

When a Grandiose Self-Image Is Threatened: Narcissism and Self-Concept Clarity as Predictors of Negative Emotions and Aggression Following Ego-Threat

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ABSTRACT Two studies examined the relation between narcissism, self-concept clarity, negative emotions, and aggression based on theoretical assumptions proposed by Baumeister, Smart, and Boden (1996). Narcissism and self-concept clarity were examined as predictors for anger, depression, and verbal aggression following ego-threat, which was operationalized by a bogus performance feedback on an intelligence test. The second study also examined the mediating effects of participants' negative emotions to provide an additional explanation for the aggressive reactions after failure. As expected, narcissism and self-concept clarity were significant predictors of negative emotions and aggression after failure. In accordance with our hypothesis, high narcissists with low self-concept clarity reacted with anger and aggression after failure, whereas less narcissistic individuals with high self-concept clarity showed feelings of depression and no aggression. The results also indicated that aggression was always directed toward the source of the ego-threatening

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feedback. Additionally, anger and depression could predict the aggressive response after failure but they did not mediate the relation between narcissism, self-concept clarity, performance feedback, and aggression.

How do people's thoughts and feelings about themselves influence their negative emotions and aggressive reactions following ego-threatening feedback? Based on a broad review of empirical research from several psychological fields, Baumeister, Smart, and Boden (1996) gathered evidence suggesting that it seems to be a very positive self-image that leads to aggression after ego-threat. Assuming that people whose self-view is very positive have much more to lose when they receive negative feedback than people whose self-view is negative, they should experience a larger threat to their self-esteem after negative feedback and a stronger motivation to reestablish their self-image by derogating or punishing the source of the ego-threat (Baumeister, 1997). This article suggests that people with an inflated and extremely positive self-view that is unstable and insecure at the same time might be prone to anger and aggression when their positive self-view is threatened by negative feedback. This unstable and inflated self-view corresponds to the concept of narcissism.

The study of narcissism has encountered a resurgence of theoretical and empirical attention. This has occurred both in personality and social psychology (Emmons, 1987; Rhodewalt & Morf, 1995) and in clinical psychology (Kernberg, 1975; Kohut, 1977; Westen, 1990). According to widely used clinical definitions (DSM-IV; American Psychiatric Association, 1994), narcissists display self-aggrandizement and fantasies about unlimited ability and power, and they react with rage, shame, or humiliation when their self-esteem is threatened. The American Psychiatric Association describes narcissism as a feeling of grandiosity used to bolster and enhance a rather fragile self-esteem. In early theories about high narcissism it was already claimed that it could be considered as a form of defensive maintenance of self-esteem (Reich, 1960).

The present research focuses on the continuous personality variable of narcissism rather than on the narcissistic personality disorder. We use the term "narcissism" in reference to a nonclinical sample lying on a continuum based on the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). According to clinical and nonclinical definitions, narcissism does not only include an extremely positive but also a somewhat fragile self-view. Since this component is not sufficiently covered by the NPI (Raskin & Terry, 1988), we decided to

include a measure of self-concept clarity (Campbell et al., 1996) as an additional predictor of negative emotions and aggression after failure.

Narcissism, Self-Concept Clarity, Negative Emotions, and Aggression

Recent studies confirm the notion of defensive and sometimes extremely emotional reactions of narcissistic individuals. Raskin, Novacek, and Hogan (1991) and John and Robins (1994) found that narcissism is positively related to grandiose self-enhancement. After measuring narcissism, Rhodewalt, Madrian, and Cheney (1998) collected data concerning daily experiences and emotional reactivity on 5 consecutive days and reported a greater positive mood variability, mood intensity, and self-esteem instability for highly narcissistic individuals. Rhodewalt and Morf (1998) received similar results in a laboratory setting. Narcissistic participants revealed significantly more anger, anxiety, and self-esteem fluctuations after failure than did less narcissistic individuals, while high and low narcissists did not differ in their reactions to success. Rhodewalt and Morf (1998) concluded that narcissistic anger is a response to perceived threats to the grandiose self-image of high narcissists. The negative emotional reaction of highly narcissistic individuals after failure might influence their interpersonal behavior and result in aggressive or other antisocial acts against others. Kernis and Sun (1994) found some evidence for this assumption. In their study, narcissists rated the provider of negative feedback as less competent than those who provided positive feedback. Thus, by derogating the source of negative feedback, narcissists refused to blame themselves for failure.

However, one could argue that not all individuals with a very positive self-view are prone to aggressive behavior. If a person is really convinced about his or her qualities, negative feedback would not pose a threat. However, in spite of their inflated self-esteem, some people may experience insecurities or temporal and situational instabilities in self-esteem. Campbell (1990) argued that the level of self-esteem as an evaluative component of the self-concept is relatively independent from a structural aspect of the self-concept, namely the extent to which it is clearly defined, internally consistent, and stable. These three aspects were summed up in the term *self-concept clarity*, which was related to different personality traits and which indeed explained variance independently from the contents of

self-concept (Campbell, et al., 1996). Self-concept clarity seems to be a relatively stable trait that can be captured by means of self-report. It can therefore be expected to have an independent influence on a person's reactions following positive or negative feedback and could, in conjunction with the level of self-esteem, be an important predictor of anger and aggression. Indeed, the temporal stability of self-esteem has already been found to be an important moderating variable between self-esteem and anger and hostility. Kernis, Grannemann, and Barclay (1989) found that people with high but unstable self-esteem reported more anger and hostility than people with high and stable self-esteem, who actually revealed the lowest level of anger and hostility. Our studies were conducted to show that this is also true for narcissistic individuals with low self-concept clarity. Thus, in combination with narcissism, self-concept clarity could be a meaningful predictor of aggressive behavior following negative feedback.

The theoretical assumptions and empirical findings described above can be summarized by a theoretical model proposed by Baumeister, Smart, and Boden (1996). According to this model, unstable inflated self-esteem is considered as a predisposition for aggressive reactions after ego-threat. Negative feedback is assumed to create a discrepancy between internal (positive) and external (negative) appraisals considered as ego-threat. An acceptance of the negative evaluation should lead to a temporarily lowered self-appraisal and negative emotions toward the self (e.g., depression), whereas a rejection of the negative feedback would result in a maintenance of the formerly high self-appraisal. In this case, the arising negative emotions could lead to anger, aggression, or even violence to reestablish the positive self-view and to derogate and punish the source of the ego-threat. Empirical support for the model was found in two studies conducted by Bushman and Baumeister (1998). High narcissism predicted participants' aggression following ego-threat since narcissists receiving failure feedback administered the highest and longest blasts of noise to an alleged second participant in a reaction time task.

Since there have been no other experimental studies investigating the model proposed by Baumeister, et al., (1996), it would be desirable to replicate the study of Bushman and Baumeister (1998) with different methods. Also, it might be interesting to explore the interactive effects of narcissism (as a measure of an inflated self-view), self-concept clarity (as an additional measure of a fragile self-view), and performance feedback on aggression. Since Bushman and Baumeister

(1998) found evidence for aggression following ego-threat, it might also be interesting to investigate the postulated negative emotions that are assumed to arise after an ego-threatening event.

The Present Research

Two studies, with different methods, were conducted to replicate the findings of Bushman and Baumeister (1998) and to extend their test of the theoretical model (Baumeister, et al., 1996) by adding self-concept clarity, anger, and depression as additional variables. Our aim was to investigate the relation between narcissism, self-concept clarity, and aggression after an ego-threatening event. However, instead of measuring physical aggression, we employed a measure of verbal aggression as the outcome variable. An additional aspect was the investigation of anger and depression as negative emotions that are assumed to arise after failure. In order to enlighten the process that leads to aggression after failure, we also investigated the mediating effects of negative emotions.

Negative Emotions

As mentioned above, there exists some empirical support for differences between individuals who are high and low in narcissism concerning their emotional reactions to success and failure (Rhodewalt & Morf, 1998; Rhodewalt, et al., 1998), and for the contention that high narcissists tend to react with more anger than low narcissists. Papps and O'Carroll (1998) provided some evidence for a relation between narcissism and anger. They could show that individuals with high levels of narcissism experienced and expressed more anger in a self-report measure than less narcissistic individuals. Our studies were designed to confirm these findings in a laboratory setting.

Together with the results of Bushman and Baumeister (1998) and the findings described above, one could derive the hypothesis that high narcissists with low self-concept clarity can be expected to feel angry after failure. As overt anger is usually highly correlated with physical aggression (see e.g., Buss & Perry, 1992), it can be expected to arise together with an aggressive reaction after ego-threat. Considering the fact that the Baumeister, et al., (1996) model also postulates a positive relation between self-directed negative emotions and nonaggressive behavior, and that low narcissists do not seem to be prone to anger and

aggression after failure, we formulate another assumption for people low in narcissism. If it is true that low narcissists direct their negative emotions against themselves instead of expressing overt anger, they should report depressive feelings after failure, especially if their negative self-view is stable. One reason for the differential effects of persons high and low in narcissism and high and low in self-concept clarity following performance feedback might be the mediating role of negative emotions.

STUDY 1

The aim of the first study was to examine the relation between narcissism, anger, and aggression following ego-threat in order to replicate the results of Bushman and Baumeister (1998) with different measures of aggression, with self-concept clarity as an additional predictor, and anger as an additional outcome variable.

We expected narcissism and self-concept clarity to moderate the relation between performance feedback and anger and aggression. Based on the theoretical model (Baumeister, et al., 1996) and the findings of Bushman and Baumeister (1998), we assumed that highly narcissistic individuals with low self-concept clarity would tend to react more angrily and aggressively after failure than less narcissistic individuals with high self-concept clarity. Thus, we expected the most negative evaluation of the experiment and the experimenter and the most anger for participants high in narcissism and low in self-concept clarity after failure. Accordingly, we expected the most positive evaluation of the experiment and the experimenter and the lowest level of anger for participants low in narcissism and high in self-concept clarity. Highly narcissistic people with high self-concept clarity should not feel threatened by negative feedback because they are absolutely convinced about their grandiosity. Also, participants scoring low in narcissism and low in self-concept clarity were not expected to react with anger and aggression after failure. Since their self-view is already negative, a success could raise their self-esteem but a failure could not lower it (see Baumeister, 1997). Thus, highly narcissistic individuals with high self-concept clarity and less narcissistic individuals with low self-concept clarity were expected to show a moderate level of anger and aggression after failure. Since our theoretical assumptions were based on the interactive effects of narcissism, self-concept clarity, and

performance-feedback on negative emotions and aggression, no hypotheses were formulated for main effects or two-way interactions between the predictors.

METHOD

Participants

Twenty-two male and 58 female undergraduate psychology students of the University of Giessen participated in this study in partial fulfillment of a departmental requirement. Their mean age was 23.40 ($SD = 5.12$).

Procedure and Materials

Participants were told that the researchers were investigating the relation between personality traits and studying skills. Participants completed the scales measuring narcissism and self-concept clarity one week before the experimental session took place. In all experimental sessions, two students participated in the experiment at the same time. One of the participants was randomly assigned to the success condition, and the other participant was assigned to the failure condition. All instructions about the alleged aim of the study, the intelligence test, and the performance feedback were presented on a computer screen. While working on the intelligence test, participants received performance feedback after each item, and a general evaluation of their performance at the end. As a manipulation check, the participants had to judge their own performance before they received the general performance feedback. After assessing their level of anger, the participants were asked to evaluate the experiment and the experimenter, and were then carefully debriefed and dismissed.

Narcissism and Self-Concept Clarity

Narcissism was measured with the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which contained 40 items that had to be answered on a 5-point scale (1 = *not at all* to 5 = *very much*). We changed the original dichotomous response format into a 5-point scale to adopt the response format of the NPI to the other trait measures administered in the present study. Sample items from the scale are “If I ruled the world it would be a much better place,” and “I am more capable than other people.” The average score of narcissism in the present sample was $M = 2.93$ ($SD = .53$, Cronbach’s $\alpha = .93$).

As an additional measure of the fragility of the self-view, a questionnaire measuring self-concept clarity was used (SCC scale; Campbell, et al., 1996). The SCC scale ($M = 3.39$, $SD = .79$, Cronbach's alpha = .73) consists of 12 items on a 5-point scale (1 = *not at all*, 5 = *very much*). Sample items from the scale are "My beliefs about myself often conflict with one another," and "On one day I might have one opinion of myself, and on another day I might have a different opinion."

The correlation between narcissism and self-concept clarity was very low ($r(78) = .18$, $p = .114$, *ns.*), indicating a very small overlap between the two variables. It can therefore be assumed that these variables make independent contributions to the prediction of anger and aggression after performance feedback.

Experimental Manipulation of Performance Feedback

Using a BASIC program (Langens, 1998), participants were instructed by the computer to answer items on an intelligence test. All instructions, items, a performance feedback after each item, and an overall feedback after the completion of the intelligence test were administered by computer. Depending on the performance feedback, participants were either told that their test results were among the best or among the worst 20% of all students. Items were taken from a standardized and widely used German intelligence test, the *Mannheimer Intelligenztest* (Conrad et al., 1971). The tasks included mathematical and linguistic skills and reasoning. Before starting the test, participants were informed about its capacity to assess studying skills and academic performance. They were also told that intelligence is defined as "achievement in a limited time period." This information was essential for the manipulation of performance feedback, because participants in the failure condition had to solve their tasks in a very short time, whereas the time provided for participants in the success condition was sufficient.

The intelligence test as an experimental manipulation of ego-threat has been examined in a preliminary study ($N = 30$) in which participants' feelings were assessed on a 9-point scale after receiving either success or failure feedback. The results revealed that participants in the failure condition assessed their performance significantly worse ($M = 2.07$, $SD = .70$ vs. $M = 6.27$, $SD = .88$, $t(28) = 14.40$, $p < .001$) and reported a much higher threat to their self-esteem ($M = 6.60$, $SD = 1.40$ vs. $M = 1.33$, $SD = .49$, $t(28) = 13.72$, $p < .001$) than participants in the success condition.

Anger. Anger was measured with an adjective list employed in a preliminary study ($N = 27$) in which a standardized and widely used German aggression questionnaire (FAF; Hampel & Selg, 1975) was correlated with a pool of 40 adjectives describing angry, aggressive, and hostile feelings. Based on

correlation coefficients ($r \geq .50$), 14 adjectives correlating highly with scales measuring spontaneous and reactive aggression were chosen for further investigations. The adjectives had to be answered at the computer on a dichotomous scale by indicating: "At the moment I feel..." *aggressive, resentful, annoyed, irritated, domineering, unscrupulous, imperious, hot-tempered, provoked, sadistic, unrestrained, angry, furious, hostile*. The average score for anger in this sample was .35 ($SD = .57$) in the failure condition and .34 ($SD = .74$) in the success condition (Cronbach's alpha = .68).

Aggression. We chose a classic and widely used method to measure verbal aggression, namely the evaluation of experiment and experimenter (see e.g., Berkowitz, 1970; Zillmann & Cantor, 1976; O'Neal & Taylor, 1989; Twenge, Baumeister, Tice, & Stucke, 2001). Each participant judged the experiment by answering the items "The intelligence test is an adequate measure for studying skills," "In general, I liked the experiment," "I think this is a good experiment," and "Experiments like this should be conducted in the future," and then judged the experimenter by answering the items "The experimenter seemed to be capable and competent," and "The experimenter was friendly and likable" on a 5-point scale. Low scores indicated a very negative evaluation and high scores a very positive evaluation. Prior to the evaluation, participants were told that their judgment would influence the future funding of the scientific project and the future employment of the experimenter in our department. A negative judgment could therefore be expected to have negative or even harmful consequences, which corresponds to a widely accepted definition of aggression by Baron and Richardson (1994, pp. 7): "Aggression is any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment." To ensure anonymity, the participants put their evaluation form in an envelope and were then asked to bring it to the secretary of our department. The average score was 2.87 ($SD = 1.12$, Cronbach's alpha = .83) for the evaluation of the experiment, and 3.65 ($SD = .79$, Cronbach's alpha = .59) for the evaluation of the experimenter.

RESULTS

Manipulation Check

The participants were asked to assess their own performance after the test on a 5-point scale (1 = *my performance was very bad*, 5 = *my performance was very good*). Participants in the failure condition judged their performance significantly lower ($M = 2.29$, $SD = .81$) than participants in the success condition ($M = 3.45$, $SD = .69$, $t(78) = 6.91$, $p < .001$).

Main Analyses

Prior to data analysis, all items measuring narcissism and self-concept clarity were each summed to one variable, so that a high score indicated a high level of narcissism or self-concept clarity. Accordingly, one score was computed for anger, one for the evaluation of the experiment, and one for the evaluation of the experimenter.

Anger, the evaluation of the experiment, and the evaluation of the experimenter served as outcome variables and were analyzed by hierarchical regression analyses with narcissism (continuous), self-concept clarity (continuous), and performance feedback (dichotomous: success vs. failure) as predictors. In a first step, main effects for the predictors were entered into the regression equation; the second step considered two-way interactions; and the third step, the three-way interaction between the predictors. Following Jaccard, Turrisi, and Wan (1990), all predictors and dependent measures were converted to z scores before computing the interaction terms to facilitate the interpretation of regression coefficients and to reduce multicollinearity (Cohen & Cohen, 1983). According to recommendations proposed by Jaccard et al., (1990), significant main effects and two-way interactions were not interpreted in the presence of a significant three-way interaction. To illustrate differential effects for participants high and low in narcissism and self-concept clarity in the two experimental conditions, we computed anger and aggression scores at values 1 standard deviation above or below the mean of each predictor according to a procedure proposed by Cohen and Cohen (1983). The predicted values computed for all outcome variables employed in Study 1 are summarized in Table 1.

Prediction of Anger Following Performance Feedback

For anger, we found the expected significant three-way interaction between all predictors ($b = .49$, $SE = .22$, $p < .05$). The explained variance of the three-way interaction, including all main effects and two-way interactions, was 19%. As can be seen in Table 1, the most anger was shown by participants scoring high in narcissism and low in self-concept clarity in the failure condition, while the lowest level of anger was found for participants scoring low in narcissism and high in self-concept clarity in the success condition. As expected, high narcissists with high self-concept clarity and low narcissists with low

Table 1
 Predicted Values From Hierarchical Regression Analyses of
 Performance Feedback, Narcissism, and Self-Concept Clarity on Anger
 and Verbal Aggression (Study 1)

Dependent Measure	Self-Concept Clarity			
	Low		High	
	Success	Failure	Success	Failure
Anger				
Low Narcissism	.28	-.07	-.62	.13
High Narcissism	-.32	.63	.54	-.17
Evaluation Experiment				
Low Narcissism	-.20	-.70	1.72	-.10
High Narcissism	-.04	-1.00	.52	-.28
Evaluation Experimenter				
Low Narcissism	.37	-.16	.05	-.16
High Narcissism	.23	-.30	.07	-.10

Note. All predicted values are computed according to a procedure recommended by Cohen and Cohen (1983). A low value for the evaluation of experiment and experimenter indicates a negative evaluation.

self-concept clarity revealed medium levels of anger after failure. Thus, narcissism and self-concept clarity moderated the relation between performance feedback and anger in the predicted way.

Prediction of Aggression Following Performance Feedback

With performance feedback, narcissism, and self-concept clarity as predictors and the evaluation of the experiment as outcome variable, the regression analyses yielded a significant interaction between the three predictors, which confirmed our expectations ($b = -.37$, $SE = .18$, $p < .05$). The explained variance of the three-way interaction, including all main effects and two-way interactions, was 45%. As can be seen in Table 1, participants in the failure condition scoring high in narcissism and low in self-concept clarity judged the experiment most negatively, and participants in the success condition scoring low in narcissism and high in self-concept clarity judged the experiment most positively. Also, the levels of aggression of people scoring high in narcissism and self-concept clarity and people scoring low in narcissism and self-concept clarity lay in between

these two groups. They evaluated the experiment negatively after failure, but not as negatively as highly narcissistic individuals with low self-concept clarity. Contrary to our expectations, no significant results were obtained when the evaluation of the experimenter served as outcome variable. Narcissism and self-concept clarity obviously moderated the relation between performance feedback and the evaluation of the experiment but not the experimenter.

DISCUSSION OF STUDY 1

The results confirmed the assumption that narcissistic individuals with low self-concept clarity experience the most anger after failure. As our adjective list was supposed to measure overt and explicit anger, our findings seem to confirm the notion that highly narcissistic individuals with low self-concept clarity are prone to negative emotions that are directed outwards, against the source of the ego-threat. In contrast to this, one aspect of the second study was whether less narcissistic individuals tended to report somewhat self-directed negative emotions after failure.

Our expectations concerning verbal aggression after failure were partially confirmed. As assumed, highly narcissistic individuals with low self-concept clarity in the failure condition gave the most negative evaluation of the experiment, while the experiment was evaluated most positively by less narcissistic individuals with high self-concept clarity in the success condition. This corresponds to the theoretical predictions derived from the Baumeister, et al., (1996) model, which proposes a more aggressive reaction after ego-threat for individuals with an inflated, unstable self-view, and to the finding that narcissists are prone to physical aggression after failure (Bushman & Baumeister, 1998). As highly narcissistic individuals feel more threatened by negative feedback, they react aggressively to reestablish their extremely positive self-view and to derogate the source of the ego-threat. This seems to be even more the case for narcissists with low self-concept clarity, because persons with an extremely positive self-view, which is unstable or insecure at the same time, are especially sensitive to ego-threats. Compared to this group, the anger and aggression of narcissistic people with high self-concept clarity and the anger and aggression of less narcissistic people with low self-concept clarity after failure was much lower. This supports the assumptions derived from Baumeister (1997).

In contrast to the negative evaluation of the experiment, the nonsignificant result for the evaluation of the experimenter was unexpected. But a closer look at the experimental procedure might explain this finding in a plausible way. In the theoretical model of Baumeister et al., (1996) it is assumed that the aggressive reaction after failure is always directed against the source of the threat. Considering the fact that our experiment was mainly directed by a computer and the experimenter acted in the background, it is not surprising that the experiment in general—but not the experimenter—was seen as the source of the ego-threat and was therefore judged negatively after failure. As narcissistic persons tend to attribute failure to external and not internal sources (Rhodewalt & Morf, 1998), failure may have been attributed to the task difficulty, for which the experimenter was not responsible. In order to receive a negative evaluation of the experimenter, it would be necessary to administer negative performance feedback originating directly from the experimenter and not the computer. Under these circumstances, narcissists would feel provoked and threatened by the experimenter and therefore would react aggressively against him/her. We conducted a second study to test this possible explanation of our results.

STUDY 2

The second study was conducted to replicate the findings of Study 1, employing a different measure for anger. An additional assumption derived from the Baumeister et al. (1996) model was that less narcissistic individuals with high self-concept clarity would report self-directed negative emotions after failure. Thus, we included a measure for feelings of depression in the second study. Another point of interest derived from the first study was the question of whether aggression after failure is always directed toward the source of the threat. In the discussion of Study 1, we argued that the experimenter was not considered as the source of the threat because he acted in the background and the negative feedback was administered by a computer program. In order to find further evidence for this line of reasoning, we changed the procedure of the second study. In addition to the negative feedback administered by computer, the experimenter gave negative feedback on an alleged creativity test.

Similar to the first study, it was hypothesized that participants scoring high in narcissism and low in self-concept clarity would react

with more anger and aggression after failure, while participants scoring low in narcissism and high in self-concept clarity would show the lowest level of anger and aggression. Again, the anger and aggression scores of narcissistic individuals with high self-concept clarity and less narcissistic individuals with low self-concept clarity were expected to lie between these two groups. Additionally, people scoring low in narcissism and high in self-concept clarity were expected to report the most feelings of depression after failure. As the negative feedback was administered by computer and also by the experimenter, we expected a negative evaluation of the experiment *and* the experimenter.

To further investigate whether the relations between narcissism, self-concept clarity, performance feedback, and aggression could be mediated by anger and depression, we employed mediational analyses with anger and depression as covariates. In doing so, we adopted Baron and Kenny's (1986) proposition that a) the predictors should account for variations in the mediator, b) a mediator should account for variations in the dependent variable, and c) a previously significant relation between the independent and dependent variables is no longer significant when controlling for the mediator. Thus, if the relation between narcissism, self-concept clarity, and aggression after performance feedback were mediated by anger and depression, the following conditions should be fulfilled: a) Narcissism, self-concept clarity, and performance feedback should predict anger and depression; b) anger and depression should predict aggression; and c) a previously significant relation between narcissism, self-concept clarity, performance feedback, and aggression should no longer be significant when controlling for anger and depression.

METHOD

Participants

Participants were 10 male and 70 female undergraduate psychology students from the University of Marburg who received credit hours in exchange for their voluntary participation. The average age of the participants was $M = 21.91$ ($SD = 4.73$).

Procedure and Materials

First, participants completed the questionnaires measuring narcissism and self-concept clarity, and then started the computer program to complete the

intelligence test. After receiving their general test result, participants assessed their emotions by answering the adjective list measuring anger and depression. The participants were then asked to do an alleged creativity test for which they received positive or negative feedback from the experimenter. Finally, they were given a questionnaire to evaluate the experiment and the experimenter. They were then fully debriefed and thanked for their participation.

Narcissism and Self-Concept Clarity

Again, narcissism ($M = 2.85$, $SD = .44$, Cronbach's alpha = .89) and self-concept clarity ($M = 3.34$, $SD = .67$, Cronbach's alpha = .83.) were measured with the same questionnaires as in Study 1. The correlation between narcissism and self-concept clarity was even lower than in the first study ($r(78) = .03$, $p = .777$, *ns.*).

Experimental Manipulation of Performance Feedback

The experimental manipulation was administered via the same computerized intelligence test we employed in the first study. Again, participants received performance feedback following each task and a general result at the end of the test. In order to vary the source of the threat, participants also received personal feedback from the experimenter. As an alleged measure of creativity, the participants were given a picture depicting two young males in a conversation and were asked to write a story about the persons in the picture. The experimenter then pretended to evaluate the story with an evaluation form on the dimensions of *writing style*, *emotional intelligence*, *originality*, *tension*, *organization* and *overall quality*. The dimensions were judged on a 5-point scale ranging from 1 = *very bad* to 5 = *very good*. Participants in the failure condition received an average score of 2, and participants in the success condition received an average score of 4.

Anger and Depression

Anger and depression were measured by the shortened "Profile of Mood States" developed by Shacham (1983). The measure consists of 8 adjectives for anger ($M = 2.98$, $SD = 2.31$, Cronbach's alpha = .96), and 8 adjectives for depression ($M = 3.04$, $SD = 2.22$, Cronbach's alpha = .96) answered on a 9-point scale (1 = *not at all* to 9 = *very much*). The adjectives measuring anger were *angry*, *peevish*, *groveling*, *annoyed*, *resentful*, *bitter*, *furiously*, *irritable*. Depression was assessed by the adjectives *unhappy*, *sad*, *blue*, *hopeless*, *discouraged*, *miserable*, *helpless*, and *worthless*.

Aggression

Again, evaluations of experiment and experimenter were chosen as measures of verbal aggression. Whereas a 5-point scale was used in Experiment 1, a 9-point scale was employed in this study in the hope of detecting even small differences between the two sources of threat. Again, a low score indicated a negative evaluation and a high score indicated a positive evaluation. Since the experimenter conducted the present study within the scope of an internship, we added the item "The experimenter did a good job within his internship" to stress the fact that a negative evaluation would have negative consequences for the experimenter. Thus, the evaluation form consisted of 3 items to judge the experiment ($M = 5.35$, $SD = 2.21$, Cronbach's alpha = .88) and 3 items to judge the experimenter ($M = 6.53$, $SD = 2.38$, Cronbach's alpha = .96). In the instructions on the form it was stressed that the evaluation would influence the future funding of the scientific project and the report card of the experimenter. Comparable to the first study, the participants put their evaluation form in an envelope, which they were asked to deliver to the secretary of the department.

RESULTS

Manipulation Check

Participants were asked to judge their own performance on the intelligence test before receiving their general test result. Our manipulation was very successful, as participants judged their own performance significantly better in the success condition ($M = 3.60$, $SD = .74$) than in the failure condition ($M = 1.93$, $SD = .66$), $t(78) = 10.68$, $p < .001$).

Main Analysis Strategy

Prior to data analyses, we computed the same variables as in the first study and employed the same approach of hierarchical regression analyses in order to investigate self-concept clarity (continuous), narcissism (continuous), and performance feedback (success vs. failure) as predictors for the outcome variables of anger, depression, and evaluation of experiment and experimenter. To further explore the nature of the results, we calculated predicted values of all outcome variables, using regression slopes from the final regression equation, at values 1 standard deviation above or below the mean of the predictors (Cohen & Cohen, 1983). The computed predicted values are depicted in Table 2.

Table 2
 Predicted Values From Hierarchical Regression Analyses of
 Performance Feedback, Narcissism, and Self-Concept Clarity on Anger,
 Depression, and Verbal Aggression (Study 2)

Dependent Measure	Self-Concept Clarity			
	Low		High	
	Success	Failure	Success	Failure
Anger				
Low Narcissism	-.29	.30	-.57	-.34
High Narcissism	-.25	1.16	-.53	.20
Depression				
Low Narcissism	.27	.57	-1.77	1.29
High Narcissism	.43	.21	-.69	.33
Evaluation Experiment				
Low Narcissism	.20	-.63	1.02	-.75
High Narcissism	.66	-.95	.92	-.43
Evaluation Experimenter				
Low Narcissism	.38	-.30	.86	-.14
High Narcissism	.98	-1.28	.30	-.40

Note. All predicted values are computed according to a procedure recommended by Cohen and Cohen (1983). A low value for the evaluation of experiment and experimenter indicates a negative evaluation.

Narcissism and Self-Concept Clarity as Predictors for Anger and Depression Following Performance Feedback

Our hypothesis concerning anger was partially confirmed by significant main effects for performance feedback ($b = -.74$, $SE = .17$, $p < .001$), narcissism ($b = .35$, $SE = .08$, $p < .001$), and self-concept clarity ($b = -.40$, $SE = .08$, $p < .001$), but not by the expected three-way interaction between all predictors. The main effects explained 48% of the variance. The predicted values (Table 2) indicate that anger was higher after failure than after success, higher for high than for low narcissists, and higher for people with low self-concept clarity than for people with high self-concept clarity. Though the three-way interaction was nonsignificant and the predicted values should therefore be interpreted with caution, Table 2 indicates that the highest anger score was found for people in the failure condition who were high in narcissism and low in self-concept clarity, while the lowest anger score was detected for people low in narcissism and high

in self-concept clarity in the success condition. Again, the anger scores for highly narcissistic individuals with high self-concept clarity and for less narcissistic individuals with low self-concept clarity were between these two groups.

With depression as an outcome variable, the expected three-way interaction between all predictors was found ($b = .38, SE = .15, p < .05$). The three-way interaction including all main effects and two-way interactions explained 68% of the variance. Predicted values revealed that less narcissistic participants with high self-concept clarity reported the most depressive feelings and highly narcissistic participants with low self-concept clarity reported the least depressive feelings after failure (Table 2).

Narcissism and Self-Concept Clarity as Predictors for Aggression Following Performance Feedback

As expected, (marginally) significant results were found for both the evaluation of the experiment and the experimenter. The regression analyses, with the evaluation of the experiment as outcome variable, yielded a marginally significant three-way interaction between all predictors ($b = -.30, SE = .17, p < .10$). The three-way interaction, including all main effects and two-way interactions, explained 58% of the variance. This three-way interaction indicated that the experiment was judged most negatively by highly narcissistic participants with low self-concept clarity after failure, while the most positive evaluation was found for less narcissistic participants with high self-concept clarity after success (see Table 2).

The manipulated performance feedback administered by the experimenter led to significant results for the evaluation of the experimenter as outcome variable. The theoretically expected three-way interaction between all predictors was highly significant ($b = -.47, SE = .13, p < .001$). The three-way interaction, including all main effects and two-way interactions, explained 73% of the variance. As can be derived from the predicted values summarized in Table 2, this three-way interaction completely confirmed our theoretical assumptions, as highly narcissistic participants with low self-concept clarity in the failure condition evaluated the experimenter more negatively than participants low in narcissism and high in self-concept clarity in the success condition.

The Mediating Role of Anger and Depression

To further investigate the mediating effects of negative emotions on the relation between narcissism, self-concept clarity, performance feedback, and aggression, a second group of analyses was conducted. Since the main analyses had already shown a significant relation between narcissism, self-concept clarity, anger, and depression, the next step, according to Baron and Kenny (1986), was to conduct hierarchical regressions with anger and depression as predictors and aggression (the evaluation of the experiment and the experimenter) as outcome variables. The results revealed significant relations between anger and the evaluation of the experiment ($b = -.37$, $SE = .11$, $p < .001$), between anger and the evaluation of the experimenter ($b = -.60$, $SE = .09$, $p < .001$), and between depression and the evaluation of the experiment ($b = -.35$, $SE = .11$, $p < .01$). Following Baron and Kenny (1986), the last step of investigating the mediating effects of anger and depression was examined by conducting hierarchical regression analyses with narcissism, self-concept clarity, and performance feedback as predictors, aggression as an outcome variable, and anger and depression as covariates. The results were comparable to the analyses without anger and depression as covariates. Thus, the first and the second recommendation of Baron and Kenny (1986) were fulfilled, but not the third one. It can therefore be concluded that anger and depression can predict verbal aggression and that anger and depression can be predicted by narcissism, self-concept clarity, and performance feedback, but they do not mediate the relation between narcissism, self-concept clarity, performance feedback, and verbal aggression. The results of Study 2 are summarized in Figure 1.

DISCUSSION OF STUDY 2

Our main hypothesis concerning the relation between narcissism, self-concept clarity, anger, and aggression was completely confirmed. It can be concluded that, in accordance with the theoretical model of Baumeister et al. (1996) and previous experimental studies (Bushman & Baumeister, 1998), our results offer additional evidence for the assumption that people with an inflated, unstable self-view are prone to angry and aggressive reactions after an ego-threatening event. Narcissists seem inordinately sensitive to criticism and are at the

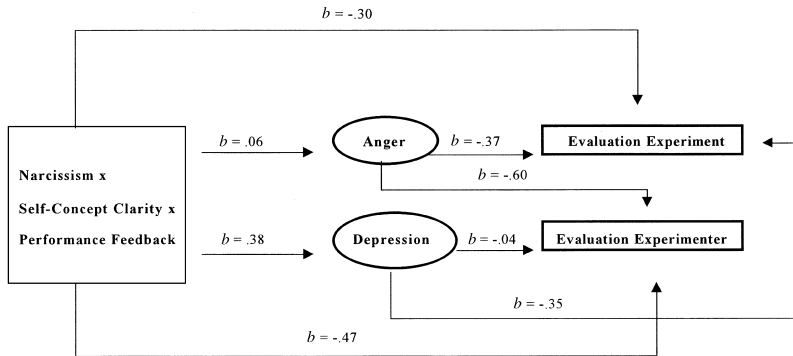


Figure 1

Standardized b values of mediation analyses according to Baron and Kenny (1986) in Study 2.

same time prone to react in aggressive ways. As shown in our studies, this might be especially true for narcissists with low self-concept clarity because they seem to be most vulnerable when experiencing an ego-threat. Both studies have shown that aggressive behavior is not related to narcissism alone. The most aggressive behavior was found for narcissists who are simultaneously low in self-concept clarity. Thus, narcissism and self-concept clarity can both be seen as important predictors for aggression following ego-threat, and our findings are an important extension to the findings of Bushman and Baumeister (1998). Both variables should be considered in future investigations.

In the present studies, we also investigated negative emotions following ego-threat that are postulated as energizers for later aggression or withdrawal (Baumeister, et al., 1996). In accordance with the Baumeister, et al. (1996) model, we found that people high in narcissism and those low in self-concept clarity tend to show anger as a reaction to negative feedback, while low narcissists with high self-concept clarity report feelings of depression. We found higher anger for narcissists with low self-concept clarity in both studies and with two different measures of anger, and together with previous empirical findings (Rhodewalt & Morf, 1998; Papps & O'Carroll, 1998) concerning narcissism and anger, these results can be regarded as well-founded. Our results for anger and depression confirm the assumption that all people experience negative emotions after failure

but that these emotions differ according to one's level of narcissism and self-concept clarity.

The mediation analyses revealed significant relations between anger and verbal aggression and between depression and verbal aggression, but no change of the previously found relation between narcissism, self-concept clarity, performance feedback, and verbal aggression emerged when controlling for anger and depression. Thus, the investigation of negative emotions in addition to aggressive behavior clarified the process of participants' reactions following performance feedback, but the negative emotions did not account for later aggression.

Another important finding was that the aggressive reaction was always directed against the perceived source of the ego-threat. In the first study, most of the experiment was directed by computer, and the participants did not receive personal performance feedback from the experimenter. This procedure resulted in a negative evaluation of the experiment but not of the experimenter. In the second study, we found that the experimenter was seen as the source of the ego-threat when he directly gave negative feedback. As a consequence, he was evaluated negatively by narcissists with low self-concept clarity. Since the participants knew that a negative evaluation would have harmful consequences, one can indeed consider this reaction an aggressive behavior. According to the Baumeister et al. (1996) model, this kind of aggressive behavior is directed against the source of ego-threat in order to apply punishment and to re-establish the extremely high self-esteem by demonstrating one's superiority. This might explain why the evaluation of the experimenter was even more negative than the evaluation of the experiment because a person is possibly perceived as a bigger threat and evokes more aggressive feelings than a computer. Narcissists might consider a person a better target for aggressive behavior and for a demonstration of their superiority. Also, there was one important difference between the two forms of performance feedback that might have contributed to the stronger aggressive reaction against the experimenter. While the computer-directed feedback could be considered as quite objective, the experimenter's evaluation of the participants' creativity can be seen as rather subjective, or even arbitrary and unfounded. Based on findings of Burnstein and Worchel (1962), who found that arbitrary frustration evokes stronger aggression, one could assume that the feedback of the experimenter was seen as less justified than the feedback administered

by computer and therefore caused more aggression. But in spite of the somewhat stronger reaction to the feedback of the experimenter in the second study, both studies provided evidence for the assumption that the most negative evaluation of experiment and experimenter was always found for participants scoring high in narcissism and low in self-concept clarity and therefore supported our main hypothesis.

CONCLUSION

Together with the comprehensive review of empirical findings presented by Baumeister, et al. (1996), and the experimentally demonstrated relation between high narcissism and physical aggression after failure (Bushman & Baumeister, 1998), our findings can be seen as additional evidence for the notion that individuals with a very positive but unstable and insecure self-view are especially vulnerable to ego-threats. In contrast to people with a stable and somewhat neutral, or negative, self-view, who seem to direct their negative feelings toward themselves, they tend to show defensive reactions and try to re-establish their positive self-image by derogating the source of the ego-threat. Our studies have shown that not only narcissism but also self-concept clarity can be considered as an important moderator of the relation between ego-threat and negative emotions and aggression. Taken together, we could find different levels of aggression and different kinds of negative emotions for people scoring high in narcissism and low in self-concept clarity and people scoring low in narcissism and high in self-concept clarity.

Based on the present research it would be one interesting aspect of future studies to apply these findings to different contexts outside the laboratory. Stucke (2001) has already found significant relations between narcissism, self-concept clarity, and aggressive driving behavior, but other applied contexts should be investigated. Secondly, our studies and the empirical findings of Bushman and Baumeister (1998) are based on an ego-threatening feedback concerning participants' intellectual abilities. It is desirable to replicate these findings for angry and aggressive reactions following social rejection or exclusion. Recent studies of Twenge, et al. (in press) have already demonstrated a significant relation between social rejection and antisocial behavior, but future studies should examine whether these findings are moderated by narcissism and self-concept clarity.

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