group members sometimes withhold their suggestions and opinions, even if they do not agree with the perspectives of other group members. When group members withhold their opinions, group productivity can suffer, as shown by research on brainstorming (e.g., Mullen, Johnson, & Salas, 1991) and groupthink (e.g., Janis, 1982). Evaluation apprehension, deference to authority, and a desire to avoid conflict are common reasons why people keep their ideas to themselves in group meetings. It is unlikely that narcissists would be quieted by any of these reasons. They may be too self-assured and arrogant to seriously consider the possibility of negative evaluation. Their feelings of superiority should prevent them from deferring to others they disagree with, regardless of the other person's status. Finally, narcissists are simply not very aware of or concerned about the feelings of other people (Watson et al., 1984), and they do not seem to value being popular (Campbell et al., in press), so they

[7] For each of the four experiments, we conducted separate regression analyses including gender as a predictor variable. In Experiment 1, the predicted interaction between challenge level and narcissism was essentially unchanged when we included gender as a predictor variable in the main regression model (in which the dependent variable was a combined measure of speed and accuracy improvement). However, this analysis revealed a significant three-way interaction between gender, challenge level, and narcissism. The predicted two-way interaction between challenge level and narcissism was stronger for women than for men. We are reluctant to draw conclusions about this gender effect for three reasons. First, the sample size in Experiment 1 was relatively small and more than 75% male, so reliability is a concern. Second, recent research suggests that the moderating impact of self-enhancement opportunity on narcissists' performance may be stronger for men than for women. In their examination of the intrinsic motivations of narcissists, Morf et al. (2000) found that male narcissists were more motivated than female narcissists to prove their superiority over others. The high challenge condition in Experiment 1 offered more opportunity to prove superiority than the low challenge condition, so it is surprising that women were more affected by this manipulation. Third, this gender effect was not replicated in the three other related studies we present in this article. When gender was added to the regression model as a predictor in Experiment 2, the predicted interaction between challenge level and narcissism remained. The only significant effects involving gender were higher order interactions, including a three-way Narcissism × Self-Esteem × Gender effect and a four-way Challenge Level × Narcissism × Self-Esteem × Gender effect. We did not replicate these effects when a comparable regression model was used to analyze Experiment 3. The only significant effect involving gender in Experiment 3 was a main effect (women improved more than men). No gender effects were found when gender was added to the Experiment 4 regression model. No statistically significant gender differences in total NPI scores were found in any of the four experiments.

should not hesitate to create conflict with others. Thus, narcissists' interpersonal insensitivity and motivational orientation could help as well as hurt team performance.

Conclusion

Researchers have documented many characteristics of subclinical narcissism, most of which are maladaptive. The present research adds to the list of negative narcissistic traits by showing that narcissists underachieve when performing tasks that offer little opportunity for self-enhancement. However, the news about narcissism is not all bad. Narcissists perform well when they perceive that high performance will bring self-glorification. When the task is daunting, the pressure is on, and the world is watching, narcissists rise to the challenge.

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