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The Evil Queen's dilemma: Linking narcissistic admiration and rivalry to benign and malicious envy

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#### Author Note

Jens Lange and Jan Crusius contributed equally to this research.

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### Abstract

It is widely assumed that narcissists are envious. Nevertheless, evidence supporting this claim has remained elusive. In five studies (combined  $N = 1225$ ), we disentangle how grandiose narcissism predicts divergent envious inclinations. Specific facets of narcissism and forms of envy shared the same underlying motivational orientations (Study 1) and distinctively related to each other (Studies 1 to 5) via differences in emotional appraisal (Study 4). Moreover, envy was linked to opposing social consequences of different narcissism facets (Study 5).

Specifically, hope for success related to narcissistic admiration, predicting benign envy, which entails the motivation to improve performance, translating into the ascription of social potency by the self and others. In contrast, fear of failure related to narcissistic rivalry, predicting malicious envy, which entails hostility, translating into the ascription of a proneness for social conflict by others. These results converged with envy measured as a trait (Studies 1 and 5) or state in recall tasks (Studies 2 and 4) and as response to an upward standard in the situation (Study 3). The findings provide important insights into narcissists' emotional complexities, integrate prior isolated and conflicting evidence, and open up new avenues for research on narcissism and envy.

*Keywords:* grandiose narcissism; narcissistic admiration and rivalry; benign and malicious envy; social comparison; social perception

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One day when the queen asked her mirror: *Mirror, mirror, on the wall, Who  
in this land is fairest of all?*

It answered: *You, my queen, are fair; it is true. But Snow-White is a  
thousand times fairer than you.*

The queen took fright and turned yellow and green with envy.

(Grimm & Grimm, 1857/2002)

Are narcissists envious? According to a widely held assumption, envy is a central element of narcissism. In fact, this notion has been endorsed so strongly that it even used to be one of the criteria to diagnose narcissistic personality disorder (American Psychiatric Association, 2000) and was incorporated in measures of grandiose narcissism (Raskin & Terry, 1988). However, the empirical link of envy and narcissism remains to be elusive. In fact, the few investigations of this question have concluded that narcissists might not suffer from the green-eyed monster. If anything, previously, only vulnerable and not grandiose narcissists have been found to be envious of others' qualities, achievements, and possessions (Gold, 1996; Krizan & Johar, 2012). Indeed, should not narcissists' grandiosity protect them from threatening upward comparisons (Neufeld & Johnson, in press)? Here, we show that narcissists are in fact highly prone to react with envy. Importantly, however, the relationship of narcissism and envy is more complex than previously assumed. To unravel it, it is necessary to take distinct motivational dynamics within both envy and narcissism into account.

Even though narcissists<sup>1</sup> share the conviction that they are superior to others, we contend that this belief does not inoculate them against upward social comparisons. In many situations, objective sources of information, such as exam results, promotion decisions, or truth-telling mirrors, may undeniably reveal one's inferiority relative to others. If high status is narcissists' central concern, any defect substantiated by comparisons with superior others should be a particularly strong elicitor of emotion and spur them to deal with their disadvantage. We posit that, despite the weakness such envious action may uncover, narcissists respond to situational inferiority with envy—the Evil Queen's dilemma.

The goal of the present research is to investigate whether narcissists are prone to feel envy and how this emotional process is connected to the social consequences of the narcissistic personality. We link the two facets of grandiose narcissism—narcissistic admiration and rivalry (Back et al., 2013)—to the two distinct forms of envy—benign and malicious envy (Lange & Crusius, 2015a; Van de Ven, Zeelenberg, & Pieters, 2009). Moreover, we investigate how these emotional links illuminate the paradox of narcissism, the enigmatic opposing effects of narcissism on perceived (un-)popularity.

### **Narcissistic Admiration and Rivalry**

Narcissists hold highly inflated, unrealistically positive, grandiose views of themselves (Gebauer, Sedikides, Verplanken, & Maio, 2012; Morf & Rhodewalt, 2001). This biased self-perception has a profound impact on narcissists' social behavior. Much of the recent interest in narcissism research has been fed by the paradoxical nature of these outcomes. On the one hand, narcissists are socially attractive (Back, Schmukle, & Egloff, 2010; Vazire, Naumann, Rentfrow, & Gosling, 2008) and seen as confident, intelligent, and competent by their peers (Back et al., 2013; Paulhus, 1998). As a consequence, narcissists have high mating success (Dufner, Rauthmann, Czarna, & Denissen, 2013, Grosz, Dufner, Back, & Denissen, 2015), are more often chosen as leaders of social groups (Brunell et al.,

2008), and have a higher probability to become famous (Dufner et al., 2015; Young & Pinsky, 2006). On the other hand, narcissists also show hostile behaviors (Bushman & Baumeister, 1998; Morf & Rhodewalt, 1993) leading others to see them as aggressive, less trustworthy, or bragging towards competitors (Back et al., 2013; Paulhus, 1998) which undermines their social relationships (Back et al., 2013; Campbell, Foster, & Finkel, 2002; Carlson & DesJardins, 2015; Leckelt, Küfner, Nestler, & Back, in press; Paulhus, 1998). The paradox culminates in the finding that narcissism can simultaneously contribute to being popular and unpopular at zero acquaintance (Back et al., 2013; Küfner, Nestler, & Back, 2013).

Back and colleagues (2013; Leckelt et al., in press) have recently developed the Narcissistic Admiration and Rivalry Concept (NARC) as a process model that accounts for these diverging behavioral and social outcomes. They posit that—at the trait level—these paradoxical effects are differentially connected to two narcissistic facets. According to their model, these facets are fed by distinct motivational dynamics determining the way in which narcissists pursue their goal of maintaining a grandiose self. The behavioral pattern of *narcissistic admiration* is driven by hope for greatness and success, causing a self-regulatory strategy of assertive self-enhancement. In line with this conceptualization, narcissistic admiration comprises feelings of grandiosity, striving for uniqueness, and perceived charmingness. As social interaction outcomes, these tendencies result in narcissists' social potency—desirable social consequences such as admiration and praise. The behavioral pattern of *narcissistic rivalry*, in contrast, is driven by fear of failure, prompting a self-regulatory strategy of antagonistic self-protection. In this vein, narcissistic rivalry is conceptualized as comprising striving for supremacy, active devaluation of others, as well as aggressiveness. As social interaction outcomes, these tendencies result in social conflict—negative social consequences such as perceived aggressiveness and unpopularity. In several studies, Back and colleagues (2013) developed a reliable and valid measure of the two facets. Their data indicates that narcissistic admiration and rivalry capture the diversity of narcissistic behavior

in a more comprehensive manner than narcissism as assessed by the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988).

Despite the importance of identifying the mechanisms underlying social effects of personality (Back, 2015; Back et al., 2011), the evidence about the processes driving the paradoxical effects of narcissism is still limited (see Leckelt et al., in press for initial findings). In line with previous researchers (e.g., Tracy & Robins, 2007), we argue that specific emotions may have much explanatory power in narcissistic reactions. Often, narcissists show more intense emotional responses than other people, as evidenced by a higher release of stress-related hormones (Cheng, Tracy, & Miller, 2013), as well as more intense anger to failure feedback (Rhodewalt & Morf, 1998) and to social exclusion (Twenge & Campbell, 2003). Some researchers have argued that many of these effects might be explained by an increased propensity of narcissists to be motivated by shame and hubristic pride (Tracy, Cheng, Robins, & Trzesniewski, 2009; Tracy & Robins, 2003, 2007). However, these emotions are predominantly related to only one side of the paradox of narcissism, its antisocial facet (Tracy et al., 2009; Tracy & Robins, 2007). If these processes do not match the multifaceted nature of narcissism, which other emotional processes might be linked to the diverse social outcomes of narcissism?

We argue that in order to answer this question it is fruitful to start with narcissists' greatest concern—their own superiority (e.g., Campbell & Miller, 2011). A high concern for superiority implies an increased propensity to compare the self to others as superiority can only be assessed relative to other people (Corcoran, Crusius, & Mussweiler, 2011). Several findings directly show that social comparisons are extremely important for narcissists. For example, narcissists' intrinsic motivation is boosted when their performance is determined in comparison to others than when their performance is self-referential (Morf, Weir, & Davidov, 2000). Furthermore, the NPI is correlated with a dispositional propensity to engage in social

comparisons (Bogart, Benotsch, & Pavlovic, 2004) and a chronic comparison mindset (Banscherus & Burgmer, 2015).

### **Narcissism and Envy**

Narcissists' greatest concern is superiority. Consequently, they tend to compare their personal standing to the level of others and their worst case should be when they are outperformed by another person. Indeed, narcissists react with stronger negative affect to upward comparison standards (Bogart et al., 2004). Thus, they should be in strong need for a functional response to manage this situation. A central emotional reaction to upward comparisons is envy. Even though envy is often regarded as a maladaptive emotion, recent theorizing and evidence has highlighted that envy serves important intrapersonal needs. Envy not only alerts people of their shortcomings relative to others, it also spurs them to deal with such disadvantages (Hill & Buss, 2008). Therefore, envy may be considered a social-functional response to increased status differences between the self and the envied person (Lange & Crusius, 2015b)

Recent evidence supports the view that envy occurs in two qualitatively different forms at the state and the trait level: benign and malicious envy. Both forms are characterized by high frustration but involve distinct cognitions and experiences, as well as diverging motivational and behavioral inclinations (Crusius & Lange, 2014; Falcon, in press; Lange & Crusius, 2015b; Van de Ven et al., 2009; Van de Ven, Zeelenberg, & Pieters, 2011a, 2011b).

Benign and malicious envy reflect two functionally different pathways in responding to superior others. Benign envy is directed at improving the envier's position by becoming as successful as the envied person or even excelling him or her. This notion is supported by findings showing that benign envy is related to more positive thoughts about envied persons (Van de Ven et al., 2009), increases the desire for their superior possessions (Crusius & Mussweiler, 2012), shifts the attentional focus towards means for improvement (Crusius &

Lange, 2014), and fosters upward-motivated behavior (Lange & Crusius, 2015a, 2015b; Van de Ven et al., 2011b). It is elicited when enviers appraise the envied persons' advantages as deserved and personal control as high (Van de Ven et al., 2011a). Furthermore, benign envy can be spurred interpersonally as a functional response to other people's status display via authentic pride about invested effort (Lange & Crusius, 2015b).

In contrast, malicious envy is directed at harming the superior position of others by pulling them down. This is supported by findings showing that malicious envy is related to resentful thoughts about the envied person (Van de Ven et al., 2009), Schadenfreude at the others' suffering (Smith et al., 1996; Van de Ven et al., 2014; Van Dijk, Ouwerkerk, Goslinga, Nieweg, & Gallucci, 2006), and an attentional shift towards envied others (Crusius & Lange, 2014; Hill, DelPriore, & Vaughan, 2011). Presumably, as previous envy measures have focused primarily on malicious envy (Lange & Crusius, 2015b), it is also related to manipulative behavior such as social undermining in groups (Duffy, Scott, Shaw, Tepper, & Aquino, 2012), cheating (Moran & Schweitzer, 2008), and aggressive inclinations (Rentzsch & Gross, in press; Rentzsch, Schröder-Abé, & Schütz, in press). Malicious envy is elicited when the envier appraises the envied person's advantage as undeserved and personal control as low (Van de Ven et al., 2011a). Furthermore, it can also be spurred interpersonally, as a functional response to other people's status display via hubristic pride about their own talent (Lange & Crusius, 2015b).

Notably, the motivational dynamics of the two envy types appear to match those of narcissistic admiration and rivalry. Benign envy is related to hope for success, motivating enviers to increase their efforts. Malicious envy is related to fear of failure and decreased hope for success, motivating enviers to avoid supposedly unreachable upward goals (Lange & Crusius, 2015a). We posit that benign and malicious envy are the emotionally functional pathways in which people high in narcissistic admiration or rivalry respond to threatening



upward comparisons. More specifically, given the conceptualization of Back et al. (2013), we argue that people who are characterized by narcissistic admiration should be motivated to reach the standard of excellence set by a superior person. Because this motivation is related to benign envy (Lange & Crusius, 2015a), they should be more likely to respond with this form of envy. As benign envy is related to ambitious behavior (e.g., Lange & Crusius, 2015a; Van de Ven et al., 2011b) with the ultimate goal to increase social prestige (see Lange & Crusius, 2015b), benign envy might explain the effects of narcissistic admiration on social potency. In contrast, narcissists characterized by narcissistic rivalry should be motivated to avoid falling short of the standard of excellence set by a superior person. Because this motivation is related to malicious envy (Lange & Crusius, 2015a), they should be more likely to respond with this form of envy. As malicious envy is related to resentful and aggressive behaviors (e.g., Duffy et al., 2012; Van de Ven et al., 2014, 2009) with the ultimate goal to dominate others (see Lange & Crusius, 2015b), malicious envy might explain the effects of narcissistic rivalry on social conflict.

Even though this reasoning suggests that narcissists should be highly envious, this relationship has been elusive in previous research. Earlier findings suggest that, if anything, only vulnerable narcissists might be prone to experience envy (Gold, 1996; Krizan & Johar, 2012; Neufeld & Johnson, *in press*). How can these findings be reconciled with our reasoning? We believe that the earlier conceptualizations of both constructs made it unlikely that previous investigations would find an association between narcissism and envy. Narcissism was measured mostly with the NPI or scales capturing grandiosity. Theoretically and empirically, these are more strongly related to narcissistic admiration than narcissistic rivalry (Back et al., 2013). Furthermore, envy was measured with the Dispositional Envy Scale (DES; Smith, Parrott, Diener, Hoyle, & Kim, 1999) or the York Enviousness Scale (YES; Gold, 1996). These scales cover only a subset of affective and motivational inclinations of envy (see Lange & Crusius, 2015a for an elaborated discussion). Particularly, some items

in the DES measure feelings of chronic inferiority (e.g., “The bitter truth is that I generally feel inferior to others”, “I am troubled by feelings of inadequacy”) and more specifically malicious envy (e.g., “Frankly, the success of my neighbors makes me resent them”) and corresponding perceptions of unfairness (e.g., “It somehow doesn't seem fair that some people seem to have all the talent”). The same arguments apply to the YES. Therefore, previous research may have, in fact, investigated mostly a relation of narcissistic admiration (grandiosity) with chronic inferiority and malicious envy. If narcissistic admiration is distinctively related to benign envy, as we argue here, it may have been impossible to find a link between narcissism and envy.

### **The Current Research**

We theorize that narcissists are envious. Adopting the NARC (Back et al., 2013), we conceptualize benign and malicious envy as linked to the different facets of narcissism and their respective motivational orientations (see Figure 1). Specifically, we theorize that hope for success fuels narcissistic admiration, which in turn fosters benign envy when being confronted with an upward comparison standard. This should result in behavioral inclinations directed at improving the narcissists’ own position. These behavioral tendencies may then be perceived by others. Thereby, benign envy may contribute to the perception of social potency as an outcome of narcissistic admiration. In addition, we theorize that fear of failure fuels narcissistic rivalry, which in turn fosters malicious envy when being confronted with an upward comparison standard. This should result in behavioral inclinations directed at harming the envied persons’ position. These behavioral tendencies may then be perceived by others. Thereby, malicious envy may contribute to the perception of social conflict as an outcome of narcissistic rivalry. We investigated these predictions sequentially in five studies (see Figure 1).

### **Study 1**

The goal of Study 1 was twofold. First, we aimed to show that narcissists characterized by narcissistic admiration and rivalry indeed have a higher propensity to engage in social comparison. This has been found for the NPI (Bogart et al., 2004), yet, not for the two facets of narcissism. Second, we investigated the specific relations of the narcissism facets and the envy forms as well as their underlying motivational orientations. Specifically, as posited by the NARC, hope for success and fear of failure should be related to narcissistic admiration and rivalry, respectively. Furthermore, we predicted that these links would mediate the effects of hope for success and fear of failure on dispositional benign and malicious envy (see Figure 1).

## Method

**Participants.** We asked 205 workers<sup>2</sup> from Amazon Mechanical Turk (MTurk) to participate in Study 1. Based on criteria set a priori, we excluded one participant who indicated we should not use the data because of careless responding (Meade & Craig, 2012). Thus, the final sample size was 204. The average age was 35.69 years ( $SD = 11.86$ , range: 20 – 73). One hundred twenty-two were male.

**Materials and procedure.** Participants completed questionnaires measuring comparison propensity, hope for success and fear of failure, narcissistic admiration and rivalry, dispositional benign and malicious envy, as well as social desirability. We measured comparison propensity with the Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons & Buunk, 1999). The scale measures the dispositional tendency to compare with eleven items (e.g., “I often compare myself with others with respect to what I have accomplished in life”;  $\alpha = .86$ ) using a scale from 1 (*I disagree strongly*) to 5 (*I agree strongly*). Although social comparison propensity can be conceptualized as unidimensional, Gibbons and Buunk (1999) have suggested that some items measure comparison propensity related to ability ( $\alpha = .88$ ) and other items measure comparison propensity related to opinion

( $\alpha = .79$ ). We predicted that narcissism and envy would be more strongly linked with comparison propensity related to ability. Opinions are not competitive such that one opinion is necessarily better than another. However, comparisons about ability are inherently related to status. Therefore, narcissists and enviers should be especially willing to compare their own capabilities to others (for a similar finding, see Lange & Crusius, 2015a). Here, we used both subscales to test these predictions.

We measured achievement motivation with the short version of the Achievement Motives Scale (AMS; Lang & Fries, 2006). Participants indicated how much they agree with five items measuring hope for success (e.g., “I like situations in which I can find out how capable I am”;  $\alpha = .85$ ) and five items measuring fear of failure (e.g., “I feel uneasy to do something if I am not sure of succeeding”;  $\alpha = .88$ ) using a scale from 1 (*strongly disagree*) to 4 (*strongly agree*).

Participants rated their narcissistic admiration and rivalry with the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013). Narcissistic admiration (e.g., “I am great”;  $\alpha = .88$ ) and rivalry (e.g., “Other people are worth nothing”;  $\alpha = .86$ ) were both assessed with nine items using a scale from 1 (*not agree at all*) to 6 (*agree completely*).

We determined participants’ dispositional envy with the Benign and Malicious Envy Scale (BeMaS; Lange & Crusius, 2015a). Participants rated their agreement on five items measuring dispositional benign envy (e.g., “When I envy others, I focus on how I can become equally successful in the future”, “I strive to reach other people’s superior achievements.”;  $\alpha = .88$ ) and five items measuring dispositional malicious envy (e.g., “I feel ill will toward people I envy”, “I wish that superior people lose their advantage.”;  $\alpha = .90$ ) using a scale from 1 (*strongly disagree*) to 6 (*strongly agree*).

We also measured social desirability concerns with a revised form of the Marlow-Crowne Social Desirability Scale (M-C Form C; Reynolds, 1982). Participants indicated for

each item whether it applied to them or not (e.g., “No matter who I am talking to, I am always a good listener”;  $\alpha = .79$ ).

## Results

Descriptive statistics and zero-order correlations of all measures included in Study 1 are displayed in Table 1. As predicted, narcissistic admiration and rivalry as well as dispositional benign and malicious envy were all positively related to comparison propensity. This pattern was more pronounced for comparison propensity related to abilities.

Furthermore, hope for success was positively correlated with narcissistic admiration and dispositional benign envy but negatively correlated with narcissistic rivalry and dispositional malicious envy. Fear of failure showed a positive relationship with narcissistic rivalry and dispositional malicious envy but was only marginally negatively correlated with narcissistic admiration and unrelated to dispositional benign envy. Narcissistic admiration and rivalry were correlated with both, dispositional benign and malicious envy. Yet, the correlations between narcissistic admiration and benign envy as well as between narcissistic rivalry and malicious envy were much stronger than the other two. Finally, social desirability showed small to medium correlations with hope for success, fear of failure, narcissistic rivalry, and dispositional malicious envy.

To test our specific predictions, we used structural equation modeling. In a first very strict path model, we tested only our hypothesized indirect effects of hope for success via narcissistic admiration to dispositional benign envy and fear of failure via narcissistic rivalry to dispositional malicious envy as they represent our essential hypotheses. The model fit was insufficient,  $\chi^2(8) = 40.73$ ,  $p < .001$ , Comparative Fit Index ( $CFI$ ) = .90, and Root Mean Square Error of Approximation ( $RMSEA$ ) = .142 CI 95% [.101; .187]. However, we argued that, generally, the underlying motivations should be related to benign and malicious envy (Lange & Crusius, 2015a). Thus, there is little reason to predict that the effects of hope for

success and fear of failure on envy would be explained entirely by the narcissism facets.

Therefore, we compared this model to a more lenient second model. We added direct paths from hope for success and fear of failure to both, dispositional benign and malicious envy (see Lange & Crusius, 2015a). This improved the model fit,  $\Delta\chi^2(4) = 33, p < .001$ . The second model showed good fit to the data,  $\chi^2(8) = 7.73, p = .10, CFI = .99$ , and  $RMSEA = .068$  CI 95% [.000; .139]. Figure 2 shows that, as predicted, hope for success was positively related to narcissistic admiration and dispositional benign envy but marginally negatively related to dispositional malicious envy. In addition, fear of failure was positively related to narcissistic rivalry and dispositional malicious envy as well as dispositional benign envy. Narcissistic admiration was linked to dispositional benign envy and narcissistic rivalry was linked to dispositional malicious envy. Crucially, the indirect effects of hope for success via narcissistic admiration to dispositional benign envy,  $ab = 0.29$ , CI 95% [0.17; 0.45],  $p < .001$ , and of fear of failure via narcissistic rivalry to dispositional malicious envy,  $ab = 0.33$ , CI 95% [0.21; 0.46],  $p < .001$ , were both significant in mediation analyses with bias-corrected bootstrap confidence intervals (5000 bootstrap re-samples; Preacher & Hayes, 2008). The findings were unchanged when we control for social desirability.

## Discussion

Study 1 fully supports our theorizing. Narcissistic admiration and rivalry as well as dispositional benign and malicious envy were correlated with comparison propensity. This finding supports the notion that people characterized by the different facets of narcissism are indeed more prone to engage in social comparisons about how successful they are in relation to others—the precondition for experiencing envy. Furthermore, narcissistic admiration and dispositional benign envy shared the motivation to reach a high standard of excellence. Narcissistic rivalry and dispositional malicious envy shared the fear of not living up to a certain standard of excellence. These findings are in line with the predictions we derived from

the NARC (Back et al., 2013) and replicates the relations between different kinds of achievement motivation and envy from Lange and Crusius (2015a). These findings suggest that common motivational cores indeed link narcissism to envy (see Figure 1). Narcissistic admiration related to the motivation to increase personal efforts in the face of envy. Narcissistic rivalry, in contrast, related to the motivation to harm the position of the superior person. This evidence is in line with the predicted relation of narcissism and envy at the trait level. In Studies 2 to 4, we investigated whether these distinct links can also be found if envy is assessed as a state.

## Study 2

For Study 2, we hypothesized that people who are characterized by narcissistic admiration should be more prone to experience benign envy and, therefore, be more likely to report such a situation when asked for a recent episode of envy. Conversely, people who are characterized by narcissistic rivalry should be more prone to experience malicious envy and, therefore, be more likely to report such a situation when asked for a recent episode of envy. This corresponds to the predicted paths in the emotional and behavioral dynamics block of Figure 1.

## Method

**Participants.** Two hundred and eleven German members of an online participant pool and German workers on CrowdFlower, a platform similar to MTurk, participated in Study 2. Fifteen (including one missing value) indicated that we should not use their data because of careless responding and were therefore excluded (Meade & Craig, 2012). In addition, twelve participants did not write down any story, nineteen participants denied having ever felt envy, and 10 participants recalled a situation unrelated to envy.<sup>3</sup> Thus, the final sample size was 155 with a mean age of 34.32 years ( $SD = 12.40$ ; range: 18 – 66). Seventy-five were male.

**Materials and procedure.** We first asked participants to complete the German version of the NARQ (Back et al., 2013). The scales measuring narcissistic admiration ( $\alpha = .87$ ) and rivalry ( $\alpha = .86$ ) were both reliable. Subsequently, participants' task was to recall a situation in which they "felt envy towards another person" (see Crusius & Lange, 2014 for a similar procedure). They should close their eyes and vividly remember the incident. Then, they should write it down as if they would talk to a good friend (Roseman, Wiest, & Swartz, 1994). Afterwards, participants rated their agreement with several items adapted from previous research on benign and malicious envy (Crusius & Lange, 2014; Lange & Crusius, 2015a, 2015b; Van de Ven et al., 2009). In the items, we referred to the envied person as *Person* and the envy object as *X*. In particular, participants indicated on eight items how much benign (e.g., "I felt [benign] envy<sup>4</sup> towards the person because of *X*", "I felt inspired to obtain *X* as well";  $\alpha = .79$ ), and on eight items how much malicious envy (e.g., "I felt [malicious] envy towards the person because of *X*", "I would have liked to hurt the person";  $\alpha = .92$ ) they felt. In addition, they rated on three items how frustrating the experience was (e.g., "It was frustrating that I did not have *X*";  $\alpha = .82$ ), and on three items how much the envied person deserved his or her advantage (e.g., "That the person was in possession of *X* felt unfair" [reverse coded];  $\alpha = .84$ ). We included the latter two scales for exploratory reasons. Participants provided their answers on a scale from 1 (*does not apply at all*) to 7 (*applies very much*). The scales can be found in the supplementary materials (Table S1).

## Results

Zero-order correlations are displayed in Table 2. As predicted, narcissistic admiration correlated positively with benign envy, whereas narcissistic rivalry did not. Conversely, narcissistic rivalry correlated positively with malicious envy, whereas narcissistic admiration did not. In addition, narcissistic rivalry was related to decreased perceptions of deservingness and more frustration. Narcissistic admiration was unrelated to these scales.



Finally, in line with previous research on envy (Lange & Crusius, 2015a; Van de Ven et al., 2011a), benign and malicious envy were both positively correlated with frustration, and malicious envy was negatively related to deservingness appraisals, whereas benign envy was unrelated to them.

To corroborate our theorizing, we also ran two regression analyses to control for the shared variance of the narcissism facets. First, we regressed benign envy simultaneously on narcissistic admiration and rivalry. As hypothesized, narcissistic admiration predicted more benign envy,  $B = 0.22$ ,  $SE = 0.11$ ,  $p = .05$ , whereas narcissistic rivalry was unrelated to it,  $B = -0.02$ ,  $SE = 0.12$ ,  $p = .86$ . Second, we ran the same regression with malicious envy as criterion. Also as hypothesized, narcissistic rivalry predicted more malicious envy,  $B = 0.51$ ,  $SE = 0.15$ ,  $p = .001$ , whereas narcissistic admiration was unrelated to it,  $B = 0.02$ ,  $SE = 0.14$ ,  $p = .86$ .

## Discussion

Study 2 supports our reasoning. Indeed, individuals who are characterized by narcissistic admiration were more likely to report benign envy. In contrast, individuals who are characterized by narcissistic rivalry were more likely to report malicious envy. These findings go beyond Study 1 by transferring the relation of narcissism and envy into the state domain and provide evidence for our predicted emotional dynamics (see Figure 1).

Study 2 was based on recalled episodes of envy. The goal of Study 3 was to corroborate these findings by investigating whether narcissists would also reveal distinct envious reactions when being confronted with a comparison standard. Do narcissistic admiration and rivalry predict benign and malicious envy in situ?

## Study 3

In Study 3, we aimed at conceptually replicating the findings from Study 2, but measured narcissism in an independent previous session. To investigate whether narcissism predicts emotional responses in an actual situation that can elicit envy, we confronted participants with an upward comparison standard. We hypothesized that narcissistic admiration would predict benign envy, whereas narcissistic rivalry should predict malicious envy. To allow for the investigation of these hypotheses, Study 3 consisted of two parts. In the first session, we measured participants' narcissistic propensities. In the second session, one week later, we confronted them with a comparison standard that should elicit envy. Thus, we were able to test whether narcissism measured at Time 1 predicts state envy measured at Time 2.

## Method

**Participants.** Two hundred and thirty workers from MTurk participated in the first part of Study 3 in which we measured only their narcissistic propensities. Approximately one week later, we invited the same group of participants to the second part of Study 3 in which we presented them with an upward comparison standard. Of the original sample, 209 participants followed the invitation which amounts to a response rate of 91%. One of these participants indicated in the first part that we should not use the data and was therefore excluded (Meade & Craig, 2012). Thus, the final sample included 208 participants with a mean age of 31.75 years ( $SD = 9.55$ ; range: 19 – 67). One hundred twenty-three were male.

MTurk workers usually participate in multiple studies each day and we deliberately did not mention that we contacted them again because of their previous participation in a study in which we had administered the NARQ. Thus, Study 3 allows a strong test of our predictions.

**Materials and procedure.** In the first part, participants completed the NARQ (Back et al., 2013). The narcissistic admiration ( $\alpha = .89$ ) and rivalry ( $\alpha = .86$ ) scales were both

reliable. The procedure of the second part was adapted from Lange and Crusius (2015a). In general, the average pay on MTurk is rather low. Nevertheless, workers rely on MTurk as an important part of their income which renders success in doing so highly relevant for them. Thus, we chose success on MTurk as an important comparison domain to elicit envy in workers.

Specifically, participants read an interview with an ostensible other MTurk worker with the gender-neutral name Alex, allegedly taken from an online MTurk worker forum. To create a highly realistic appearance of the interview, we modified the HTML source code of an actual, popular MTurk forum and embedded a screenshot of the browser window in our survey. This interview portrayed Alex as being extremely successful. Nevertheless, because the described reasons for his/her high status (a mixture of effort and luck) could be interpreted as being only partly deserved and not necessarily under personal control, Alex was ambiguous with regard to his/her potential to elicit benign or malicious envy (for a detailed description, see Lange & Crusius, 2015a).

Finally, participants rated their agreement with four items measuring benign envy ( $\alpha = .90$ ), four items measuring malicious envy ( $\alpha = .82$ ), three items to measure frustration within the situation ( $\alpha = .88$ ), and three items to measure appraised deservingness of Alex's success ( $\alpha = .82$ ) similar to Study 2. The items can be found in the supplementary materials (Table S2).

## Results

Zero-order correlations are displayed in Table 3. As predicted, narcissistic admiration but not narcissistic rivalry was positively correlated with benign envy. Narcissistic rivalry was positively correlated with malicious envy, whereas narcissistic admiration showed a weaker, marginally significant relationship. Furthermore, replicating Study 2, narcissistic rivalry but not narcissistic admiration was linked to more frustration and less appraised

deservingness. Finally, both benign and malicious envy were related to more frustration, and benign envy correlated positively with deservingness, whereas malicious envy showed the reversed pattern.

To corroborate these findings controlling for the shared variance of the narcissism facets, we ran two regression analyses. First, we regressed benign envy simultaneously on narcissistic admiration and rivalry. As hypothesized, narcissistic admiration emerged as a significant predictor,  $B = 0.37$ ,  $SE = 0.10$ ,  $p < .001$ , whereas narcissistic rivalry was unrelated to it,  $B = -0.17$ ,  $SE = 0.11$ ,  $p = .10$ . Second, we repeated this analysis with malicious envy as criterion. Also as hypothesized, narcissistic rivalry emerged as a significant predictor,  $B = 0.62$ ,  $SE = 0.07$ ,  $p < .001$ . In contrast, the marginally significant zero-order relation of narcissistic admiration with malicious envy dropped to non-significance,  $B = -0.07$ ,  $SE = 0.07$ ,  $p = .28$ .

## Discussion

Study 3 lends further support to our predictions. Narcissists reacted with more envy when they were confronted with an upward standard in an actual comparison situation. The findings, again, highlight the importance of differentiating between the specific forms of narcissism and envy. Narcissistic admiration predicted benign envy, whereas narcissistic rivalry predicted malicious envy. Importantly, narcissism was measured in an independent session to prevent that participants were aware of the connection between the narcissism measures and being exposed to the upward comparison standard. Also, we elicited envy in situ, substantiating the findings from Study 1 and 2 in which we used dispositional scales and recalled emotional situations. In combination, studies 1 to 3, thus, supports the notion of distinct links between narcissistic admiration and rivalry with benign and malicious envy at the trait and state level—in a pattern of a double dissociation.

Studies 2 and 3 were also consistent with respect to the correlations of narcissistic admiration and rivalry with deservingness. Conceptually, the evaluation of the envied person's deservingness constitutes an appraisal dimension that differentiates between benign and malicious envy (Van de Ven et al., 2011a). According to appraisal theories of emotion, people constantly monitor and evaluate their environment in an automatic fashion for patterns of different appraisal dimensions. Encountering such an appraisal pattern leads to the elicitation of an emotion (e.g., Ellsworth & Scherer, 2003). For instance, when an individual appraises a situation as unexpected, goal obstructive, and high in control potential, anger is elicited. Thus, for a full understanding of the processes underlying emotion elicitation in individuals, it is vital to examine their appraisal patterns. We therefore aimed to investigate such cognitive underpinnings of the relationship between narcissism and envy more closely in the next study.

We reasoned that the appraisal patterns of benign and malicious envy can be linked to narcissistic admiration and rivalry as conceptualized in the NARC. In Studies 2 and 3, narcissistic rivalry was negatively related to deservingness appraisals of the envied person's success, whereas narcissistic admiration was unrelated to them. Based on these findings, we hypothesized that deservingness appraisals might be a process mediating the effect of narcissistic rivalry on malicious envy. This hypothesis fits the NARC's notion that people characterized by narcissistic rivalry defend superiority by actively devaluing others. Empirically, this link is in line with the fact that the entitlement/exploitativeness sub-facet (Emmons, 1987) of the NPI is most strongly related to narcissistic rivalry. In other words, narcissistic rivalry should entail a sense of being more entitled and deserving than others. Thus, encountering an upward comparison standard should lead individuals characterized by narcissistic rivalry to evaluate the superior position of the other as undeserved, triggering malicious envy (see Van de Ven et al., 2011a). Furthermore, this reasoning is backed up by

the finding that only the entitlement facet of grandiose narcissism predicted (malicious) envy as assessed by the DES (Neufeld & Johnson, in press).

Which appraisal dimension connects narcissistic admiration and benign envy? We reasoned that it would be perceptions of high personal control about the opportunity to change the situation. This hypothesis fits the NARC's notion that people characterized by narcissistic admiration seek superiority by a grandiose and assertive strategy of self-enhancement. Indeed, the leadership/authority, superiority/arrogance, and self-admiration/self-absorption sub-facets of the NPI (which are most strongly related to narcissistic admiration; Back et al., 2013) predict a higher internal locus of control (Watson, Sawrie, & Biderman, 1991). From a theoretical perspective, personal control should be strongly related to benign envy, as a firm belief in one's capabilities is necessary to elicit goal-directed action (Bandura, 1977). In fact, research by Van de Ven et al. (2011a) has shown that appraisals of personal control contribute to benign envy. Thus, we predicted that benign envy should be related to appraisals of personal control.

Even though we focused on the predictions that personal control relates to benign envy, and that deservingness relates to malicious envy, we also explored links of personal control with malicious envy, and of deservingness with benign envy. In principle, low personal control could lead to a state where people can only lash out against others, relating to malicious envy. Similarly, appraising the envied person's success as deserved could foster positive regard toward the other person, relating to benign envy. Given that this reasoning is more indirect and previous data has only partly supported these links (for deservingness, see Studies 1-3, for personal control, see Van de Ven et al., 2011a) we treated them as exploratory.

#### **Study 4**

In Study 4, we tested the appraisal dimensions that may connect the narcissism facets to the envy forms. Specifically, we predicted that narcissistic admiration is associated with heightened appraisals of personal control, mediating the effect on benign envy. In contrast, narcissistic rivalry should be associated with lower appraised deservingness of the envied person's success, mediating the effect on malicious envy.

## Method

**Participants.** Two hundred and fifty MTurk workers participated in Study 4. Three participants indicated we should not use their data and were therefore excluded (Meade & Craig, 2012). Four additional participants did not report any emotional episode and nine did not write about envy and were therefore also excluded.<sup>5</sup> The final sample consisted of 234 participants with a mean age of 34.89 years ( $SD = 12.02$ ; range: 19 – 73). One hundred eleven were male.

**Materials and procedure.** The procedure closely resembled the paradigm from Study 2. Participants completed the NARQ (Back et al., 2013), then recalled a recent episode of envy, and finally responded to items about this incident. There were only two changes. First, one item from the benign envy scale and one item from the malicious envy scale had to be deleted as they would have been redundant in English (see Footnote 4). Second, in order to test our predictions regarding the link between narcissistic admiration and benign envy, we added three items measuring personal control (e.g., “I experienced control over my possible actions to improve my own outcome”). The items can be found in the supplementary materials (Table S3). The scales regarding narcissistic admiration ( $\alpha = .88$ ), narcissistic rivalry ( $\alpha = .87$ ), benign envy ( $\alpha = .70$ ), malicious envy ( $\alpha = .90$ ), frustration ( $\alpha = .72$ ), deservingness ( $\alpha = .85$ ), and personal control ( $\alpha = .75$ ) were all reliable.

## Results

Zero-order correlations can be found in Table 4. As predicted, narcissistic admiration was positively correlated with perceptions of personal control, and the latter were also related to more benign envy. However, unexpectedly, narcissistic admiration showed only a non-significant positive relationship with benign envy. In contrast, narcissistic rivalry was negatively correlated with deservingness appraisals, and the latter were also related to less malicious envy. In addition, narcissistic rivalry was linked to more malicious envy.

Furthermore, narcissistic admiration was again unrelated to deservingness appraisals and frustration. Narcissistic rivalry was only marginally positively correlated with personal control but was linked to more frustration. Benign and malicious envy were both related to more frustration. Benign envy tended to be positively correlated with deservingness. Finally, malicious envy was also positively related to personal control, yet, less strongly than benign envy.

To test our focal predictions, we used structural equation modeling. In a first strict path model, we tested only the paths from narcissistic admiration via personal control to benign envy and from narcissistic rivalry via deservingness to malicious envy, representing our essential hypotheses. The model fit was insufficient,  $\chi^2(8) = 59.22$ ,  $p < .001$ ,  $CFI = .83$ , and  $RMSEA = .166$  CI 95% [.128; .207]. However, it is reasonable to expect direct effects of narcissistic admiration and rivalry on benign and malicious envy as appraisals of personal control and deservingness are not necessarily the only possible mechanisms. For instance, the needs for prestige and for dominance underlying narcissistic admiration and rivalry could also contribute to envy, as these are connected to the envy forms (Lange & Crusius, 2015b). Furthermore, based on the reasoning above and in line with the zero-order correlations, we expected small relations between appraisals of personal control and deservingness with malicious and benign envy, respectively. Therefore, in a more lenient model, we added direct paths from narcissistic admiration to benign envy and narcissistic rivalry to malicious envy.



Additionally, we added paths from personal control to malicious envy and from deservingness to benign envy.

These changes improved the model fit,  $\Delta\chi^2(4) = 57.63, p < .001$ , and the new model showed excellent fit to the data,  $\chi^2(4) = 1.59, p = .81, CFI = 1.00$ , and  $RMSEA = .000$  CI 95% [.000; .061]. The results are depicted in Figure 3. As hypothesized, narcissistic admiration predicted increased personal control, which was related to more benign envy. The indirect effect was significant, as tested with 5000 bootstrap re-samples and bias-corrected confidence interval,  $ab = 0.15$ , CI 95% [0.09; 0.25],  $p < .001$ . Also as hypothesized, narcissistic rivalry predicted decreased deservingness, which was related to less malicious envy. The indirect effect was significant,  $ab = 0.17$ , CI 95% [0.04; 0.31],  $p = .01$ . However, as already indicated by the zero-order correlations, there was no direct effect of narcissistic admiration on benign envy ( $p = .37$ ), whereas narcissistic rivalry continued to predict malicious envy. Furthermore, personal control was positively related to malicious envy, yet, less strongly than benign envy. Deservingness was marginally positively correlated with benign envy.

## Discussion

Study 4 extends the findings from Studies 1 through 3 by investigating specific appraisal dimensions connecting narcissistic admiration to benign envy and narcissistic rivalry to malicious envy—personal control and deservingness, respectively. Narcissists characterized by narcissistic admiration perceived that they had high control over their future outcomes, which in turn was related to benign envy, entailing motivation to invest more effort to reach the higher standard of the envied person. Narcissists characterized by narcissistic rivalry evaluated the envied person's success as undeserved, which in turn was related to malicious envy, entailing the motivation to harm the position of the competitor. These effects

are in line with the notion that the facets of grandiose narcissism as conceptualized by the NARC are connected to the cognitive underpinnings of the elicitation of envy.

Unexpectedly, narcissistic admiration showed no direct relationship with benign envy in this study. We believe this may be attributed to chance as Studies 1 to 3 clearly found the link (see also Study 5). In addition, the specific design of the study may have reduced the effect size. Notably, the correlation was also weaker in Study 2 in which we used almost the same paradigm as in Study 4. This might have happened as these two studies are based on an additional assumption. Particularly, we predicted that narcissists characterized by narcissistic admiration should be more likely to experience benign envy when being confronted with a comparison standard and should then also be more likely to recall and report such a story. As we measured narcissism and envy as traits in Study 1 and envy in situ in Study 3, these two studies rest on only the first of these assumptions. Thus, the more indirect method employed in Studies 2 and 4 may have made it less likely to find the effect in Study 4.

So far, the present evidence suggests that narcissistic admiration and rivalry as well as benign and malicious envy are linked to the same underlying motivational propensities—hope for success and fear of failure. Furthermore, narcissistic admiration is distinctively related to benign envy, whereas narcissistic rivalry is distinctively related to malicious envy. These pathways are mediated via appraisals of personal control and deservingness of the envied person's success. However, our theorizing based on the NARC (Back et al., 2013) goes beyond these findings. We argue that narcissists' tendency to experience benign or malicious envy might elucidate the paradox of narcissism, namely, its positive and negative social effects.

### **Study 5**

In Study 5, we aimed to extend the findings of Studies 1 to 4 by showing that envious inclinations of narcissists illuminate the paradox of narcissism. Thus, we aimed at

testing our predicted relationships of the emotional dynamics with the social interaction outcomes (see Figure 1). Specifically, we predicted that narcissistic admiration should be related to dispositional benign envy, mediating the effect on social potency. Benignly envious behavior is characterized by ambition and increased performance (Lange & Crusius, 2015a, 2015b; Van de Ven et al., 2011b) with the ultimate goal to reach prestige (see Lange & Crusius, 2015b). This might engender narcissists' social success.

In contrast, narcissistic rivalry should be related to dispositional malicious envy, mediating the effect on social conflict. Maliciously envious behavior is characterized by hostility (Duffy et al., 2012; Lange & Crusius, 2015b) with the ultimate goal to dominate others (see Lange & Crusius, 2015b). This might engender the ascription of social conflict.

In addition, an interesting extension to these hypotheses would be that dispositional benign envy is negatively related to social conflict. This is in line with research on envy, as other people can constitute means for enviers to improve their own position (Crusius & Lange, 2014). Thus, enviers should keep superior people close to be able to emulate them.

To test our hypotheses, we approached dyads of participants who rated their own narcissistic and envious propensities as well as themselves and their partners on social potency and conflict items.

## Method

**Participants.** Dyads of four hundred and twenty-six students participated in Study 5. One participant was a non-native speaker who had problems understanding the items and refrained from working on all items related to the perception of the self and the other person. Therefore, we excluded this dyad from the analyses. Thus, the final sample included 424 participants with a mean age of 22.39 years ( $SD = 3.36$ ; range: 18 – 38; two missings). One hundred forty-eight were male (two missings). Fifty-one dyads included partners with a

different gender, 48 were same gender male dyads and 113 were same gender female dyads (two missing values). Partners also rated how good they knew the partner on a scale from 1 (*not at all*), 2 (*fleeting*), 3 (*rather good*), 4 (*pretty good*), to 5 (*extremely good*). The mean was 3.72 ( $SD = 0.86$ ; range: 1 – 5).

**Materials and procedure.** Participants were approached on a campus of a large German University. We explicitly instructed experimenters to approach individuals who already seemed to be a dyad of people who knew each other. To ensure variance in closeness, we asked experimenters also to invite dyads who appeared to be colleagues or members of learning groups in addition to the more frequent dyads of friends. The dyad members were then separated from each other and completed the questionnaire independently of each other on a clipboard. In this questionnaire, participants completed the German versions of the NARQ (Back et al., 2013) and then the BeMaS (Lange & Crusius, 2015a) similar to Study 1. The scales measuring narcissistic admiration ( $\alpha = .81$ ), narcissistic rivalry ( $\alpha = .80$ ), benign envy ( $\alpha = .83$ ), and malicious envy ( $\alpha = .86$ ) were all reliable. Afterwards, they rated how often certain items applied to them and to their dyad partner on a scale from 1 (*never*), 2 (*rarely*), 3 (*occasionally*), 4 (*often*), 5 (*very often*), to 6 (*extremely often*). The items were related to social potency (“I/My acquaintance am/is ambitious”, “I/My acquaintance get/s compliments”, “I/My acquaintance am/is admired by others”) and social conflict (“I/My acquaintance gossip/s about others”, “I/My acquaintance feel/s Schadenfreude”, “I/My acquaintance am/is well received by others” [reverse coded]). The items were inspired by previous research on the perception of narcissists (Back et al., 2013; Carlson, Vazire, & Oltmanns, 2011). We were specifically interested in items relating to distal effects of envious responding. Benignly envious individuals typically invest more effort to attain a goal and are therefore probably ambitious (Lange & Crusius, 2015a) leading to prestige and compliments. Maliciously envious individuals tend to gossip about others and feel Schadenfreude at their suffering (Van de Ven et al., 2014; Wert & Salovey, 2004). This should ultimately undermine

their social reputation. In contrast, benignly envious individuals should keep others close in order to learn from them, therefore triggering less social conflict (Crusius & Lange, 2014).

However, in both, the ratings of the self and by the partner, an exploratory factor analysis with oblimin rotation suggested a slightly different allocation of items. More precisely, these analyses each produced two factors with eigenvalues greater than 1, which each explained more than 22% of the variance. The items related to ambition, compliments, admiration, and being well received loaded on the first factor  $> .52$ . The items related to gossip and Schadenfreude loaded on the second factor  $> .82$ . Cross-loadings were small  $< |.11|$ . In hindsight, it makes sense that the item related to “being well received” fits the social potency domain. Thus, we averaged the ratings of the self to self-rated social potency ( $\alpha = .68$ ) and self-rated social conflict ( $\alpha = .62$ ) according to the results of the factor analysis. The ratings by the other person were averaged to peer-rated social potency ( $\alpha = .72$ ) and peer-rated social conflict ( $\alpha = .74$ ). As we initially thought that one of our social potency items would be a reversed social conflict item, we reasoned that narcissistic rivalry might also be negatively related to self- and peer-rated social potency as measured in our study even if this is not fully in line with the model of Back and colleagues (2013). Therefore, we also predicted a negative relation of narcissistic rivalry and social potency.

## Results

Zero-order correlations of all measures are displayed for two groups of randomly separated partners in Table 5. This was done because of the dyadic data structure. The correlational patterns within persons were highly similar for the two partners. As predicted, narcissistic admiration more so than narcissistic rivalry correlated with dispositional benign envy. Both were related to self-rated social potency. Furthermore, narcissistic rivalry more so than narcissistic admiration correlated with dispositional malicious envy. Both were related to self-rated social conflict. Unpredicted cross-correlations between narcissistic admiration and

dispositional benign envy with self-rated social conflict and between narcissistic rivalry and dispositional malicious envy with self-rated social potency were smaller or insignificant compared to the predicted pattern. Furthermore, participants' dispositional narcissism and envy were correlated with their own ratings of their partner's social potency and conflict. In addition, within-dyad correlations of narcissism, envy, and social potency and conflict were all positive and mostly significant, thus indicating dyadic non-independence in the data.

Next, we assessed the convergence between self- and peer-rated social potency and conflict. The correlation of self- and peer-rated social potency,  $r(424) = .18, p < .001$ , and the correlation between self- and peer-rated social conflict,  $r(424) = .22, p < .001$ , were significant, but showed only modest convergence. Therefore, we analyzed self and peer perceptions independently.

We proceeded by testing the effects on self- and peer-rated social perception with structural equation modeling. To control for dyadic non-independence of our data, we ran two mediated actor partner interdependence models, one for the predictions of the self perceptions of social potency and conflict and one for the predictions of the peer perceptions (Kenny, Kashy, & Cook, 2006; Ledermann & Bodenmann, 2006). As we tested almost the same initial model for self and peer perceptions, we first describe the general structure of these models and subsequently proceed to the results of each model separately.

We included indirect effects from narcissistic admiration via dispositional benign envy to social potency and from narcissistic rivalry via dispositional malicious envy to social conflict. In a first very strict model, we did not include direct effects from narcissistic admiration to social potency and from narcissistic rivalry to social conflict as our predictions pertained to indirect effects. However, as argued above, we added paths from narcissistic rivalry to social potency and from dispositional benign envy to social conflict. All corresponding means, intercepts, and (co)variances were set equal between partners to specify

the model for indistinguishable partners (Kenny et al., 2006). In addition, we allowed for actor and partner effects in both models. Although, we only hypothesized actor effects in the model for self perceptions and partner effects in the model for peer perceptions, we specified the full actor-partner pattern, to control for potential confounds of intrapersonal effects with interpersonal effects and vice versa. There were only two additional paths in the peer perception model. We added paths from narcissistic admiration and rivalry from one partner to peer-rated social potency and conflict of the other partner, although, as stated above, we did not include the direct effects of the partner's own narcissism facets on the corresponding social outcome. This was reasonable as the other partner rated the social outcome whereby his or her personality might have biased this judgment (see Table 5). Thus, even in the absence of direct effects, this potential bias needed to be controlled. The full model that we initially tested for self and peer perceptions can be found in the Appendix (Figure A1).

For self perceptions, the model fit was insufficient,  $\chi^2(54) = 265.06, p < .001, CFI = .69$ , and  $RMSEA = .136$  CI 95% [.120; .153]. However, including the direct intra- and interpersonal paths from narcissistic admiration to self-rated social potency and from narcissistic rivalry to self-rated social conflict increased the model fit significantly,  $\Delta\chi^2(4) = 194.86, p < .001$ , with the new model showing good fit to the data,  $\chi^2(50) = 70.20, p = .03, CFI = .97$ , and  $RMSEA = .044$  CI 95% [.014; .066]. The results are depicted in Figure 4. As the model was specified for indistinguishable partners, the results are depicted for only one partner and interpersonal paths were omitted for clarity. As hypothesized, narcissistic admiration predicted dispositional benign envy, mediating the effect on self-rated social potency. The indirect effect was significant, as tested with 5000 bootstrap re-samples and bias-corrected confidence interval,  $ab = 0.05$ , CI 95% [0.02; 0.10],  $p = .001$ . Conversely, narcissistic rivalry predicted dispositional malicious envy, mediating the effect on self-rated social conflict. The indirect effect was significant,  $ab = 0.15$ , CI 95% [0.01; 0.27],  $p = .03$ . The direct positive effects of narcissistic admiration and rivalry on self-rated social potency and

conflict were still significant. This may indicate either that envy is not the only mediator of the relations between narcissism and social potency and conflict or that the direct effects are based on shared method variance due to narcissists' tendencies for self-enhancement (John & Robins, 1994). Finally, the negative effect of narcissistic rivalry on self-rated social potency was significant, whereas the effect of dispositional benign envy on self-rated social conflict was not.

Do the indirect effects of narcissistic admiration via dispositional benign envy on social potency and of narcissistic rivalry via dispositional malicious envy on social conflict also emerge in the perception by the dyad partner? The strict model, as described above, showed good fit to the data,  $\chi^2(52) = 75.04$ ,  $p = .02$ ,  $CFI = .96$ , and  $RMSEA = .046$  CI 95% [.016; .068]. The results are depicted in Figure 5. As hypothesized, narcissistic admiration predicted dispositional benign envy, which was related to higher peer-rated social potency. The indirect effect was significant, as tested with 5000 bootstrap re-samples and bias-corrected confidence interval,  $ab = 0.07$ , CI 95% [0.03; 0.10],  $p < .001$ . Narcissistic rivalry predicted dispositional malicious envy, which was related to higher peer-rated social conflict. The indirect effect was significant,  $ab = 0.10$ , CI 95% [0.00; 0.19],  $p = .049$ . Besides, as in the model for self perceptions, narcissistic rivalry marginally negatively predicted peer-rated social potency. Here, the negative effect of dispositional benign envy on peer-rated social conflict was also significant.<sup>6</sup>

An alternative model including the direct effects of narcissistic admiration on peer-rated social potency and narcissistic rivalry on peer-rated social conflict did not significantly improve the model fit,  $\Delta\chi^2(2) = 3.21$ ,  $p = .20$ , and was therefore rejected. This finding supports the interpretation that the direct paths in the self-perception model were at least partially due to self-enhancement bias in narcissists' self-reports and highlights the value of a multi-method approach.



## **Discussion**

The findings of Study 5 are in line with the notion that envy is linked to the paradox of narcissism. We conceptually replicated the distinct pathways from narcissistic admiration to dispositional benign envy and from narcissistic rivalry to dispositional malicious envy. Moreover, these pathways were also distinctively related to the frequency with which behaviors related to social potency and conflict were performed. Envy mediated the effects of narcissism on social potency and conflict in self perceptions and in perceptions by peers, providing a convergent pattern. This constitutes strong evidence for the notion that emotional processes related to envy play an important role in narcissists' social functioning.

## **General Discussion**

### **Summary and Implications**

Converging evidence of five studies support the proposition that narcissists have an enhanced propensity to be envious. Different forms of narcissism and envy shared motivational orientations and were distinctively linked to each other, explaining narcissisms' effects on social potency and social conflict. Specifically, hope for success was linked to narcissistic admiration, a motivational basis that tied narcissistic admiration to benign envy (Studies 1 to 5). The latter association was mediated by the perception of high personal control (Study 4). These ambitious behavioral inclinations characterizing benign envy were related to the ascription of social potency by the self and others (Study 5). Fear of failure was linked to narcissistic rivalry, a motivational basis that tied narcissistic rivalry to malicious envy (Study 1 to 5). The latter association was mediated by low deservingness of the envied person's advantage (Study 4). These hostile behavioral inclinations characterizing malicious envy were related to the ascription of social conflict by the self and others (Study 5). Despite their positive correlation, narcissistic admiration and rivalry were distinctively connected to benign and malicious envy. This constitutes the full pattern of a double dissociation. These

findings converged in methodological diverse ways with German (Studies 2 and 5) and US American participants (Studies 1, 3, and 4). They were revealed when envy was measured as a trait (Studies 1 and 5) and as a state in a recall task (Studies 2 and 4) or elicited in situ (Study 3). Finally, the ascription of social potency and conflict was not only reflected in self evaluations but also in the perception of acquaintances (Study 5).

These findings are the first to support the widely held assumption that grandiose narcissists are prone to experience envy. In fact, this notion has often been stressed in scholarship on narcissism (American Psychiatric Association, 2000; Campbell & Miller, 2011), and has even been used to convey a narcissistic person to participants in experimental research (Campbell et al., 2002) or measure narcissism (Raskin & Terry, 1988). Yet, the link between grandiose narcissism and envy has not been substantiated empirically (Gold, 1996; Krizan & Johar, 2012) and sometimes even turned out to be negative (Neufeld & Johnson, in press). The present research suggests that the relation of narcissism and envy is more complex than has been previously assumed, corroborating the incremental value of differentiating between two facets of grandiose narcissism and the two forms of envy. Particularly, depending on their narcissistic facet, individuals in our studies reacted with distinct kinds of envy, in line with their underlying motivational tendencies. These diverging emotional reactions were related to both, narcissists' upward directed as well as their hostile behavioral inclinations, linking envy to the paradox of narcissism. The present work also provides a framework to integrate previously scattered and conflicting evidence on the behavioral outcomes of narcissism such as narcissists' propensity to be competitive (Morf & Rhodewalt, 2001; Morf et al., 2000; Raskin & Terry, 1988) or their hostile behaviors directed at the better-off (Morf & Rhodewalt, 1993; South, Oltmanns, & Turkheimer, 2003).

The current research offers converging empirical support for all stages of the dynamic of narcissist's motivations and social outcomes, as conceptualized in Back et al.'s

(2013) NARC. Furthermore, it establishes envy as an emotional pathway connected to this dynamic and suggests that narcissists' cognitive appraisal patterns contribute to it. Such an integrated perspective allows new predictions for research on narcissism. For instance, state and trait benign envy have been linked to increased performance and persistence, as shown in creativity tasks (Lange & Crusius, 2015b; Van de Ven et al., 2011b) or the speed of long-distance runners (Lange & Crusius, 2015a). In contrast, research on narcissists' reactions to upward comparisons has mainly focused on the social repercussions of such comparisons (e.g., Morf & Rhodewalt, 1993; South et al., 2003). This approach should be complemented by research focused on upward directed motivation. As described, such motivational effects might be prevalent at the behavioral level as well as at the cognitive level, for example with regard to goal-related attentional consequences (see Crusius & Lange, 2014; Gu, He, & Zhao, 2013).

Behavioral consequences are also important when it comes to the differences between narcissistic grandiosity and narcissistic vulnerability (Pincus et al., 2009). The latter has been related to envy as measured with the DES (Krizan & Johar, 2012) and displaced forms of aggression even in the absence of ego threats (Krizan & Johar, 2014). As we discussed more extensively above, the DES is focused on malicious envy (Lange & Crusius, 2015a). As because benign envy is connected more strongly to upward motivational tendencies, we expect that vulnerable narcissism should be solely related to malicious envy as measured with the BeMaS. Then, it could be argued that vulnerable narcissists project their malicious envy feelings onto unevolved third parties in upward comparison situations and therefore behave aggressively towards them.

Furthermore, the current findings also provide new and intriguing insights into research on envy. For example, they suggest that person characteristics related to status concerns, such as narcissism, could interact with situational affordances. Narcissistic

admiration and rivalry are the first identified dispositional variables that distinctively predict benign and malicious envy. This adds another perspective to the social-functional approach that may explain the elicitation of envy (Lange & Crusius, 2015b). In particular, envy has been shown to be a social-functional response to another persons' status display expressed by pride. Benign envy is the response to authentic pride of a superior person. Malicious envy is the response to hubristic pride of a superior person. This research is in line with the notion that envy's primary goal is the regulation of social status and hierarchies. Narcissists characterized by narcissistic admiration may react strongly to competitors displaying authentic pride. These individuals signal prestige, a respectable and sociable sign of high status (Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Cheng, Tracy, & Henrich, 2010) whereby they represent important means for narcissists to boost their ego. In contrast, narcissists characterized by narcissistic rivalry might react more strongly to competitors expressing hubristic pride. These individuals signal dominance, a disliked endorsement of fixed hierarchies (Cheng et al., 2013, 2010) whereby they represent significant threats to narcissists' egos. Generalizing from this approach, other status related dispositional propensities might show similar effects. For instance, people high in social dominance orientation or right-wing authoritarianism defend status through prejudice towards low power groups, whereas people with a conspiracy mentality question hierarchies via prejudice towards high power groups (Imhoff & Bruder, 2014). Envy could thus be an important emotional process that can explain various behaviors of individuals with strong status concerns.

### **Limitations**

The studies presented here are not free from limitations. First, the conclusions are based on cross-sectional data (Studies 1, 2, 4, 5) as well as on prospective data in the short term (Study 3). It would be interesting to investigate how narcissists' envious reactions

develop over time or how they affect their social life in the long term. An interesting question for future research can be derived from the NARC (Back et al., 2013). According to this model, the social outcomes of narcissism—social potency and conflict—feed back into narcissists' motivational dynamics as an ego boost or an ego threat. If benign and malicious envy are emotional processes contributing to the social consequences of narcissistic admiration and rivalry as suggested here, they should also have longitudinal boosting or threatening effects. Such long-term outcomes of envy have not been studied so far. As both envy forms are related to high frustration during the envy episode, it could be predicted that they do not lead to positive long-term effects on well-being. However, we hypothesize that benign envy is a functional response to upward comparisons that can boost the ego in the long run. Specifically, it leads to upward directed action aimed at improving the personal situation (Lange & Crusius, 2015a, 2015b; Van de Ven et al., 2011b). Thus, if successful, it might lead to overall higher status and possibly more positive affect over time. These outcomes can reinforce the ego. In contrast, even if malicious envy is a functional response in the sense that it may reduce frustration immediately after a confrontation with an upward comparison standard, it might be disadvantageous over longer periods of time. This is because the low personal level of achievement remains. Therefore, the continuing status decrement might foster negative affect in the long run and therefore pose a continuous ego threat.

Second, even if envy contributes to the explanation of the paradox of narcissism, we did not include all facets of narcissists' social potency and conflict. In fact, we chose dimensions theoretically related to distal effects of envy. Therefore, we were able to link narcissism to outcomes not yet investigated in narcissism research such as an increased propensity for gossiping or Schadenfreude. However, we did not cover other narcissists' tendencies such as being seen as humorous and physically attractive (Back et al., 2013, 2010; Dufner et al., 2013). It is less clear whether envy can explain these effects. If benign envy leads to ambitious striving for an upward goal upon frustrating confrontations with superior

others, humor might not be the most likely response. Regarding attractiveness, it could even be predicted that envious reactions might decrease physical attractiveness because these initially communicate low status (see Dijkstra & Buunk, 1998). However, dispositional benign envy not only motivates the envier to better the personal situation but also fosters actual improvement behavior (Crusius & Mussweiler, 2012; Lange & Crusius, 2015a, 2015b; Van de Ven et al., 2009). It could therefore lead to high achievement in the long-run. This might increase humor because of a more positive evaluation of the self and higher attractiveness because of higher status. It would be interesting for future research to contrast these different accounts.

### **Conclusion**

The Evil Queen in Snow White is a primary example of a narcissist. She can't help looking in the mirror and, thereby, exposes her desperate need to verify her superior attractiveness. The current framework suggests that once she is no longer the fairest of all, she finds herself in a psychological dilemma. In line with her narcissistic tendencies she should loathe the threatening weakness revealed by her envious feelings, yet, she has a strong motive to restore her grandiose self. The tale recounted by the Brothers Grimm reflects that this dilemma can be resolved by envy. However, the deceitful gift of a poisoned apple represents only one side of potential narcissistic behavior.

The findings presented above lend credence to the widely held conviction that narcissists are envious, for which evidence has long been elusive. The current research supports the notion that the different forms of envy disentangle narcissists' Janus-faced behavior toward others. Enviars characterized by narcissistic admiration may try to improve their performance, which is connected to benign envy and social approval. Enviars characterized by narcissistic rivalry may try to harm the envied person's position, which is connected to malicious envy and the social perception of being prone to engage in conflict.

Even though these emotional pathways lead to strikingly different consequences, they are nevertheless both spurred to mitigate the Evil Queen's dilemma.

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## Footnotes

<sup>1</sup> As long as not otherwise stated, when we refer to narcissism, we mean non-pathological, grandiose narcissism as the trait that may characterize people in the general population.

<sup>2</sup> We report all data exclusions and measures for each study. Sample sizes were set in advance with the expectation of small to medium sized effects and the aim to achieve 80% power.

<sup>3</sup> In a logistic regression, neither narcissistic admiration,  $B = -0.12$ ,  $SE = 0.21$ ,  $\chi^2(1) = 0.32$ ,  $p = .57$ , nor narcissistic rivalry,  $B = 0.15$ ,  $SE = 0.21$ ,  $\chi^2(1) = 0.50$ ,  $p = .48$ , predicted the probability of exclusion.

<sup>4</sup> German, along with other languages (Crusius & Lange, 2014; Van de Ven et al., 2009), has distinct terms for feeling benign (*beneiden*) and malicious envy (*missgönnen*), both translating to the English verb “to envy”.

<sup>5</sup> In a logistic regression, neither narcissistic admiration,  $B = 0.06$ ,  $SE = 0.30$ ,  $\chi^2(1) = 0.04$ ,  $p = .83$ , nor narcissistic rivalry,  $B = -0.04$ ,  $SE = 0.32$ ,  $\chi^2(1) = 0.01$ ,  $p = .92$ , predicted the probability of exclusion.

<sup>6</sup> The findings of this model are unchanged when we control for gender composition or the averaged closeness of the dyad partners.

Table 1

*Descriptive Statistics and Zero-order Correlations of all Measures in Study 1*

	<i>M (SD)</i>	INCOM	INCOM Ability	INCOM Opinion	Hope for Success	Fear of Failure	Narcissistic Admiration	Narcissistic Rivalry	Dispositional Benign Envy	Dispositional Malicious Envy	Social Desirability
INCOM <sup>a</sup>	3.29 (0.71)	-									
INCOM Ability	3.01 (0.91)	.90*	-								
INCOM Opinion	3.62 (0.76)	.77*	.44*	-							
Hope for Success <sup>b</sup>	3.22 (0.54)	.11	.01	.21*	-						
Fear of Failure <sup>b</sup>	2.53 (0.74)	.29*	.28*	.18*	-.29*	-					
Narcissistic Admiration <sup>c</sup>	3.22 (0.98)	.31*	.31*	.19*	.29*	-.13 <sup>+</sup>	-				
Narcissistic Rivalry <sup>c</sup>	2.40 (0.94)	.27*	.36*	.03	-.19*	.31*	.31*	-			
Dispositional Benign Envy <sup>d</sup>	3.86 (1.14)	.51*	.45*	.40*	.36*	.03	.48*	.23*	-		
Dispositional Malicious Envy <sup>d</sup>	2.32 (1.14)	.28*	.40*	-.01	-.25*	.35*	.12 <sup>+</sup>	.71*	.08	-	
Social Desirability <sup>e</sup>	1.44 (0.26)	-.18*	-.24*	-.02	.21*	-.30*	.02	-.45*	-.11	-.38*	-

*Note.* *N* = 204

<sup>a</sup> Iowa-Netherlands Comparison Measure (Gibbons & Buunk, 1999). Answers were given on a scale from 1 (*I disagree strongly*) to 5 (*I agree strongly*). <sup>b</sup> Achievement Motive Scale (Lang & Fries, 2006). Answers were given on a scale from 1 (*strongly disagree*) to 4 (*strongly agree*). <sup>c</sup> Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013). Answers were given on a scale from 1 (*not agree at all*) to 6 (*agree completely*). <sup>d</sup> Benign and Malicious Envy Scale (Lange & Crusius, 2015a). Answers were given on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). <sup>e</sup> M-C Form C (Reynolds, 1982). Answers were given on a scale from 1 (*True*) to 2 (*False*). <sup>+</sup>  $p < .10$  \*  $p < .05$

Table 2

*Descriptive Statistics and Zero-order Correlations of all Measures in Study 2*

	<i>M (SD)</i>	Narcissistic Admiration	Narcissistic Rivalry	Benign Envy	Malicious Envy	Frustration	Deservingness
Narcissistic Admiration <sup>a</sup>	3.26 (0.91)	-					
Narcissistic Rivalry <sup>a</sup>	2.46 (0.86)	.32*	-				
Benign Envy <sup>b</sup>	4.72 (1.17)	.17*	.04	-			
Malicious Envy <sup>b</sup>	2.79 (1.53)	.11	.29*	-.08	-		
Frustration <sup>b</sup>	4.83 (1.60)	-.04	.20*	.31*	.52*	-	
Deservingness <sup>b</sup>	3.91 (1.89)	-.03	-.20*	.05	-.76*	-.52*	-

*Note.* *N* = 155

<sup>a</sup> Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013). Answers were given on a scale from 1 (*not agree at all*) to 6 (*agree completely*). <sup>b</sup> Answers were given on a scale from 1 (*does not apply at all*) to 7 (*applies very much*). <sup>+</sup>  $p < .10$  \*  $p < .05$

Table 3

*Descriptive Statistics and Zero-order Correlations of all Measures in Study 3*

	<i>M (SD)</i>	Narcissistic Admiration	Narcissistic Rivalry	Benign Envy	Malicious Envy	Frustration	Deservingness
Narcissistic Admiration <sup>a</sup>	3.15 (1.03)	-					
Narcissistic Rivalry <sup>a</sup>	2.30 (0.94)	.34*	-				
Benign Envy <sup>b</sup>	5.24 (1.38)	.24*	-.02	-			
Malicious Envy <sup>b</sup>	1.78 (1.06)	.12 <sup>+</sup>	.52*	-.11	-		
Frustration <sup>b</sup>	3.36 (1.82)	.01	.37*	.13 <sup>+</sup>	.40*	-	
Deservingness <sup>b</sup>	5.98 (1.25)	-.07	-.39*	.17*	-.76*	-.55*	-

*Note.*  $N = 208$

<sup>a</sup> Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013). Answers were given on a scale from 1 (*not agree at all*) to 6 (*agree completely*). <sup>b</sup> Answers were given on a scale from 1 (*does not apply at all*) to 7 (*applies very much*). <sup>+</sup>  $p < .10$  \*  $p < .05$

Table 4

*Descriptive Statistics and Zero-order Correlations of all Measures in Study 4*

	<i>M (SD)</i>	Narcissistic Admiration	Narcissistic Rivalry	Benign Envy	Malicious Envy	Frustration	Deservingness	Personal Control
Narcissistic Admiration <sup>a</sup>	3.29 (1.02)	-						
Narcissistic Rivalry <sup>a</sup>	2.37 (0.97)	.41*	-					
Benign Envy <sup>b</sup>	4.75 (1.14)	.08	-.04	-				
Malicious Envy <sup>b</sup>	2.53 (1.49)	.18*	.44*	-.16*	-			
Frustration <sup>b</sup>	4.72 (1.52)	.01	.15*	.33*	.41*	-		
Deservingness <sup>b</sup>	4.35 (1.88)	-.09	-.19*	.13 <sup>+</sup>	-.65*	-.51*	-	
Personal Control <sup>b</sup>	3.78 (1.55)	.32*	.12 <sup>+</sup>	.40*	.14*	.01	.01	-

*Note.* *N* = 234

<sup>a</sup> Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013). Answers were given on a scale from 1 (*not agree at all*) to 6 (*agree completely*). <sup>b</sup> Answers were given on a scale from 1 (*does not apply at all*) to 7 (*applies very much*). <sup>+</sup>  $p < .10$  \*  $p < .05$

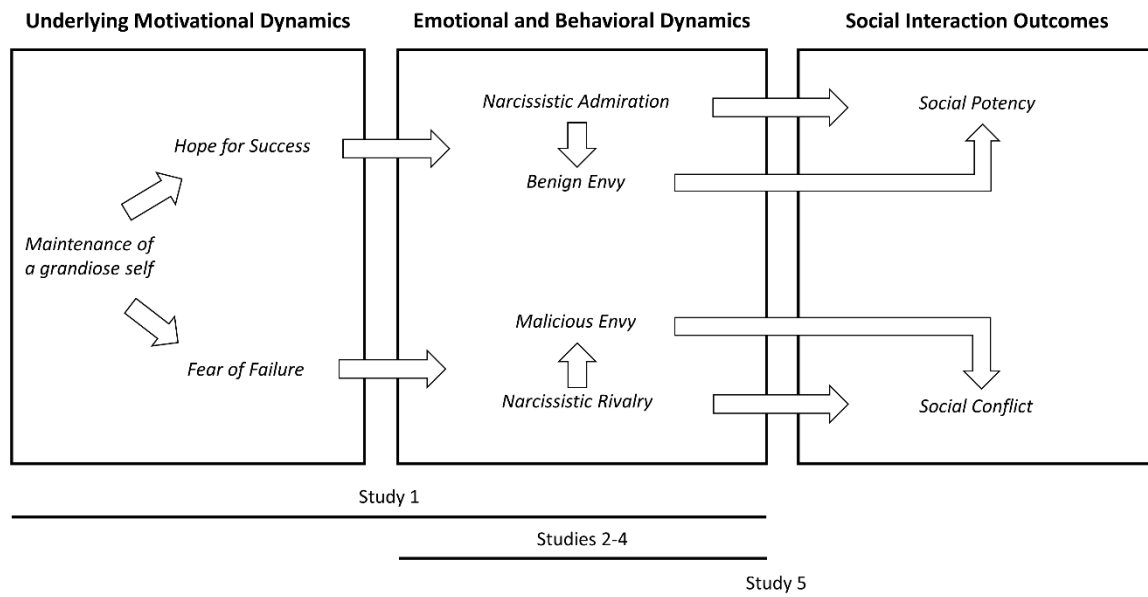
Table 5

*Descriptive Statistics, Zero-order Correlations within participants and Partner Similarity of all Measures in Study 5*

	<i>M (SD)</i>	Narcissistic Admiration	Narcissistic Rivalry	Dispositional Benign Envy	Dispositional Malicious Envy	Self-rated Social Potency	Self-rated Social Conflict	Rating of Other's Social Potency	Rating of Other's Social Conflict
Narcissistic Admiration <sup>a</sup>	3.14 (0.75)	.17*	.30*	.42*	.22*	.60*	.23*	.16*	.04
Narcissistic Rivalry <sup>a</sup>	2.19 (0.75)	.34*	.16*	.18*	.60*	.05	.51*	-.06	.29*
Dispositional Benign Envy <sup>b</sup>	3.52 (1.02)	.25*	.16*	.10	.20*	.39*	.10	.28*	-.09
Dispositional Malicious Envy <sup>b</sup>	1.96 (0.91)	.18*	.67*	.29*	.24*	.06	.44*	-.03	.19*
Self-rated Social Potency <sup>c</sup>	3.78 (0.73)	.56*	.02	.35*	.03	.10	.10	.40*	.01
Self-rated Social Conflict <sup>c</sup>	2.89 (1.03)	.20*	.43*	.18*	.36*	.22*	.17*	.08	.47*
Rating of Other's Social Potency <sup>c</sup>	4.25 (0.76)	.21*	-.20*	.22*	-.11	.39*	.07	.19*	-.04
Rating of Other's Social Conflict <sup>c</sup>	2.53 (1.07)	.09	.25*	.07	.19*	.12 <sup>+</sup>	.63*	.07	.24*

*Note.*  $N = 424$ . Within-person correlations of randomly separated partners. Partner 1 (below diagonal) and Partner 2 (above diagonal) with  $n = 212$ . Within-dyad correlations on diagonal in italics with  $n = 212$  dyads.

<sup>a</sup> Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013). Answers were given on a scale from 1 (*not agree at all*) to 6 (*agree completely*). <sup>b</sup> Benign and Malicious Envy Scale (Lange & Crusius, 2015a). Answers were given on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). <sup>c</sup> Participant's self-rated social potency/conflict. Answers were given on a scale from 1 (*never*), 2 (*rarely*), 3 (*occasionally*), 4 (*often*), 5 (*very often*), to 6 (*extremely often*). <sup>+</sup>  $p < .10$  \*  $p < .05$  <sup>d</sup> Participant's rating of partner's social potency/conflict. Answers were given on a scale from 1 (*never*), 2 (*rarely*), 3 (*occasionally*), 4 (*often*), 5 (*very often*), to 6 (*extremely often*). <sup>+</sup>  $p < .10$  \*  $p < .05$



*Figure 1.* Conceptual framework of the links between the different forms of narcissism and envy, adapted from the Narcissistic Admiration and Rivalry Concept (NARC, Back et al. 2013) and overview of the studies testing the corresponding links.

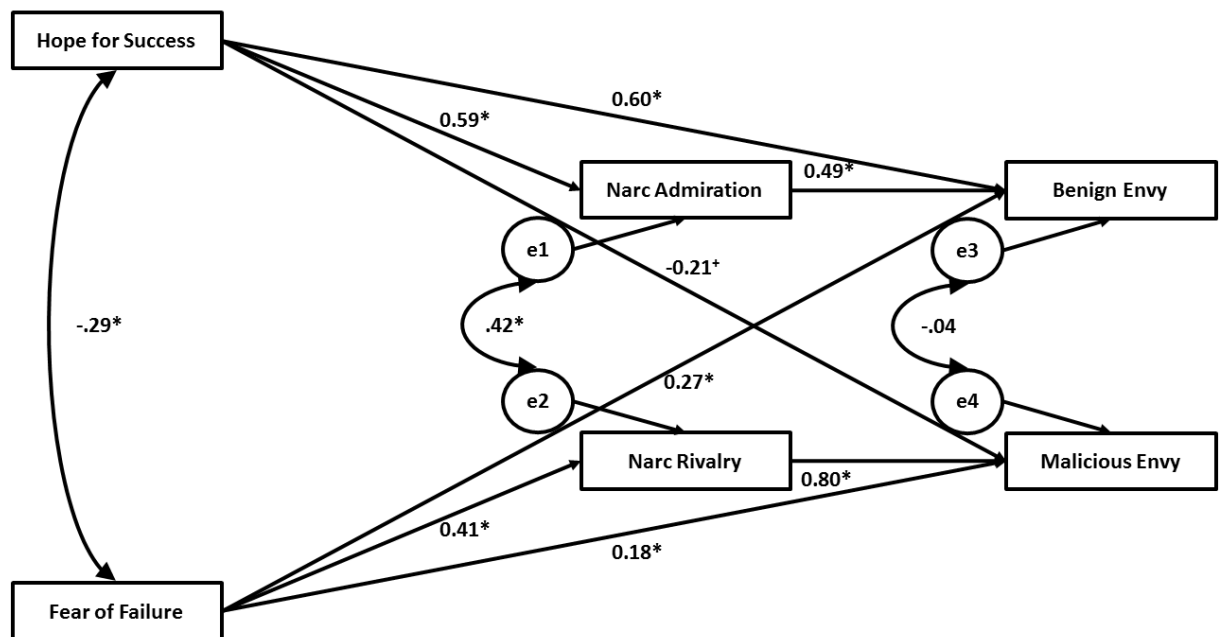


Figure 2. Direct and indirect effects of hope for success and fear of failure on narcissistic admiration and rivalry as well as dispositional benign and malicious envy in Study 1.

Depicted coefficients constitute unstandardized regression weights.  $^+ p < .10$   $^* p < .05$



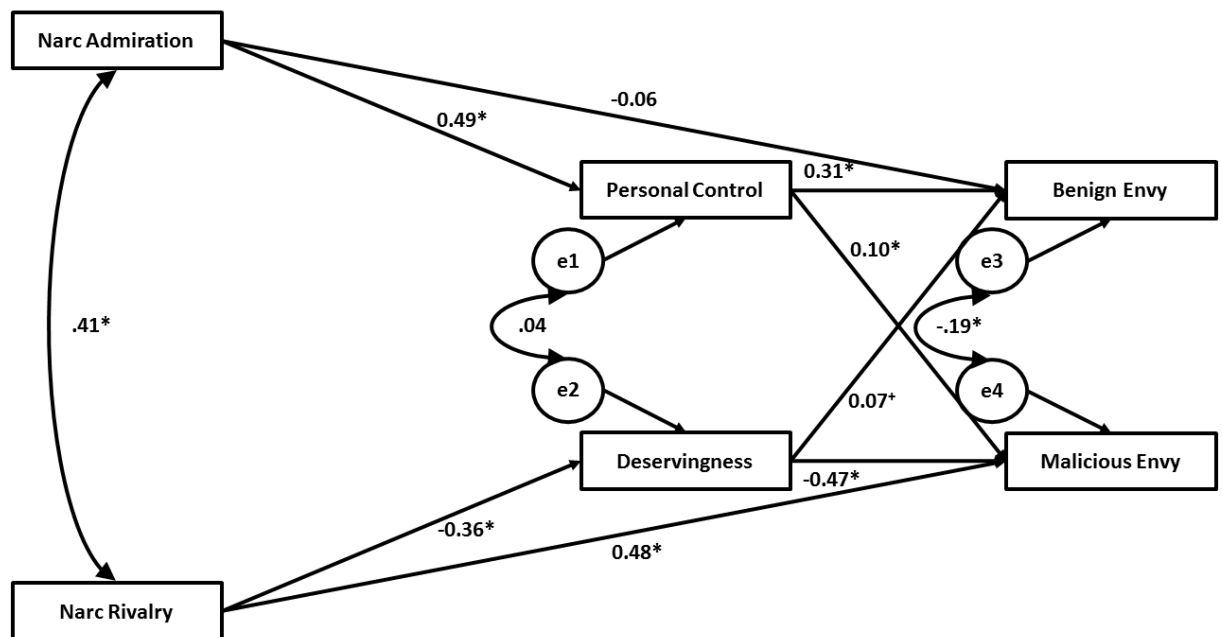


Figure 3. Direct and indirect effects of narcissistic admiration and rivalry via personal control and deservingness on benign and malicious envy in Study 4. Depicted coefficients constitute unstandardized regression weights. <sup>+</sup>  $p < .10$  \*  $p < .05$

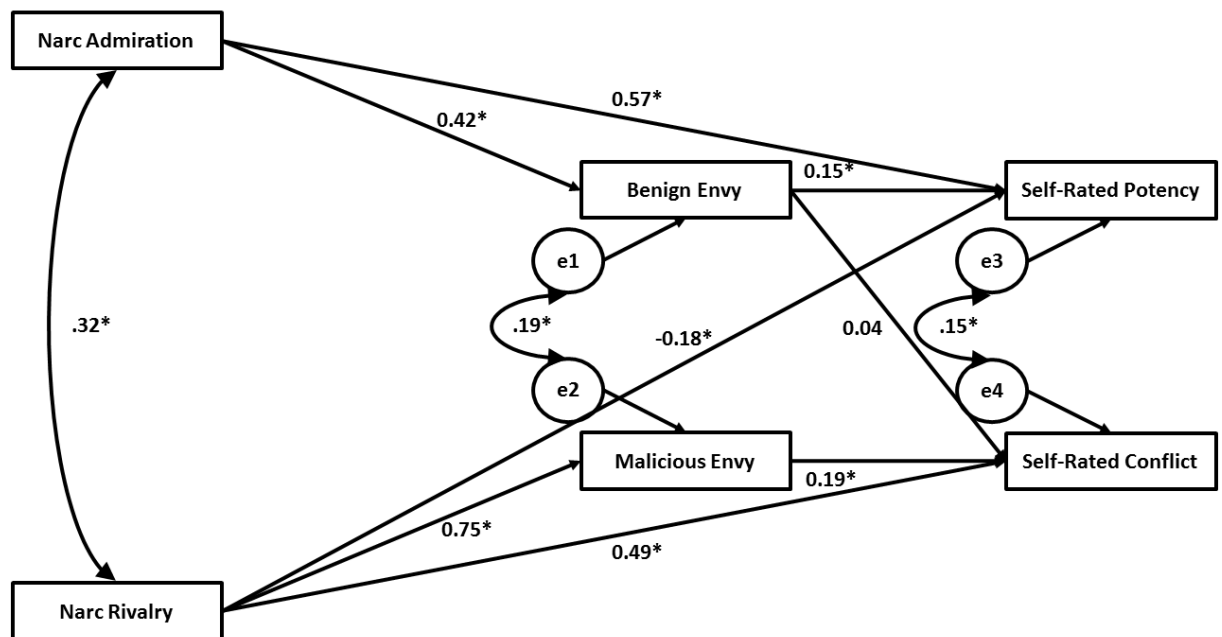


Figure 4. Direct and indirect effects of narcissistic admiration and rivalry via dispositional benign and malicious envy on self-rated social potency and conflict in Study 5. Depicted coefficients constitute unstandardized regression weights. <sup>+</sup>  $p < .10$  \*  $p < .05$

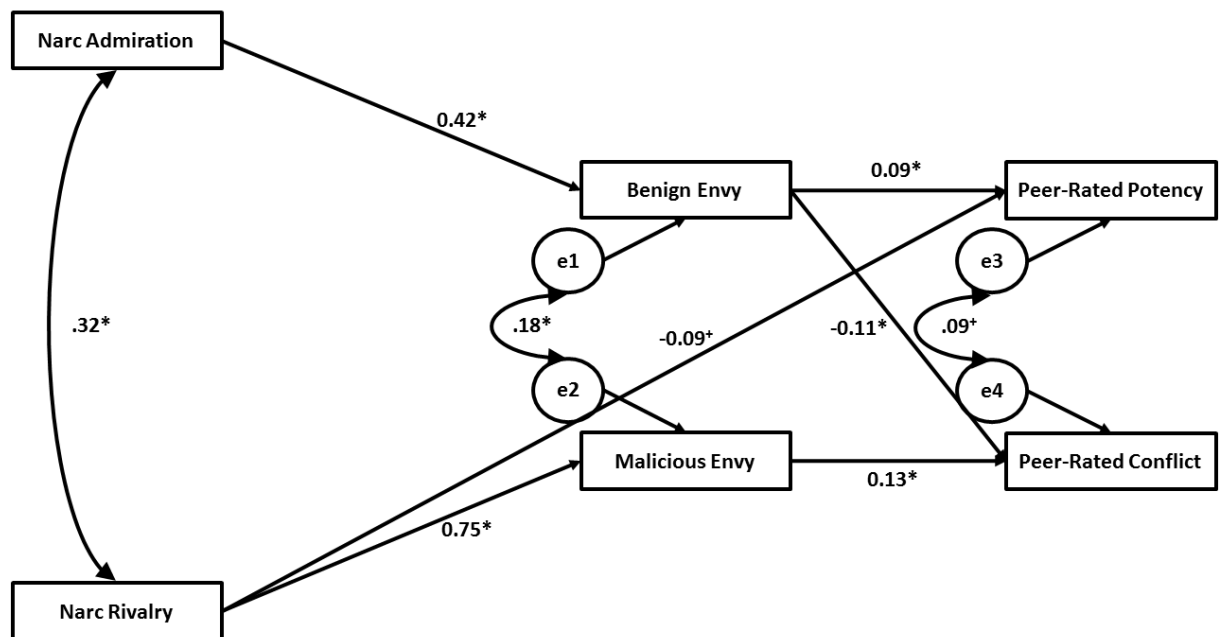
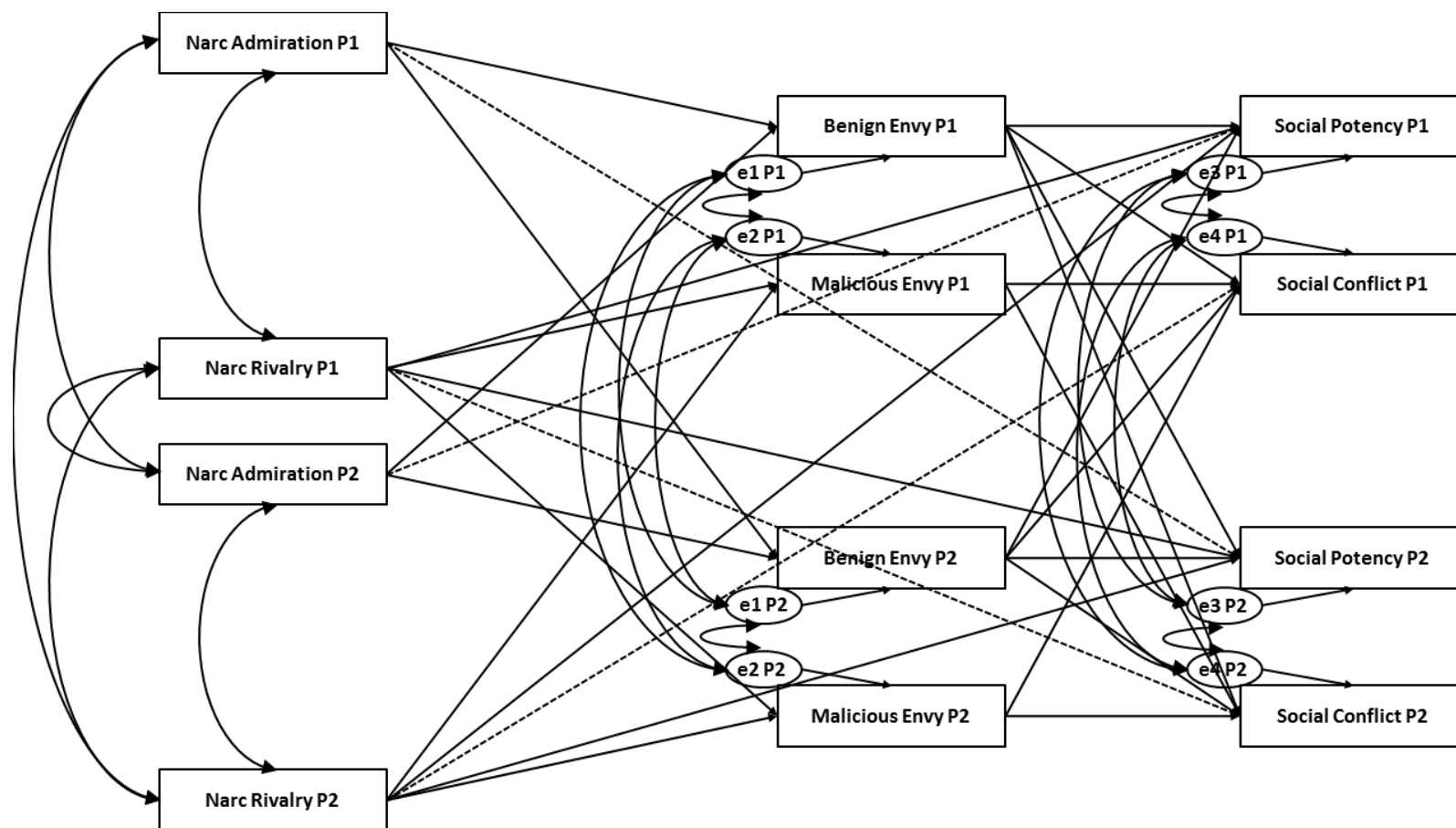


Figure 5. Direct and indirect effects of narcissistic admiration and rivalry via dispositional benign and malicious envy on peer-rated social potency and conflict in Study 5. Depicted coefficients constitute unstandardized regression weights. <sup>+</sup>  $p < .10$  \*  $p < .05$

*Appendix*

*Figure A1.* Dyadic model tested in Study 5 for self and peer perception. Means, intercepts, and (co)variances of constructs from Partner 1 were set equal to the corresponding means, intercepts, and (co)variances from Partner 2. The same applies to paths within each mediation model and covariances between constructs. Dotted paths were included only in the peer perception model. P – Partner

## Supplementary Materials

Table S1

*Items measuring benign envy, malicious envy, intensity of negative affect, and deservingness in Study 2*

Scale	Items
Benign Envy	<p>Ich wollte mich mehr anstrengen, um X auch zu erreichen. (I tried harder to also obtain X.)</p> <p>Ich fühlte mich inspiriert, X auch zu erreichen. (I felt inspired to also obtain X.)</p> <p>Ich habe mir gewünscht, X auch zu haben. (I wished to also have X.)</p> <p>Ich habe X begehrt. (I desired X.)</p> <p>Ich habe die Person bewundert. (I admired the person.)</p> <p>Ich fand die Person sympathisch. (I liked the person.)</p> <p>Ich wollte wie die Person sein. (I wanted to be like the person.)</p> <p>Ich habe die Person um X beneidet. (I felt [benign] envy towards the person because of X.)</p>
Malicious Envy	<p>Ich habe Kälte gegenüber der Person gefühlt. (I felt cold towards the person.)</p> <p>Ich habe mir gewünscht, dass die Person bei einer anderen Sache scheitert. (I wished that the person would fail at something.)</p> <p>Ich hätte X am liebsten beschädigt. (I would have liked to damage X.)</p> <p>Ich hätte der Person am liebsten weh getan. (I would have liked to hurt the person.)</p> <p>Ich habe der Person X missgönnt. (I felt [malicious] envy towards the person because of X.)</p> <p>Ich habe mir gewünscht, dass die Person X nicht mehr hat. (I wished that the person would no longer have X.)</p> <p>Ich hätte der Person gern X weggenommen. (I would have liked to take X away from the person.)</p> <p>Ich hatte negative Gedanken gegenüber der Person. (I had negative thoughts about the person.)</p>
Intensity of Negative Affect	<p>Es hat weh getan, X nicht zu haben. (It hurt not to have X.)</p> <p>Dass die Person X hatte und ich nicht, hat eine intensive negative Emotion bei mir ausgelöst. (That the person had X and I lacked it, elicited strong negative feelings in me.)</p> <p>Es war frustrierend, dass ich X nicht hatte. (It felt frustrating that I did not have X.)</p>
Deservingness	<p>Die Person hatte X nicht verdient. (The person didn't deserve X.) (r)</p> <p>Es fühlte sich ungerecht an, dass die Person über X verfügte, und ich nicht. (It felt undeserved that the person had X and I hadn't.) (r)</p> <p>Dass sich die Person im Besitz von X befand, fühlte sich unfair an. (That the person was in possession of X felt unfair.) (r)</p>

*Note.* Answers were given on scales from 1 (*does not apply at all*) to 7 (*applies very much*). Items marked with an r are reversed coded.

Table S2

*Items measuring benign envy, malicious envy, intensity of negative affect, and deservingness, in Study 3*

Scale	Items
Benign Envy	Alex's success inspires me to put more effort in earning a higher wage on mTurk. I feel more motivated to be as successful as Alex. Alex's success encourages me. I want to be like Alex.
Malicious Envy	I wish that Alex would fail at something. I would like to take the success away from Alex. I have negative thoughts about Alex. I do not find Alex likable.
Intensity of Negative Affect	I am dissatisfied because I make less money than Alex. It feels bad to be less successful than Alex. It frustrates me that I don't earn as much as Alex.
Deservingness	Alex does not deserve to be so successful. (r) It feels unfair that Alex earns that much money. (r) It feels undeserved that Alex earns that much money and I do not. (r)

*Note.* Answers were given on scales from 1 (*does not apply at all*) to 7 (*applies very much*). Items marked with an r are reversed coded.

Table S3

*Items measuring benign envy, malicious envy, intensity of negative affect, deservingness, and personal control in Study 4*

Scale	Items
Benign Envy	I tried harder to also obtain X. I felt inspired to also obtain X. I wished to also have X. I desired X. I admired the Person. I liked the Person. I wanted to be like the Person.
Malicious Envy	I felt cold towards the Person. I wished that the Person would fail at something. I would have liked to damage X. I would have liked to hurt the Person. I wished that the Person would no longer have X. I would have liked to take X away from the Person. I had negative thoughts about the Person.
Intensity of Negative Affect	It hurt not to have X. That the Person had X and I lacked it elicited strong negative feelings in me. It felt frustrating that I did not have X.
Deservingness	The Person didn't deserve X. (r) It felt undeserved that the Person had X and I hadn't. (r) That the Person was in possession of X felt unfair.
Personal Control	I experienced control over my possible actions to improve my own outcome. I felt a sense of control about attaining X in the future. I felt that I was able to attain X.

*Note.* Answers were given on scales from 1 (*does not apply at all*) to 7 (*applies very much*). Items marked with an r are reversed coded.