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Dispositional envy revisited: Unraveling the motivational dynamics of benign and malicious
envy

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Abstract

Previous research has conceptualized dispositional envy as a unitary construct. Recently however, episodic envy has been shown to emerge in two qualitatively different forms. Benign envy is related to the motivation to move upwards, whereas malicious envy is related to pulling superior others down. In four studies ($N = 1094$)—using the newly developed Benign and Malicious Envy Scale (BeMaS)—we show that dispositional envy is also characterized by two independent dimensions related to distinct motivational dynamics and behavioral consequences. Dispositional benign and malicious envy uniquely predict envious responding following upward social comparisons. Furthermore, they are differentially connected to hope for success and fear of failure. Corresponding to these links, dispositional benign envy predicted faster race performance of marathon runners mediated via higher goal setting. In contrast, dispositional malicious envy predicted race goal disengagement. The findings highlight that disentangling the two sides of envy opens up numerous research avenues.

Keywords: envy, benign envy, malicious envy, social emotion, social comparison

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envy

As a marketer, it would require tremendous effort to advertise envy. According to Catholic beliefs it is a deadly sin and Cain's murder of Abel is only one of the many biblical warnings of the dangers of this emotion. Similarly, many fictional portrayals of envious characters such as Shakespeare's Iago in *Othello* or Pushkin's Salieri paint a grim picture of people who are consumed by envy, which motivates them to their dastardly deeds. These depictions of envy not only imply that there are stable inter-individual differences in the tendency to experience envy, they may also have contributed to a rather negative view of envy in society. Much research confirms the socially destructive power of envy (Smith & Kim, 2007). Yet, semantic distinctions in several languages, such as the different Russian terms for *black* and *white* envy, suggest that another form of envy exists. One that is similarly characterized by frustrated desire but lacks the hostility of its vicious counterpart. Indeed, recent research on state envy has revealed that there is a more benign kind of envy which elicits upward motivation (e.g., Crusius & Lange, 2014; Van de Ven, Zeelenberg, & Pieters, 2009). Thus, envy can have distinct motivational consequences. Benign envy increases the motivation to invest more effort to improve one's own position. In contrast, malicious envy increases the motivation to harm an envied person's success. Here we show that to understand how people differ in their chronic susceptibility to experience envy and to explain its motivational tendencies, it is necessary to distinguish between these two kinds of envy also on the trait level. Doing so sheds light on the distinct motivational dynamics of envy by linking each envy form to global motivational dispositions and to concrete behavior.

Social Comparison and Envy

Envy is defined as a negative emotional response to another person's superior quality, achievement, or possession, in which the envier either desires the advantage or wishes

that the other person lacks it (Parrott & Smith, 1993; Smith & Kim, 2007). In its essence, envy is always based on an upward social comparison. Such a comparison is particularly likely to result in envy if it is directed toward similar others and if it concerns domains of high relevance to the self (Salovey & Rodin, 1984).

Social comparisons are a fundamental element of human cognition. People engage in social comparisons habitually (e.g., Corcoran, Crusius, & Mussweiler, 2011; Mussweiler, 2003) and automatically (Mussweiler, Rüter, & Epstude, 2004), explaining why envy is such a common and culturally universal experience (Foster, 1972). Nevertheless, people also vary systematically in their propensity to compare themselves to others (Gibbons & Buunk, 1999). Therefore, it is safe to predict that they will also exhibit stable inter-individual differences in their propensity to experience envy. In fact, much evidence has firmly established that dispositional envy exists and that it determines important psychological and behavioral outcomes (Gold, 1996; Smith, Parrott, Diener, Hoyle, & Kim, 1999; Veselka, Giammarco, & Vernon, 2014). Importantly, however, these efforts to measure envy as a trait have not taken into account that, at the state level, two qualitatively different forms of envy exist: Benign and malicious envy.

Benign and Malicious Envy

Envy has consistently been referred to as a deadly sin, implying that malicious tendencies are an essential element of envy. However, prominent scholars and intellectuals such as Aristotle (1929), Dorothy L. Sayers (1969), or John Rawls (1999) have observed that another kind of envy exists. This benign, emulative form of envy can increase the desire to get what the envied person has, but lacks the hostility characterizing its malicious counterpart. In many languages, there are two different words for envy, substantiating such a distinction. For instance, in Dutch there are the words *benijden* and *afgunst*, and in German this is paralleled by the words *beneiden* and *missgönnen* (Crusius & Lange, 2014; Van de Ven et al., 2009).

The first word implies a more upward motivating form of envy, whereas the second word designates envy's hostile form. Perhaps the clearest occurrence of this etymological difference is present in Russian, in which there is *white* and *black* envy. Still, even in languages that allow a semantic distinction of the two forms of envy, there may also exist an inclusive term. For example, in German, the words *Neid* (envy) and *neidisch* (envious) capture both envy forms simultaneously. At the same time, languages such as English or Spanish have only one word for envy. Nevertheless, when speakers of these languages are asked to report an instance of envy, they report one of two qualitatively distinct emotional episodes matching the distinction between benign and malicious envy (Van de Ven et al., 2009). Thus, there is evidence that the two forms of envy exist independently of language differences.

From a functionalist perspective, the two forms of envy may reflect two different routes through which people can achieve the goal to level the difference between the self and a superior comparison standard (Van de Ven et al., 2009). On the one hand, in *benign* envy, envious may try to level themselves up to become as successful as the other person. This notion is supported by findings showing that envy can increase personal effort (Schaubroeck & Lam, 2004; Van de Ven, Zeelenberg, & Pieters, 2011a), propel behavior aimed at obtaining a desired object (Crusius & Mussweiler, 2012), and shift attention toward means to attain it (Crusius & Lange, 2014). Recent research suggests that envy-eliciting situations result in benign envy if the envied person's advantage is evaluated as subjectively deserved and if the envious perceives high control over personal outcomes (Van de Ven, Zeelenberg, & Pieters, 2011b).

On the other hand, in *malicious* envy, envious may try to level the envied person down, decreasing or denigrating the advantage of the other. This notion is supported by findings showing that envy can increase Schadenfreude (Smith et al., 1996; Van Dijk,

Ouwerkerk, Goslinga, Nieweg, & Gallucci, 2006; Van de Ven et al., 2014), lead to hostile and resentful behaviors (Duffy, Scott, Shaw, Tepper, & Aquino, 2012; Salovey & Rodin, 1984), and shift attention toward the envied person (Crusius & Lange, 2014; Hill, DelPriore, & Vaughan, 2011). Envy-eliciting situations result in malicious envy if the envied person's advantage is evaluated as subjectively undeserved and the envier experiences less control over personal outcomes (Van de Ven et al., 2011b). Nevertheless, both forms of envy involve equivalent degrees of highly negative affect and frustration (e.g., Crusius & Lange, 2014).

In spite of substantial evidence in favor of two forms of envy at the state level (Belk, 2011; Crusius & Lange, 2014; Van de Ven et al., 2009, 2011a, 2011b; Van de Ven, Zeelenberg, & Pieters, 2011c) this distinction has not been taken into account in the investigation of dispositional envy.

Existing Trait Measures of Envy

Three scales have been introduced to measure trait envy, all of them conceptualizing it as a single dimension. But what form of envy was focal in these scales, benign or malicious envy?

First, Gold (1996) developed the York Enviousness Scale. Although he cites work connecting envy to improvement motivation, Gold explicitly differentiates covetousness from it. Instead, the scale is focused on resentment and ill will. These emotional facets should be indicators of malicious but not of benign envy. In addition, the scale correlates positively with anger and hostility which, according to our reasoning, reflect only malicious envy.

Second, Smith et al. (1999) developed the Dispositional Envy Scale (DES), which is the most widely used measure of envy as a personality trait. The scale is composed of items measuring inferiority, ill will, frustration, and perceptions of injustice. It correlates with negative self-esteem, depression, neuroticism, hostility, and resentment. With the exception of

frustration and a sense of inferiority, which should characterize both benign and malicious envy, most of the emotional facets and correlates of the DES should again be indicative of malicious but not of benign envy.

Finally, Veselka et al. (2014) recently developed the Vices and Virtues Scale to measure dispositional tendencies to commit deadly sins, including a subscale to measure envy. Their items also focus on resentment and anger, and should thus be concerned only with malicious envy.

Dispositional Benign and Malicious Envy and their Motivational Dynamics

In summary, dispositional envy is a comparison-based emotional trait that leads to frustration upon the confrontation with an upward standard. However, parallel to state envy, we predict that there are two forms of dispositional envy, namely dispositional benign and malicious envy. Apart from the aforementioned commonalities they should be uniquely connected to distinct motivational dynamics and, ultimately, distinct envious behavior. In that sense, differentiating between two forms of envious responding at the trait level should allow to elucidate how dispositional envy predicts these outcomes and which form explains the specific relationships. What are the important constructs related to envy and how are dispositional benign and malicious envy uniquely connected to them?

Most importantly, as described above, envy is related to a multitude of motivational goals that may result from upward comparisons. In general, envy's functional goal is to level the difference between the self and the envied person (Van de Ven et al., 2009). In the case of benign envy, the envier tries to level up whereas in the case of malicious envy, the envier tries to level the envied person down. Thus, in both envy forms, the envier is concerned with a standard of excellence—the level of the envied person—in a domain of high relevance to the self (Salovey & Rodin, 1984). Situations in which individuals are concerned with a personally important standard of excellence trigger the achievement motive (McClelland, Atkinson,

Clark, & Lowell, 1953). The achievement motive also has two components that differ in how individuals respond to this standard of excellence: Hope for success and fear of failure (Atkinson, 1957). Hope for success leads to an approach towards the standard, whereas fear of failure leads to avoidance of failing to reach it. We contend that these motivational tendencies fuel dispositional benign and malicious envy and explain their distinct behavioral patterns.

The optimistic disposition of hope for success should lead to appraisals of perceived control over future outcomes. In other words, it should be connected to perceiving oneself as capable of achieving success. In an upward comparison situation the standard of excellence is represented by the level of the envied person. Given that enviers perceive personal control over the ability to reach this standard, benign envy should be spurred (Van de Ven et al., 2011b). Therefore, hope for success should predict dispositional benign envy and ultimately lead to motivated behavior directed at achieving this standard. This is in line with previous findings that have linked state envy to upward directed motivational tendencies (Crusius & Lange, 2014; Van de Ven et al., 2011a). As previous research on dispositional envy did not investigate benign envy, this relationship awaits empirical scrutiny.

In contrast, we predict that dispositional malicious envy is fueled by a general motivation to avoid falling short of a standard of excellence. Such a pessimistic disposition should lead to an appraisal of low perceived control over future outcomes. Low control, in turn, is known to be linked to malicious envy (Van de Ven et al., 2011b). In this case, enviers perceive an inability to ever reach the standard. From a functional perspective, in such a situation it makes more sense to alter the standard to decrease the threat resulting from it. In an upward comparison, this implies that the envier tries to harm the envied person's success. Therefore, fear of failure should be related to dispositional malicious envy and ultimately avoidant behavior towards this standard. This is in line with previous findings linking state envy to hostile motivational tendencies (Smith & Kim, 2007). As previous scales measuring

dispositional envy were—presumably—mostly concerned with dispositional malicious envy, this reasoning might also explain why the DES has been linked to antisocial behavior such as diminished cooperation in social dilemmas (Parks, Rumble, & Posey, 2002) and chronic Schadenfreude about others' misfortune (Krizan & Johar, 2012).

In summary, recent research on episodic envy suggests that a one-dimensional conceptualization of envy does not capture the full spectrum of the motivational dynamics related to experiences of envy and envious responding. We contend that, similar to the state level, there are two distinct forms of envy at the trait level: Dispositional benign and malicious envy. In what follows, we report four studies investigating this possibility. In Study 1, we developed the Benign and Malicious Envy Scale (BeMaS). In Study 2, we demonstrate convergent and discriminant validity of the BeMaS. We show that dispositional benign and malicious envy dissociate motivational intentions to improve personal performance from motivational intentions to harm when people are confronted with an upward comparison standard. In Study 3, we demonstrate that hope for success is linked to the motivational tendencies of dispositional benign envy. However, fear of failure and less hope for success are linked to the motivational tendencies of dispositional malicious envy. Study 4 shows that the motivational dynamics of dispositional benign and malicious envy translate into the race performance of long-distance runners.

Study 1

The goal of Study 1 was to develop a measure for dispositional benign and malicious envy.

Method

Participants.

We recruited 365 participants¹ from Amazon Mechanical Turk (mTurk) with a mean age of 25.69 years ($SD = 8.91$) of which 258 were male.

Materials and procedure.

Initially, we generated 23 items potentially measuring dispositional benign envy and 25 items potentially measuring dispositional malicious envy based on previous research on the experience, motivational consequences, and action tendencies of the two emotions. We instructed participants that the items referred to situations in which they lack another's superior quality, achievement, or possession and either desire it or wish the other lacks it. This was done to prevent any confusion regarding the terms envy and jealousy (see Parrott & Smith, 1993). The latter refers to situations in which people are afraid of losing something they already possess (mostly a relationship) and is distinct from envy.

The potential benign envy items focused on liking of the envied other (e.g., "I have warm feelings towards top performers"), increased effort caused by envy (e.g., "I strive to reach other people's superior achievements"), and increased goal setting after upward comparisons (e.g., "If someone has superior qualities, achievements, or possessions, I try to attain them for myself"). The malicious envy items focused on hostile behavior (e.g., "If other people have something that I want for myself, I wish to take it away from them."), resentful feelings toward the envied person (e.g., "Seeing other people's achievements makes me resent them"), and general feelings of anger in relation to upward comparisons (e.g., "I hate to encounter people I envy"). Participants indicated their agreement on a scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

We also added the DES scale (Smith et al., 1999) as the most popular trait envy measure to investigate our prediction that this scale primarily measures dispositional malicious and not benign envy.

Results and Discussion

Exploratory factor analyses with oblimin rotation clearly revealed two factors in the scree plot. Items measuring likability of the envied person typically loaded highly on both factors and were therefore excluded. Based on our results, we chose six items for each subscale. These items had good psychometric properties, loaded highly on their intended factor and not on the other, fitted our understanding of benign and malicious envy, and several contained the word *envy*.

The dispositional benign envy subscale ($\alpha = .85$) and the dispositional malicious envy subscale ($\alpha = .89$) were both internally consistent. The scales were not correlated, $r(365) = .01, p = .89$. The DES showed no significant relation with the dispositional benign envy subscale, $r(365) = .04, p = .46$, but was significantly correlated with the dispositional malicious envy subscale, $r(365) = .65, p < .001$.

After this initial study, feedback from colleagues and further results led us to refine the scale in some details. An English native speaker pointed out that the formulation of one item used a somewhat uncommon word, which we then exchanged with a more frequent synonym. In addition, in later studies with the BeMaS one benign envy item repeatedly loaded highly on both the dispositional benign and malicious subscale. We therefore decided to delete this item from the scale. To even out the number of items we also excluded another malicious item whose content was covered by others. This led to the final version of the BeMaS (see Table 1). We tested the internal structure of the BeMaS with an independent sample ($N = 933$). A structural equation model with two correlated factors—dispositional benign and malicious envy—showed good fit to the data, $\chi^2(34) = 189.89, p < .001$, GFI = .96, CFI = .97, AGFI = .93, and RMSEA = .07 CI95% [.06; .08] (for details and further results see the Supplementary Data).² We then also translated the English scale into German.³

Study 2

The goal of Study 2 was to establish convergent and discriminant validity of the BeMaS. More precisely, we wanted to test whether it can predict the diverse motivational consequences of envy. On the one hand, benign envy spurs upward directed behavior aimed at leveling oneself up. On the other hand, malicious envy spurs socially harmful behavior aimed at leveling the other person down. In Study 2, we confronted participants with an upward social comparison standard. If the BeMaS (assessed in a previous session) measures stable differences in envious responding it should predict the specific emotional reactions toward this comparison standard. More specifically, we hypothesized that dispositional benign envy would predict benign envy at the state level and that dispositional malicious envy would predict malicious envy at the state level. However, dispositional benign envy should neither correlate with state malicious envy nor should dispositional malicious envy correlate with state benign envy. This would constitute evidence for the full pattern of a double dissociation (Teuber, 1955).

Also of interest were correlations of dispositional benign and malicious envy with perceived deservingness and the intensity of participants' negative affect. Being an important appraisal dimension distinguishing the two forms of envy, we expected dispositional benign envy to correlate positively, but dispositional malicious envy to correlate negatively with deservingness. Furthermore, we expected both dispositional benign and malicious envy to predict the intensity of negative affect experienced in the situation. The latter prediction is important because it establishes that the BeMaS does not capture admiration instead of benign envy. Benign envy entails a certain amount of admiration for the more advantaged other. However, the two emotions are also associated with distinct thoughts, action tendencies, motivational goals, and appraisal patterns. Most importantly, whereas benign envy is a negative emotion, admiration is a positive emotion (Crusius & Lange, 2014; Van de Ven et al., 2009, 2011a, 2011b). Just as dispositional malicious envy, dispositional benign envy should thus predict negative affect.

Method

Participants. We recruited 194 participants from mTurk and instructed them to complete the BeMaS and several other measures unrelated to the current study (see Stimulus Materials online). We contacted the same participants three to four weeks later offering them the participation in another study. Of the original sample, 167 participants followed this invitation resulting in a response rate of 85%. Mean age was 31.83 years ($SD = 10.47$). One hundred and ten were male.

mTurk workers typically participate in several different studies each day. Furthermore, we did not mention that we contacted them because of their previous participation in a study including the BeMaS. Finally, we administered the BeMaS along with other measures in the first wave of data collection. Therefore, this study constitutes a strong test of the construct validity of the BeMaS.

Materials and procedure. All participants were workers on the crowdsourcing platform Amazon Mechanical Turk (mTurk). On mTurk, workers can earn money by completing diverse tasks such as categorizing photographs, describing products, or completing surveys. Even though the average pay on mTurk can be assumed to be quite low, many workers rely on mTurk as one important source of their income, and the success in doing so is a frequent topic of discussion on internet forums that specialize on mTurk. That is why we chose success on mTurk as a comparison dimension to elicit envy.

To do so, we confronted mTurk workers with an alleged interview of another mTurk worker with the gender-neutral name Alex, supposedly taken from an mTurk internet forum. To create a highly realistic appearance, we modified the HTML source code of a popular mTurk forum and embedded a screenshot of it in our survey. According to the interview, Alex is highly successful, earning at least \$10 per hour, recently even \$12 with a record of \$17. Alex explained that his/her success might be due to the fact that he/she is working very hard

and diligently, resulting in a spotless approval record for his/her work on mTurk (nevertheless, the interview contained several spelling mistakes). In addition he/she explained that part of his/her success is being a so-called Master Worker. This status allows mTurk workers to access tasks that are often better paid than other tasks. It is awarded by Amazon to workers who prove to be reliable. However, the criteria for assessing this are not transparent. In the interview, Alex acknowledges this fact by stating that he/she became Master Worker for unknown reasons, it could well be random. From previous studies we knew that this description is highly believable and an upward standard for almost all mTurk workers (Faulmüller & Crusius, 2014; Lange, Hagemeyer, & Crusius, 2014). Because the factors that contributed to Alex' success were only partly controllable and deserved, Alex was ambiguous with regard to the possibility to elicit state benign and malicious envy.

After reading the interview, participants responded to four items adapted from Crusius and Lange (2014) and Van de Ven et al. (2009) measuring benign envy ($\alpha = .88$; e.g., "Alex's success inspires me to put more effort in earning a higher wage on mTurk"), four items related to malicious envy ($\alpha = .86$; e.g., "I wish that Alex would fail at something"), three items related to perceptions of deservingness ($\alpha = .89$; e.g., "Alex does not deserve to be so successful" [reverse coded]), and three items related to intensity of negative affect ($\alpha = .90$; e.g., "It frustrates me that I don't earn as much as Alex") on a scale from 1 (*does not apply at all*) to 7 (*applies very much*).

Results and Discussion

As predicted, dispositional benign envy was related to benignly envious responses toward Alex, $r(167) = .30, p < .001$, but not to maliciously envious responses, $r(167) < .01, p = .99$. Dispositional malicious envy was related to maliciously envious responses toward Alex, $r(167) = .44, p < .001$, but not to benignly envious responses, $r(167) = .02, p = .84$. As predicted, this constitutes the full pattern of a double dissociation in which dispositional

benign and malicious envy are connected distinctively to upward-directed or harmful behavior following an unflattering upward comparison.

In addition, dispositional benign envy was unrelated to deservingness, $r(167) = -.12$, $p = .13$, whereas dispositional malicious envy showed a negative correlation, $r(167) = -.40$, $p < .001$. We are uncertain of why there was no positive relationship of dispositional benign envy with deservingness as we had predicted based on findings at the state level (e.g., Van de Ven et al., 2011b). Yet, recent evidence suggests that the effects of benign envy are more strongly driven by perceptions of personal control than deservingness appraisals, whereas for malicious envy, the reverse applies (Lange, Hagemeyer, & Crusius, 2014).

However, dispositional benign envy, $r(167) = .15$, $p = .06$, and dispositional malicious envy, $r(167) = .27$, $p < .001$, were both related to intensity of negative affect. Despite being marginally significant, the correlation of dispositional benign envy and frustration was not significantly different from the correlation of dispositional malicious envy with frustration, $z = -1.34$, $p = .18$. This result underlines that both dispositions increase the pain felt after upward comparisons and that dispositional benign envy is distinct from admiration.

Study 3

In Study 2, we collected first evidence for the distinct motivational dynamics of envy that can be unraveled by the BeMaS. State benign and malicious envy as measured in Study 2 implied concrete motivational tendencies, for instance the inspiration to invest more effort or the wish that the envied person would fail. In Study 3, we wanted to go one step further by linking dispositional benign and malicious envy to broad underlying motivational tendencies: Hope for success and fear of failure.

We reasoned that dispositional benign envy is fueled by a general motivation to reach a standard of excellence and thereby achieve success. Therefore, hope for success should be related to dispositional benign envy. In contrast, we reasoned that dispositional malicious envy is fueled by a general motivation to avoid falling short of a standard of excellence. Therefore, fear of failure should be related to dispositional malicious envy.

The core underlying process of this conceptualization is a social comparison. Thus, although dispositional benign envy should be related to hope for success and dispositional malicious envy to fear of failure, both should be positively correlated with a general tendency to compare, establishing convergent validity. These predictions were of focal interest in Study 3.

Method

Participants

We recruited 192 participants on mTurk with a mean age of 31.6 years ($SD = 9.95$). One hundred twenty-one were male.

Materials and procedure

Among other scales unrelated to the current study (see Stimulus Materials online), participants completed the BeMaS to measure dispositional benign ($\alpha = .84$) and malicious envy ($\alpha = .90$), as well as scales to measure hope for success, fear of failure, and general comparison propensity.

We included the revised version of the Achievement Motives Scale (AMS-R; Lang & Fries, 2006) to measure hope for success ($\alpha = .83$; e.g., “I am attracted by tasks, in which I can test my abilities”) and fear of failure ($\alpha = .86$; e.g., “I feel uneasy to do something if I am not sure of succeeding”). Answers were given on a scale from 1 (*strongly disagree*) to 4 (*strongly agree*).

As a measure of the dispositional tendency to compare, we used the Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons & Buunk, 1999; $\alpha = .87$; e.g., “I always pay a lot of attention to how I do things compared with how others do things”). Participants responded on a scale from 1 (*I disagree strongly*) to 5 (*I agree strongly*). Although the scale is typically used with a composite score, the authors suggested that some items measure comparison propensity related to abilities and other items measure comparison propensity related to personal opinions. We predicted that the correlation of dispositional benign and malicious envy with comparison propensity should be stronger for the ability subscale as opinions are usually not a domain that elicits envy (DelPriore, Hill, & Buss, 2012).

Results and Discussion

Descriptive statistics and zero-order correlations of the scales can be found in Table 2. As predicted, dispositional benign envy was positively related to hope for success but unrelated to fear of failure. In contrast, dispositional malicious envy was positively related to fear of failure and even negatively related to hope for success. Both forms of dispositional envy, however, were positively correlated with comparison propensity, especially with the comparison propensity regarding abilities.

In order to verify our predictions and to control for the correlation of hope for success and fear of failure, we also ran two regression analyses. Specifically, we regressed dispositional benign envy simultaneously on hope for success and fear of failure. Confirming the hypothesized pattern, hope for success predicted dispositional benign envy, $B = 0.71$, $SE = 0.13$, $p < .001$, whereas for fear of failure the association was marginal, $B = 0.15$, $SE = 0.09$, $p = .08$. Repeating the same analysis with dispositional malicious envy as criterion revealed a significant positive relationship for fear of failure, $B = 0.33$, $SE = 0.11$, $p = .002$, but also a significant negative relationship for hope for success, $B = -0.48$, $SE = 0.16$, $p = .002$.

In summary, a motivation to reach a standard of excellence is linked to dispositional benign envy, whereas a motivation to avoid falling short of such a standard is linked to dispositional malicious envy. In addition, dispositional malicious envy was negatively correlated with hope for success. Thus, not only do maliciously envious people fear to not live up to a standard of excellence, they even actively refrain from pursuing it.

Study 4

The goal of Study 4 was to extend the findings regarding the motivational dynamics of envy by investigating the behavioral effects of dispositional benign envy in a field setting. The current perspective and evidence strongly suggest that past research on dispositional envy was exclusively focused on malicious envy. Being the form of envy with a longer research history, malicious envy has been linked to many important real-world outcomes such as social undermining in working groups (Duffy et al., 2012) or deception in negotiations (Moran & Schweitzer, 2008). There is less evidence for behavioral effects of state benign envy, and it remains to be investigated how dispositional benign envy is related to real-world behavior and outcomes.

One highly self-relevant domain, in which the success of others is often interpreted as justified and personal control over one's accomplishments appraised as high, is athletic achievement. In sports, superior comparison standards typically invest much effort into training in order to reach their goals. Therefore, benign envy should occur frequently among competitive individuals and may have beneficial effects with regard to their performance.

Study 3 has shown that dispositional benign envy is associated with a general motivational tendency to optimistically pursue standards of excellence. We wondered whether this corresponds to the actual performance of long-distance runners in an important race. Usually, runners practice multiple times per week and are likely exposed to several upward comparison standards during training as well as during their races. These upward comparisons

could elicit envy. The connection of dispositional benign envy to hope for success should lead to an adoption of this high standard of excellence. To put it differently, dispositional benign envy should increase goal setting during training. Given that goal setting predicts performance, this goal, in turn, should spur the motivation to excel during training and, ultimately, the race.

Dispositional malicious envy, on the other hand, should be unrelated to performance in long-distance running. Study 3 has shown that malicious envy is linked to a fear of not living up to a certain standard and decreases motivation to reach such a goal. Therefore, being exposed to upward comparison standards during training should not lead to the adoption of a higher goal and therefore not to increased performance during the race.

To investigate these hypotheses, in Study 4, we measured participants' dispositional benign and malicious envy shortly before they took part in a marathon or a half-marathon. They also indicated the goal they had set themselves for their race. We hypothesized that dispositional benign envy would predict race performance mediated via higher goal setting. Dispositional malicious envy should not show this pattern.

Method

Participants

In total, 474 individuals participated in this study. We excluded the data of 36 individuals who, instead of running the regular half or full marathon, participated in smaller, non-comparable races taking place at the same time (e.g., the team relay marathon). Additionally, the questionnaires of 23 individuals could not be matched to their race results because they did not provide a race number or because their race number was illegible. Furthermore, 21 individuals had no race results because they either did not start in the race, were disqualified, or started but did not finish the race. Finally, 23 individuals did not indicate

a specific time goal (they left the field blank or stated that they just wanted to finish the race). One participant indicated an extreme time goal for the marathon (it was much faster than the world record), which was most likely an error. The remaining sample⁴ consisted of 370 participants, 208 of them ran the half marathon and 162 the full marathon. They were 17-78 years old ($M = 39.60$, $SD = 10.67$), 252 were male.

Materials and procedure

We approached the runners on the two days before the race when they picked up their race number at the Cologne Marathon exhibition. We invited them to take part in a study on the effects of social comparisons on sports performance in exchange for the chance to win a gift voucher in a lottery. In the questionnaire, they were asked to indicate their race number, to complete the benign ($\alpha = .79$) and malicious envy ($\alpha = .83$) items⁵, and to indicate the time goal they had set themselves for their race. After the race, we downloaded the runners' race results and their demographic data, which were publicly available from the website of the Cologne Marathon, using the individual race numbers as identifiers.

Results and Discussion

We present descriptive statistics and zero-order correlations in Table 3. We used the average running speed in kilometers per hour as dependent variable. Runners' time goal was also transformed into a speed goal. As predicted, dispositional benign envy was positively related to higher goal setting and performance during the race. In contrast, dispositional malicious envy was unrelated to these variables.

We then tested the hypothesis that the goal runners had set for themselves before the race mediated the relationship between dispositional benign envy and race performance. We present the results of the mediation analysis controlling for age, gender, type of race, and dispositional malicious envy in Figure 1. The indirect effect in a bootstrap mediation analysis

with 5000 bootstrap re-samples and bias-corrected confidence interval (Preacher & Hayes, 2008) was significant $ab = .15$, CI 95% [.03; .28], Sobel $Z = 2.56$, $p = .01$. Repeating the same analysis with dispositional malicious envy as predictor yielded no significant indirect effect, $ab = -.09$, CI 95% [-.27; .09], Sobel $Z = -1.14$, $p = .26$.⁶

Although not anticipated, we noted during data collection that not every runner had set a specific time goal for the race. This enabled us to test another hypothesis in Study 4. According to our reasoning, dispositional malicious envy is fueled by a fear of not living up to a standard of excellence and also less motivation to reach this goal. In other words, dispositional malicious envy should lead to an active avoidance of a specific goal. This would be in line with the dynamics of enviers' underlying motives. In the current study, a number of participants did not indicate a concrete race goal although we explicitly asked for it. We tested whether dispositional benign and malicious envy predicted the tendency to indicate no goal. To this end, we ran a logistic regression in which we regressed goal (0 – goal indicated, 1 – no goal indicated) on dispositional benign and malicious envy, controlling for age, sex, and type of race. In line with our reasoning, dispositional benign envy marginally predicted the adoption of a concrete race goal, $B = -0.42$, $SE = 0.23$, $\chi^2(1) = 3.34$, $p = .07$, $OR = 0.66$, CI 95% [0.42; 1.03]. However, also as hypothesized, dispositional malicious envy significantly predicted the avoidance of a concrete race goal, $B = 0.49$, $SE = 0.18$, $\chi^2(1) = 7.30$, $p = .01$, $OR = 1.64$, CI 95% [1.14; 2.34].

In summary, our hypotheses were supported. Higher goal setting mediated the association of dispositional benign envy on race performance. This constitutes the first evidence for behavioral correlates of dispositional benign envy with a real-world behavioral outcome. In addition, we also found that dispositional malicious envy predicted the active avoidance of a concrete race goal. Together, these findings strongly support the contention that dispositional benign and malicious envy are connected to distinct motivational dynamics.

General Discussion

Previous research has treated dispositional envy as a unitary construct. In contrast, recent research on state envy has shown that people may react to threatening upward comparisons with two qualitatively distinct forms of envy: benign envy, which involves the motivational tendency to improve oneself, and malicious envy, which is aimed at pulling the superior other down. We predicted that people also differ in their propensity to experience benign and malicious envy. To capture the two envy forms on the trait level, we developed the BeMaS scale which uniquely predicts benign and malicious reactions in comparison situations. We further reasoned that dispositional benign envy is fueled by an optimistic achievement motive and associated with the adoption of a standard of excellence provided by the envied person and, ultimately, increased performance. In contrast, dispositional malicious envy should be fueled by a pessimistic fear of not living up to the standard of excellence provided by the envied person and the active disengagement of such a goal.

The data confirm our predictions. They reveal that dispositional benign and malicious envy can be measured as distinct forms of envious responding (Study 1). Furthermore, the data show that the DES (Smith et al., 1999)—the most widely used scale to measure dispositional envy so far—exclusively taps into dispositional malicious envy. In addition, the BeMaS predicts benignly and maliciously envious responses towards an upward social comparison standard that people are confronted with (Study 2). In line with these behavioral inclinations, dispositional benign envy is linked to hope for success, whereas dispositional malicious envy is linked to fear of failure and decreased hope for success (Study 3). Moreover, these motivational dynamics translate into performance patterns of long-distance runners mediated via increased goal setting for dispositional benign envy. The propensity to experience malicious envy can even be associated with the active disengagement of concrete goals (Study 4).

The current data highlight that the BeMaS allows to uncover previously unknown motivational dynamics of envy. In Study 4, dispositional malicious envy predicted the active disengagement of a concrete race goal of long-distance runners. This fits the results of Study 3 which showed that dispositional malicious envy is linked to a fear of not living up to a certain standard of excellence and decreased hope to reach it. It follows that dispositional malicious envy may also be an important predictor of motivational behavior in other settings and be related to other specific forms of coping strategies that fit this motivational dynamic. For instance, people prone to malicious envy may often actively deny the goal to get good grades in an educational situation, or disidentify with the goal to pursue a better position in the company. They may also be more likely to switch to other comparison domains to bolster their self-esteem, or they may engage in self-handicapping. This reflects a pattern of a self-protection strategy (rather than a self-enhancement strategy) in responding to self-esteem threat evoked by upward social comparisons (cf. Hepper, Gramzow, & Sedikides, 2010).

Furthermore, translated versions of the BeMaS may be an interesting means to test cultural differences of dispositional benign and malicious envy and how they relate to other psychological constructs. There is not yet much research on cultural variations in envious responding (but see Foster, 1972) and we are not aware of such research under the umbrella of benign and malicious envy. In eastern cultures people tend to construe the self as interdependent (Markus & Kitayama, 1991). Given that such a self-construal leads under some circumstances to stronger assimilation effects (Kühnen & Hannover, 2000), we would predict more benign envy. Nevertheless, eastern cultures often instill stable social hierarchies and demand to respect these fixed status differences (Hofstede, Hofstede, & Minkov, 2010). This could decrease felt personal control over one's outcomes which would then increase malicious envy (Van de Ven et al., 2011b). Such hypotheses could easily be tested with the BeMaS.

The studies presented above are strongly focused on the motivational dynamics of dispositional envy. We see this as a central dimension of envious responding. Nevertheless, we are optimistic that the BeMaS can also help to predict distinct relationships of the different envy forms with other important personality characteristics and important psychological outcomes. For instance, it has been shown that dispositional envy is related to all three elements of the Dark Triad (Veselka et al., 2014). As Veselka et al.'s scale presumably taps into dispositional malicious envy, it remains to be investigated how dispositional benign envy is related to Machiavellianism, narcissism, and psychopathy. We predict benign envy to be positively related to Machiavellianism and narcissism but not to psychopathy (Lange, Crusius, & Hagemeyer, 2014). Benign envy results from an appraisal of control over personal outcomes (Van de Ven et al., 2011b) which might, in excess, lead to a grandiose view on the self and therefore narcissism (Lange, Hagemeyer, & Crusius, 2014). Furthermore, benign envy is characterized by strong frustration and negative affect (e.g., Crusius & Lange, 2014). Its central goal is to overcome this frustration by leveling up. Possibly, in the extreme, the benignly envious are inclined to use every means to attain this superior level of achievement, even if they have to resort to trickery and manipulation characterizing Machiavellianism. In summary, confidence in the self and a willingness to stop at nothing to level up in concert with hope for success should protect the benignly envious individual from negative affect in the long run and thus, from psychopathy. On the other hand, we would predict dispositional malicious envy, to be related to Machiavellianism and psychopathy as measured within the Dark Triad. Malicious envy entails hostile behaviors directed at the envied person (e.g., Duffy et al., 2012; Moran & Schweitzer, 2008) which could underlie a manipulative mind. These hostile behaviors in concert with resentful thoughts might eventually lead into subclinical psychopathic thoughts (see for instance Gold, 1996).

Conclusion

For a long time, there has been agreement about the hostile nature of envy. Recent findings, however, cast doubt on this one-dimensional picture of envious responding. Next to the socially destructive behaviors that characterize malicious envy, the benign form of envy can also lead to upward directed behavior. In the present paper we conceptualized and measured envy as a two-dimensional personality trait. This enabled us to link dispositional malicious and benign envy to distinct pessimistic and optimistic motivational tendencies and, ultimately, behavior. We are confident that taking the dual nature of envy into account will uncover the wide variety of motivational dynamics and behavioral consequences of the most joyless of all sins.

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Footnotes

¹ For this and all of the subsequent studies, we report all data exclusions, all manipulations, and all measures. The sample size of each study was set in advance. In Study 1, 2 and 3, we restricted our analyses *a priori* to native speakers who were in the US during testing, indicated that they were not fairly or very distracted during the study, indicated that they comprehended the tasks and instructions, and that we can include their data into our analyses (Meade & Craig, 2012). This led to the exclusion of 22 participants in Study 1, seven participants of Study 2, and 10 participants of Study 3. In Study 4, we did not collect this data to keep the questionnaire as short as possible. For more information on the diversity of the demographic variables and the overall good quality of personality psychology research conducted with mTurk samples see Buhrmester, Kwang, and Gosling (2011).

² We also tested the temporal stability of the BeMaS over a three to four week interval. These analyses confirmed the temporal stability of the BeMaS. Details can be found in the Supplementary Data.

³ In the dispositional benign envy scale, the term *envy* was translated into the German word for benign envy *beneiden*. In the dispositional malicious envy scale the term *envy* was translated into the German word that captures both envy forms *Neid*.

⁴ A binary logistic regression showed that neither dispositional benign envy, $B = -0.08$, $SE = 0.12$, $\chi^2(1) = 0.41$, $p = .52$, $OR = 0.93$, nor dispositional malicious envy, $B = .03$, $SE = 0.15$, $\chi^2(1) = 0.04$, $p = .84$, $OR = 1.03$, predicted the likelihood of data exclusion.

⁵ This study was conducted with our first translation of the BeMaS into German.

Unfortunately, we later learned that one dispositional malicious envy item did not load highly on the respective scale. This item was later slightly rephrased which corrected this problem.

However, our predictions were mostly centered on dispositional benign envy.

⁶ We also tested a full model with structural equation modeling such that dispositional benign and malicious envy served as parallel predictors. The results are the same but the model is less parsimonious. Details can be found in the Supplementary Data.

Table 1

The Benign and Malicious Envy Scale (BeMaS) and Factor Loadings of Each Item

| | Item | Benign Envy | Malicious Envy |
|------|---|-------------|----------------|
| (1) | When I envy others, I focus on how I can become equally successful in the future. | .84 | -.09 |
| (3) | If I notice that another person is better than me, I try to improve myself. | .84 | -.11 |
| (4) | Envyng others motivates me to accomplish my goals. | .76 | .11 |
| (7) | I strive to reach other people's superior achievements. | .84 | .02 |
| (9) | If someone has superior qualities, achievements, or possessions, I try to attain them for myself. | .81 | .09 |
| (2) | I wish that superior people lose their advantage. | .03 | .72 |
| (5) | If other people have something that I want for myself, I wish to take it away from them. | .05 | .81 |
| (6) | I feel ill will towards people I envy. | -.04 | .89 |
| (8) | Envious feelings cause me to dislike the other person. | -.03 | .84 |
| (10) | Seeing other people's achievements makes me resent them. | -.01 | .88 |

Note. Factor loadings were taken from a factor analysis with oblimin rotation with the collapsed samples from Study 2, Study 3 and the Supplementary Data ($N = 933$). Numbers in parentheses refer to the item's position in the full scale. Factor loadings $> .30$ are written in bold.

Table 2

Descriptive Statistics and Zero-Order Correlations of the Scales used in Study 3.

| | <i>M (SD)</i> | Benign Envy | Malicious Envy | Hope for Success | Fear of Failure | INCOM | INCOM Ability | INCOM Opinion |
|-------------------------------|---------------|-------------|----------------|------------------|-----------------|-------|---------------|---------------|
| Benign Envy ^a | 4.12 (0.92) | - | | | | | | |
| Malicious Envy ^a | 2.54 (1.13) | -.07 | - | | | | | |
| Hope for Success ^b | 3.12 (0.50) | .37* | -.26* | - | | | | |
| Fear of Failure ^b | 2.78 (0.73) | .05 | .26* | -.19* | - | | | |
| INCOM ^c | 3.39 (0.68) | .26* | .21* | .10 | .39* | - | | |
| INCOM Ability ^c | 3.09 (0.88) | .27* | .26* | .00 | .41* | .92* | - | |
| INCOM Opinion ^c | 3.76 (0.66) | .16* | .07 | .23* | .23* | .79* | .49* | - |

^a Participants responded on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). ^b Participants responded on a scale from 1 (*strongly disagree*) to 4 (*strongly agree*). ^c Iowa-Netherlands Comparison Orientation Measure. Participants responded on a scale from 1 (*I disagree strongly*) to 5 (*I agree strongly*). * $p < .05$

Table 3

Descriptive Statistics and Zero-Order Correlations of the Variables in Study 4.

| | <i>M (SD)</i> | Benign Envy | Malicious Envy | Age | Gender | Race Type | Race Goal | Race Speed |
|-----------------------------|---------------|------------------|----------------|-------|--------|-----------|-----------|------------|
| Benign Envy ^a | 3.41 (1.03) | - | | | | | | |
| Malicious Envy ^a | 1.58 (0.77) | .32* | - | | | | | |
| Age | 39.60 (10.67) | -.23* | -.18* | - | | | | |
| Gender ^b | 0.32 (0.47) | .10 ⁺ | .03 | -.23* | - | | | |
| Race Type ^c | 0.44 (0.50) | -.02 | -.05 | .11* | -.24* | - | | |
| Race Goal ^d | 10.77 (1.50) | .12* | -.03 | .05 | -.31* | .05 | - | |
| Race Speed ^d | 10.67 (1.48) | .11* | -.01 | .02 | -.32* | .02 | .86* | - |

Note. Spearman Correlations.^a Participants responded on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). ^b 0 – Male, 1 – Female. ^c 0 – Half Marathon, 1 – Full Marathon.^d Kilometers per Hour. * $p < .05$ ⁺ $p < .10$

DISPOSITIONAL BENIGN AND MALICIOUS ENVY

Figures

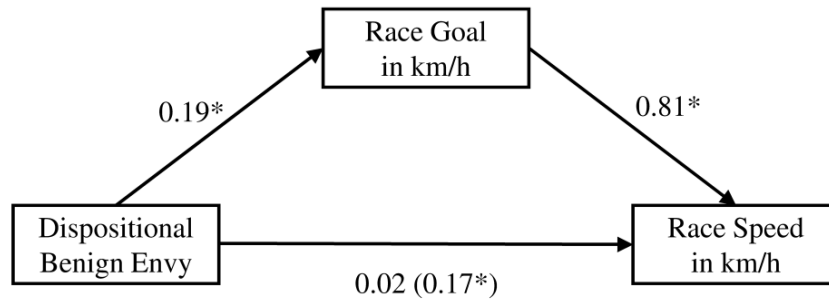


Figure 1. Mediation effect of dispositional benign envy on race speed via race goal controlling for age, gender, race type, and dispositional malicious envy. * $p < .05$

DISPOSITIONAL BENIGN AND MALICIOUS ENVY

Supplementary Data

Confirmatory Factor Analysis

Participants

We collapsed five independent samples including the samples from Study 2 (Sample 4) and Study 3 (Sample 5) in which we used the BeMaS. Details regarding the origins of the samples, their composition regarding age and gender as well as details on the reliability of the dispositional benign and malicious subscales can be found in Table S1.

Materials and Procedure

In each sample, participants filled in the BeMaS next to other scales unrelated to the current analysis.

Results and Discussion

A model with two correlated factors—dispositional benign and malicious envy—showed good fit to the data, $\chi^2(34) = 189.89, p < .001, GFI = .96, CFI = .97, AGFI = .93,$ and $RMSEA = .07$ CI95% [.06; .08]. The standardized regression weights for each item were $> .63$. Both factors were correlated, $r(933) = .15, p < .001$. Importantly, an alternative model with one trait envy factor on which all items loaded produced very poor fit, $\chi^2(35) = 2662.85, p < .001, GFI = .55, CFI = .47, AGFI = .29,$ and $RMSEA = .28$ CI95% [.27; .29]. This corroborates the structural stability of the BeMaS especially in comparison to a conception of envy as a unitary factor.

Temporal Stability

Participants

DISPOSITIONAL BENIGN AND MALICIOUS ENVY

The temporal stability of the BeMaS was tested with Sample 3 from the confirmatory factor analysis (see Table S1). The final sample included 174 participants amounting to a response rate of 89%.

Materials and Procedure

Three to four weeks after participants had completed the scale, we invited them to complete the BeMaS again.

Results and Discussion

The temporal stabilities of the dispositional benign envy subscale, $r(174) = .67, p < .001$, and the dispositional malicious envy subscale, $r(174) = .66, p < .001$, were both acceptable. This corroborates the quality of the BeMaS and speaks to the dispositional nature of benign and malicious envy.

Structural Equation Model Study 4

We tested a complete model with the data of Study 4. In the model, dispositional benign and malicious envy served as parallel predictor variables. We specified indirect effects of the envy forms via race goal to race speed. Variance in race goal and race speed already explained by age, gender, and race type were controlled. In addition, the envy forms and the covariates were all allowed to correlate. The model showed excellent fit, $\chi^2(2) = 1.15, p = .56$, GFI = 1.00, AGFI = 0.99, CFI = 1.00, RMSEA = .000 CI 95% [.000; .088] (see Figure S1). The indirect effect for dispositional benign envy via race goal on race speed with 5000 bootstrap re-samples and bias-corrected confidence interval (Preacher & Hayes, 2008) was significant, $ab = 0.16, CI 95\% [0.04; 0.28]$. The excellent model fit implies that this constitutes a full mediation. Also as expected, the indirect effect of dispositional malicious envy was not significant, $ab = -0.09, CI 95\% [-0.27; 0.09]$.

DISPOSITIONAL BENIGN AND MALICIOUS ENVY

Table S1

*Demographic Data of Participants of the Confirmatory Factor Analysis and Descriptive**Statistics of the BeMaS*

| | Sample | N | M _{Age} | n(male) | Benign Envy ^a | | Malicious Envy ^a | |
|---|-----------------|-----|------------------|---------|--------------------------|------------|-----------------------------|------------|
| | | | | | α | M(SD) | α | M(SD) |
| 1 | MTurk | 218 | 35.43 | 79 | .88 | 3.96(1.10) | .88 | 2.50(1.12) |
| 2 | German Students | 134 | 26.16 | 43 | .85 | 3.81(0.98) | .84 | 2.40(0.93) |
| 3 | MTurk | 195 | 36.23 | 80 | .90 | 4.00(1.18) | .88 | 2.27(1.09) |
| 4 | MTurk | 194 | 31.18 | 129 | .89 | 4.12(1.10) | .91 | 2.53(1.18) |
| 5 | MTurk | 192 | 31.60 | 121 | .84 | 4.12(0.92) | .90 | 2.54(1.13) |

^a Answers were given on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*).

DISPOSITIONAL BENIGN AND MALICIOUS ENVY

Figures

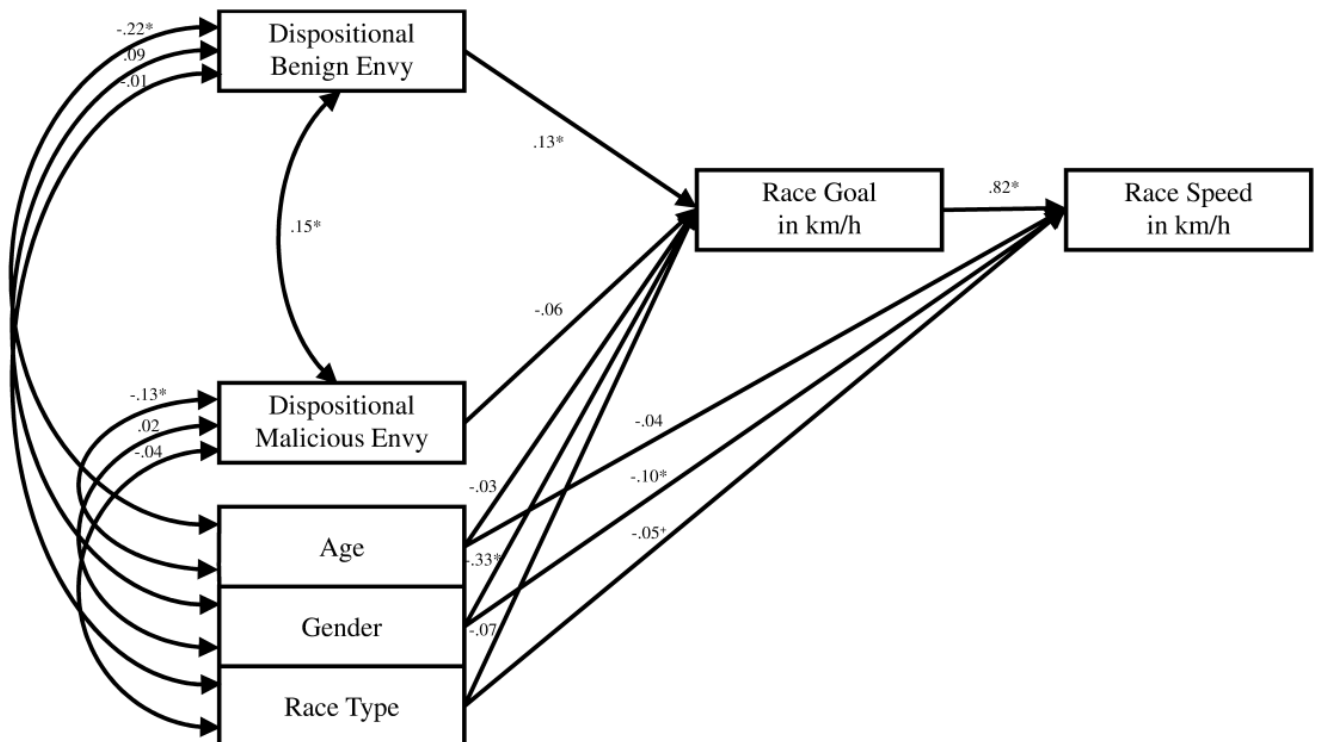


Figure S1. Indirect effects of dispositional benign and malicious envy via race goal on race speed controlling for age, gender, and race type. Gender was coded 0 – Male, 1 – Female. Race Type was coded 0 – Half Marathon, 1 – Full Marathon. * $p < .05$. + $p < .10$