

Different Provocations Trigger Aggression in Narcissists and Psychopaths

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Abstract

Although previous research has demonstrated that ego-threatened narcissists react aggressively, no allowance was made for the overlap of subclinical narcissism with subclinical psychopathy. Nor is there research directly comparing the reactions of these two personalities to physical threat. To investigate these distinctions, the present study examined the degree to which narcissists and psychopaths respond with aggression to ego threat versus physical provocation. Participants were given the opportunity to aggress with a white noise blast against an ostensible partner who had provoked them. Results replicated previous findings that narcissists aggress in response to ego threat provocation (a personal insult), even when overlap with psychopathy is controlled. By contrast, psychopathy emerged as the unique predictor of aggression in response to physical provocation (a gratuitous blast of loud white noise). The results point to qualitatively different aggression mechanisms underlying narcissistic and psychopathic aggression.

Keywords

aggression, Dark Triad, Machiavellianism, narcissism, psychopathy

It has been established that narcissists become aggressive when insulted (Barry, Chaplin, & Grafeman, 2006; Bushman & Baumeister, 1998), when ostracized (Twenge & Campbell, 2003), or when their perceived entitlements are challenged (Baumeister, Catanese, & Wallace, 2002; Bushman, Bonacci, van Dijk, & Baumeister, 2003). Together, these findings support the proposition that ego threat increases the likelihood of aggression among those high in narcissism.

Narcissism, however, is only one of a triad of overlapping concepts associated with antisocial behavior (Paulhus & Williams, 2002). Another is Machiavellianism, which has surprisingly little association with outright aggression (see Jones & Paulhus, 2009). The third of these dark personalities, psychopathy, is the most consistent predictor of antisocial behavior, including aggression (see various reviews in Patrick, 2007).

Admittedly, the bulk of the psychopathic aggression was collected on criminal samples in forensic settings (Hare, 1998). However, recent research indicates that similar antisocial patterns are evident in *subclinical psychopaths*, that is, those operating outside of clinical and forensic settings (LeBreton, Binning, & Adorno, 2005). Laboratory research on psychopathic aggression in subclinical samples has been facilitated by the advent of self-report measures such as the Self-Report Psychopathy scale (SRP; Paulhus, Neumann, & Hare, in press).

Much of what is known about personality predictors of aggression has been summarized in the review by Bettencourt, Talley, Benjamin, and Valentine (2006). Unfortunately, at the time of that review, there were no behavioral studies of

aggression among subclinical psychopaths. Subsequent research has filled that gap with laboratory evidence that self-report measures of psychopathy predict aggression in subclinical samples (Reidy, Zeichner, & Martinez, 2008; Reidy, Zeichner, Miller, & Martinez, 2007).

Provocation Patterns

The review by Bettencourt and colleagues (2006) also forged a distinction between personality variables that predict aggression regardless of the situation (e.g., trait aggression) and personality variables that predict aggression only following provocation (e.g., narcissism). Given the overlap between subclinical narcissism and subclinical psychopathy (Paulhus & Williams, 2002), one might assume that contexts provoking one personality would provoke the other. However, there are distinctive features of narcissism and psychopathy that lead us to predict responsiveness to different provocations.

One important distinction is that between ego threat and physical threat. A long tradition of research has emphasized how those two threats differ in terms of autonomic reactions and coping responses (e.g., Heatherton, Herman, & Polivy,

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1991; S. M. Miller, 1987; Rappaport & Katkin, 1972). We suspect that narcissists will be more provoked by ego threat and psychopaths by physical threat.

Our prediction regarding narcissists follows from their defensive grandiosity (e.g., Morf & Rhodewalt, 2001; Raskin, Novacek, & Hogan, 1991): Challenging a self-image that is both inflated and fragile is likely to ignite aggression. Psychopaths, on the other hand, are characterized by impulsivity and callousness (Cleckley, 1976; Hare, 1998). Their aggression, rooted in an evolutionary history of retaliatory competition, tends to be swift and ruthless (Mealey, 1995). In short, the literature suggests that psychopaths are more likely than narcissists to retaliate with aggression to physical provocation.

Present Study

We sought to tease apart the provocations that trigger aggression in narcissists and psychopaths using a standard laboratory paradigm (Taylor, 1967). In response to a provocation during a competitive game, participants were given the opportunity to blast a confederate with white noise (Bushman & Baumeister, 1998).

The concept of *ego threat* was operationalized by inducing half of our participants to believe that their essays had been derogated by a partner. Hypothesis 1 was that narcissists would be especially responsive to this form of provocation. The concept of *physical threat* was operationalized by exposing participants to a gratuitous blast of white noise (maximum intensity and duration) from the ostensible partner. Hypothesis 2 was that psychopaths would be especially responsive to this form of provocation. Based on the minimal associations in the literature, Hypothesis 3 was that Machiavellianism would not predict aggression in response to either provocation.

Method

Participants

Participants were 82 undergraduate students who volunteered to participate for extra marks in psychology courses. Their mean age was 20.4 years, and 60% were female.

Materials

SRP. The SRP (Paulhus et al., in press) is a 64-item self-report measure of psychopathy. It comprises four facets that, consistent with the Psychopathy Check List, define the construct of psychopathy (Hare, 2003). The facets are Erratic Lifestyle (sample item = "I'm a rebellious person"), Callous Affect (sample item = "I am more tough-minded than other people"), Interpersonal Manipulation (sample item = "I think I could 'beat' a lie detector"), and Criminal Tendencies (sample item = "I have been arrested by the police"). The alpha for the total psychopathy score was strong ($\alpha = .87$).

Substantial research has accumulated in support of the construct validity of the SRP. The total SRP score shows concurrent validity with other self-report measures (Hicklin & Widiger, 2005), and the four-facet structure has been

confirmed (Williams, Paulhus, & Hare, 2007). The instrument has been shown to surpass other personality measures in predicting exam cheating (Nathanson, Paulhus, & Williams, 2005) and sexual deviance (Williams, Cooper, Howell, Yuille, & Paulhus, 2009). In one study, the SRP predicted criminal recidivism 4 years in advance (Salekin, 2008).

Narcissistic Personality Inventory (NPI). The NPI (Raskin & Hall, 1979) is a 40-item forced-choice instrument that measures an overt, grandiose form of narcissism (see J. D. Miller & Campbell, 2008). Construct validity of the NPI has been reviewed by Morf and Rhodewalt (2001).

In the present sample, the alpha reliability was solid ($\alpha = .85$). The NPI and SRP showed a substantial and significant positive correlation ($r = .48, p < .01$, two-tailed).

Machiavellianism (Mach-IV). The Mach-IV (Christie & Geis, 1970) is a 20-item Likert-type questionnaire designed to measure Machiavellianism. A sample item is "It is wise to flatter important people." Validation evidence was recently reviewed by Jones and Paulhus (2009).

In our sample, the alpha reliability was acceptable ($\alpha = .62$). Its correlations with the other members of the Dark Triad were $r = .17, p = .13$ (NPI) and $r = .41, p < .01$, two-tailed (SRP).

Rosenberg's Self-Esteem Scale (RSE). The RSE (Rosenberg, 1965) is a standard measure of global self-esteem and showed a strong reliability in this sample ($\alpha = .89$). A number of researchers have pointed out why it should be included in studies of narcissism to distinguish that construct from global self-regard (e.g., Donnellan, Trzesniewski, Robins, Moffit, & Caspi, 2005; Paulhus, Robins, Trzesniewski, & Tracy, 2004).

Procedure

Participants were greeted in the laboratory by a same-sex experimenter and told that they would be playing a game with another student (their ostensible "partner"). The partner was said to already be seated in another room. To begin, participants completed a questionnaire package that included the personality measures.

The study was then described as an investigation of how essay-writing affects reaction times. They would be writing an essay, getting it evaluated, and then playing a reaction-time game with a same-sex partner.

Manipulating ego threat. The aggression provocation closely followed that used by Bushman and Baumeister (1998). Participants had to choose to write an essay either for or against free abortions on campus. Their essay was taken away for delivery to the ostensible partner; shortly thereafter, the experimenter brought in (what appeared to be) the partner's essay. In fact, all participants received an essay that opposed their own viewpoint.

Previously composed feedback forms were kept in envelopes with multiple shuffled copies of positive and negative evaluations in the pile; hence, it was easy for the experimenter to randomly assign participants to condition while keeping the experimenter blind to condition.

Participants were then randomly assigned to receive either positive or insulting feedback on their essay. The wording of the feedback was identical to that used by Bushman and Baumeister (1998). The personal insult read, "This is the worst essay I have ever read!!" and the positive feedback condition read, "No comments, great essay!!"

As noted by Bushman and Baumeister (1998), the insult represents an ego threat because participants' personal opinions and attitudes as well as their essay writing ability are being assailed; both are ostensibly important to most college students.

Competitive computer game. Before feedback was administered, the game procedure was explained to participants: It was identical to Bushman and Baumeister's (1998) white noise aggression paradigm, with the exception of fewer trials (9 instead of 25). In this paradigm, participants are asked to click on a red square as fast as possible. They are told that the slower respondent gets blasted with white noise at levels of intensity and duration that are set by their opponent. The computer was programmed so that all participants lost the first round of competition and were blasted with the maximum duration and intensity of white noise. Subsequent trials were randomized so that the participant won approximately half of the subsequent trials. Win or lose, the participant had to decide on each trial what noise settings to deliver to his or her partner.

Manipulation of physical threat. Pain is one of the standard instigators of aggression. Indeed, blasts of white noise have been used to provoke participants in the past to study anger and retaliation (e.g., Nunn & Thomas, 1999). We took advantage of that research by investigating the increase in aggression beyond the first trial. The first aggression settings were decided before the delivery of any white noise, but those in later trials were, in large part, retaliations to the partner's aggression.

Experimental Design and Analysis

Because the intensity and duration settings were highly correlated, $r(82) = .89$, we standardized and averaged them to create an overall index of administered aggression. Two such aggression scores provided the dependent variables. First was Trial 1 aggression—based on the setting participants provided after the ego-threat manipulation but before receiving the first noise blast. Second was the mean aggression score over Trials 2 to 9, that is, after receiving the first blast from the partner. These measures represented a participant's aggression before and after being physically provoked.

The key analyses were two moderated multiple regressions. The first used personality scores and the ego-threat condition to predict aggression at Trial 1. The second used personality scores to predict the increase in aggression from Trial 1 to Trials 2 to 9. The former provides a useful baseline because that aggression score is uncontaminated by (a) winning or losing or (b) the white noise level received from the ostensible partner.

Results

In preliminary analyses, we evaluated a variety of possible gender effects. Results revealed that gender was unrelated to prior or postprovocation aggression, nor did gender interact with condition for either outcome. Accordingly, we pooled male and female participants in all subsequent analyses.

Manipulation Checks

After participating in the competitive game, participants were asked two open-ended questions to assess their perceptions of (a) their partner's feedback and (b) the quality of their partner's essay. The first response was coded on a scale of 1 (*low*) to 7 (*high*) for how negatively they felt their partner rated their essay (i.e., how threatening the feedback was perceived to be). For example, one participant in the negative feedback condition wrote, "He thought it was crap!"

The second open-ended response was coded on a scale of 1 (*low*) to 7 (*high*) for how critical participants were of their partner's essay. For example, one participant in the negative feedback condition wrote in response to the quality of his partner's essay, "Stupid—he's a moron."

High ratings on these two variables indicate ego threat; after all, most students are invested in their academic skills, and a direct attack constitutes a challenge to their intellectual competence. Moreover, a defensive attack on a critical evaluator is typically associated with ego threat (e.g., A. R. Cohen, 1959).

Our analyses indicated that participants in the ego-threat condition felt more threatened by the feedback ($M = 6.33$) compared to participants in the control condition ($M = 1.79$), $t(73) = 12.16$, $p < .01$.¹ Ego-threatened participants were also more defensive in their response to their partner's essay ($M = 4.11$) compared to control participants ($M = 3.15$), $t(74) = 2.21$, $p < .04$.

In sum, our analyses indicate that our label for this manipulation (i.e., ego threat) is appropriate. These results add support for the use of essay insult as an ego threat manipulation (see Bushman & Baumeister, 1998).

Analysis 1: Ego Threat Manipulation

To evaluate Hypothesis 1, we followed Bushman and Baumeister (1998) in analyzing aggression on Trial 1. At Step 1 of the regression, we entered the main effects (insult, psychopathy, narcissism, Machiavellianism); at Step 2, we entered the interactions (psychopathy \times insult, narcissism \times insult, Machiavellianism \times insult). Previous theory and research allowed no predictions about the higher level interactions or the interaction of the three personality variables.²

As expected, the insult increased aggression ($\beta = .38$, $t = 3.45$, $p < .01$). The key prediction (Hypothesis 1) was supported by a significant narcissism \times insult interaction. As depicted in Figure 1, insult evoked greater levels of aggression among those high in narcissism ($\beta = 2.23$, $t = 2.32$, $p = .02$). The main effects were not significant for narcissism ($\beta = .16$,

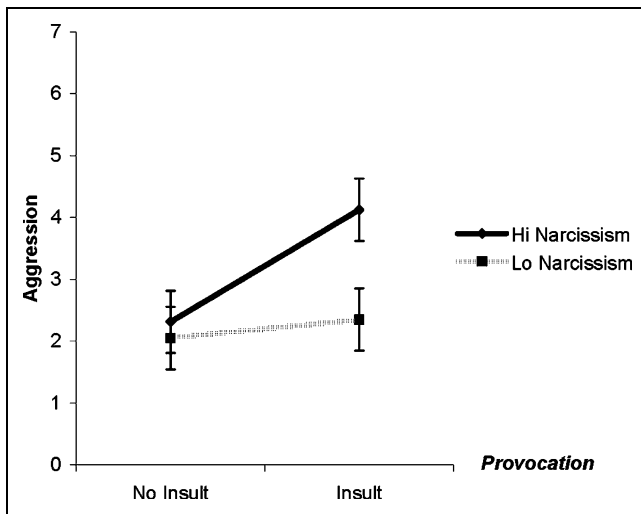


Figure 1. Effects of ego provocation and narcissism on aggression. The plotting procedure followed that recommended by J. Cohen, Cohen, West, and Aiken (2003). Error bars are based on standard error of the mean.

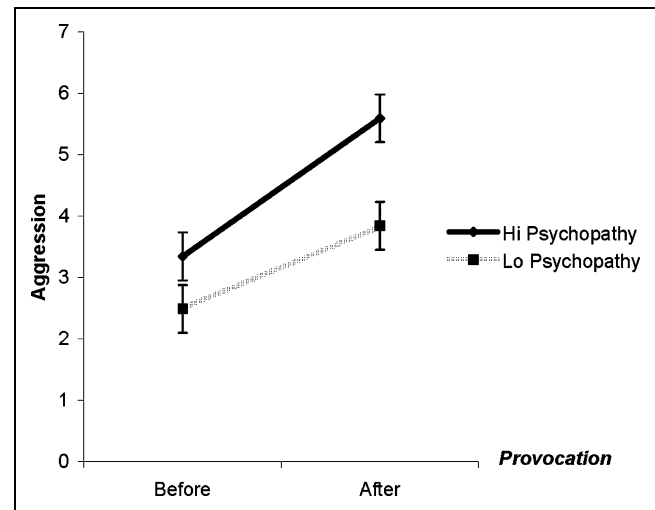


Figure 2. Effects of physical provocation and psychopathy on aggression. The plotting procedure followed that recommended by J. Cohen (2003). Error bars are based on standard error of the mean.

$t = 1.32, p = .19$), psychopathy ($\beta = .02, t = 0.19, p = .85$), or Machiavellianism ($\beta = .11, t = 0.91, p = .37$). Neither psychopathy ($\beta = -.76, t = -0.85, p = .40$) nor Machiavellianism ($\beta = -.25, t = -0.32, p = .75$) interacted with insult. The null result for Machiavellianism was consistent with Hypothesis 3. No other interactions were significant.

Note that although in this analysis we were controlling for Machiavellianism and psychopathy, the interaction between narcissism and insult nevertheless emerged. We conclude that narcissism is a unique predictor of aggression following an ego-threat provocation and not a spurious consequence of its overlap with other members of the Dark Triad. It is also worth noting that, as a covariate, self-esteem was not significant and did not alter this pattern of results.

We conducted an ancillary analysis to address the recent claim that narcissistic reactions to threat are maximal among those high in self-esteem (Bushman et al., 2009). We failed to find a self-esteem \times narcissism interaction within the ego-threatened group ($\beta = -.016, t = -0.01, p = .99$). Considering our sample size of 40 participants in the ego-threatened group, however, we did not have the statistical power ensuing from the large samples reported by Bushman et al. (2009).

Analysis 2: Physical Provocation

Our second analysis evaluated the effect on aggression of physical provocation (i.e., the gratuitous painful blast from partner). The overall effect was clear from the higher level of aggression ($M = 4.72$) after the provocation (Trials 2–9) compared to the mean ($M = 2.91$) before the provocation (i.e., Trial 1). Indeed, a one-sample t test revealed a moderate to strong effect size ($d = .82, t = 7.49, p < .001$). Hypothesis 2 would be confirmed if individual differences in this increase were significantly associated with psychopathy scores.

To evaluate that hypothesis, we first regressed postprovocation aggression on preprovocation aggression to yield a residual representing the increase. In turn, that residual was regressed on narcissism, Machiavellianism, and psychopathy. The independent effect of psychopathy was substantial ($\beta = .23, t = 2.21, p = .03$); the narcissism effect was not ($\beta = .04, t = 0.33, p = .74$), nor was Machiavellianism ($\beta = .02, t = 0.15, p = .88$). In sum, psychopathy was a unique predictor of aggression in response to physical provocation.³

The pattern is depicted in Figure 2. The means are plotted according to recommendations by J. Cohen, Cohen, West, and Aiken (2003): The high versus low psychopathy groups roughly correspond to top and bottom thirds of the SRP distribution. The error bars suggest that extreme psychopathy groups differentiate levels of aggression in both pre- and post-physical-provocation conditions. That is, psychopaths show more aggressive tendencies across the board—even when unprovoked. This finding further supports research by Reidy et al. (2008) suggesting that subclinical psychopaths engage in indiscriminate aggression.

Discussion

We predicted that narcissists and psychopaths would aggressively respond to qualitatively different provocations. Using a standard laboratory aggression paradigm, where participants were given the opportunity to blast their ostensible partner with white noise, we were able to confirm this pattern of results.

First, when blasted with white noise by their partners, psychopaths retaliated more violently than did nonpsychopaths. In other words, psychopaths are especially responsive to provocation of a physical nature. By contrast, narcissists showed no responsivity to this provocation (independent of their psychopathy scores). Second, we replicated previous research in finding that ego-threatened narcissists were

especially aggressive. Our results add to earlier research by showing that this narcissistic aggression occurs independently of its overlap with psychopathy.

Psychopathic Aggression

Although both are members of the overlapping Dark Triad of noxious personalities (Paulhus & Williams, 2002), narcissists and psychopaths appear to aggress for different reasons. These reasons may reflect the different reproductive strategies that provided them an adaptive advantage (e.g., Book & Quinsey, 2004).

According to Mealey (1995), for example, psychopaths seek short-term gain by exploiting their immediate environment for acquisition of resources. Their impulsive and callous nature would naturally lead them to respond in a reckless fashion to a physically aggressive threat such as painful white noise. Not only are they unable to inhibit their aggressive impulses when provoked, but also they care little about inflicting pain on others (Hare, 1998).

Their predisposition to aggress even when unprovoked may serve a reputational function that deters aggression from others. Furthermore, those individuals who are recklessly aggressive care little about their own physical safety (Wilson & Daly, 1985). However noxious to others, this cluster of traits may constitute one effective reproductive strategy (Mealey, 1995).

Narcissistic Aggression

Narcissists exhibit a rather different pattern of aggression because of their superiority focus: They are likely to respond to any provocation that threatens their grandiose self-image (Morf & Rhodewalt, 2001). Our results help circumscribe this conclusion by showing that narcissists' reactivity to ego threat does not extend to physical threat.

The narcissism effect appeared independent of trait self-esteem—as is typical of laboratory aggression studies (Bushman & Baumeister, 1998). A null effect for self-esteem showed that a positive self-image on its own is not enough to predispose one to aggression (Donnellan et al., 2005).

Note that impulsivity is a defining feature of both psychopaths (Hicklin & Widiger, 2005) and narcissists (Vazire & Funder, 2006). However, our recent research has also shown that, of the three Dark Triad members, psychopaths consistently score highest on impulsivity (Jones & Paulhus, in press). Our results suggest that short-term orientation and impulsivity are key aspects to aggressive responding for psychopathy. Whatever impulsivity is contained in narcissism may be accounted for by its overlap with psychopathy; if so, narcissistic aggression ensues entirely from a threatened ego. Alternatively, it may be that the impulsive component of narcissism combines with ego threat to instigate that brand of aggression (Vazire & Funder, 2006).

Dark Triad and Beyond

It appears that personality predispositions toward aggression may be more differentiated than previously understood. Although both show aggressive tendencies, subclinical psychopaths appear to be aggressive for reasons different from those of subclinical narcissists. Psychopathic aggression appears to be less discriminating. Indeed, subclinical psychopathy may be the personality trait underlying measures of trait aggression and explain why the latter predicts unprovoked as well as provoked aggression (Bettencourt et al., 2006).

Future research should include the identification of situations that differentially predict aggressive reactions in the third member of the Dark Triad, namely, the Machiavellian. It is likely that Machiavellians restrict their aggression to circumstances where that behavior maximizes long-term outcomes (Jones & Paulhus, 2009). A fourth overlapping construct whose aggression profile requires clarification is that of the borderline personality (Leichsenring, 1999). Thus three of these specific aggressive personalities appear to fall into the category of those provoked by specific contexts (Bettencourt et al., 2006).

Differential Provocations

Our data also confirm that there are important psychological differences between provocations stemming from ego threat versus physical threat. Ego threats constitute an attack on a positive self-concept: Self-serving attributions and derogation of others should provide relief.⁴ By contrast, physical threats produce the potential to undermine health and safety. Fight or flight may be necessary; either way, a speedy behavioral response is called for.

The fact that our data showed differential sensitivities tied to two distinct personalities also provides evidence for a fundamental difference between these two threats. Indeed, the provocation that created aggression in narcissism was the very one that produced ego concerns. The provocation that created aggression in psychopaths was the one that potentially required dismissing safety concerns. In sum, the present research supports the notion that ego and physical provocations are qualitatively different, and distinctive personality types will respond to them in distinctive ways.

Limitations

A limitation to our conclusions ensues from our use of self-report measures on subclinical samples. Narcissism and psychopathy may be more difficult to disentangle at the level of clinical disorders (Livesley, 2001). Moreover, alternative self-report measures of narcissism may show different correlates (see J. D. Miller & Campbell, 2008; Pincus et al., in press). However, that same research indicates that the NPI, the measure we chose, does capture those elements of narcissism most closely associated with aggression, namely, dominance, entitlement, and antagonism. An ideal future study would incorporate provocations targeted at narcissism, psychopathy,

Machiavellianism, and borderline personality as measured with both self-report and clinical assessments.

Notes

1. All significance tests in this article are two-tailed.
2. The inclusion of gender and its interaction with insult yielded no significant results and did not alter the hypothesized effects. For simplicity and brevity, those analyses are not shown here.
3. Inclusion of the insult manipulation, gender, self-esteem, or their interactions yielded no significant effects, nor did they alter the hypothesized effects. The inclusion or exclusion of the antisocial behavior facet of the Self-Report Psychopathy scale did not change the overall results. For simplicity and brevity, those analyses are not shown.
4. Leary, Terry, Allen, and Tate (in press) have recently called for more specificity in operationalizing ego threat. We defined ego threat in this study as a concrete threat to one's self-esteem or self-image in the private domain.

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