Narcissistic Status Pursuit in Everyday Social Life: A Within-Person Process Approach to the Behavioral and Emotional Dynamics of Narcissism

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We embrace the values of openness and transparency in science (Schönbrodt et al., 2015). We report how we determined our sample size, all data exclusions (if any), all

manipulations, and all measures in the study (Simmons et al., 2012), or refer to project documentations in the OSF. The data and statistical code necessary to reproduce the reported results can be retrieved from https://osf.io/nxyh3/. The hypotheses for the studies, data cleaning procedures, and statistical analyses were preregistered; see https://osf.io/nxyh3/. We are grateful to Martje Kohlhoff, Tina Nadine Ricken, and Elina Ryvkina for their help with conducting and documenting the data collection.

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Abstract

Status pursuit has been emphasized as a key motivational factor underlying narcissism, but research has just begun to unravel the processes by which more narcissistic individuals pursue status in their everyday social interactions. In this manuscript, we combine process models of narcissistic status pursuit with three-factor models of narcissism to test whether different aspects of narcissism (i.e., agentic, antagonistic, and neurotic narcissism) can be characterized by stronger reactivity to different kinds of status perceptions (i.e., the perceived assignment of status, attack on status, and neglect of status). Using data from two experience sampling studies, one involving college students ($N_{participants}$ = 285; $N_{observations}$ = 18,036) and one in the general population ($N_{participants}$ = 1,177; $N_{observations}$ = 36,074), we first found that the perceived assignment of status, attack on status, and neglect of status were related to status-relevant behaviors (i.e., expressive, combative, and avoidant behaviors) and emotions (e.g., pride, anger, and shame) within persons on average. Next, we found that both mean levels of perceptual, behavioral, and emotional states and status contingencies (i.e., the within-person relationships of status perceptions with behavioral and emotional states) varied considerably across individuals and that these individual differences were reliable and stable across time. Lastly, we found some associations between trait levels of agentic, antagonistic, and neurotic narcissism and individual differences in mean levels as well as status–emotion contingencies. Our findings emphasize the multifaceted and status-driven nature of narcissism and support the use of theoretically derived contingencies as more dynamic aspects of personality.

[Word Count: 247 words]

Keywords: narcissism, status, emotions, experience sampling, social interactions

Narcissistic Status Pursuit in Everyday Social Life: A Within-Person Process Approach to the Behavioral and Emotional Dynamics of Narcissism

The desire for social status has been identified as a primary motivation of individuals with high narcissism (Grapsas et al., 2020; Mahadevan & Jordan, 2022; Zeigler-Hill et al., 2019). However, it is unclear how more narcissistic individuals pursue status in their everyday lives. One potential process underlying narcissistic status pursuit is heightened sensitivity to status cues (Grapsas et al., 2020): Due to their stronger motivation to attain a high status (Mahadevan & Jordan, 2022; Zeigler-Hill et al., 2019), more narcissistic individuals may pay more attention to status cues in social situations and react more strongly to these cues with status-relevant behaviors and emotions (i.e., display heightened behavioral and emotional reactivity). Here, we combine these process ideas of narcissistic status pursuit (Grapsas et al., 2020) with three-factor models of narcissism (e.g., Krizan & Herlache, 2018; Miller et al., 2017; Wright & Edershile, 2018). Specifically, we test whether agentic, antagonistic, and neurotic aspects of narcissism are systematically linked to different kinds of status perceptions (i.e., the perceived assignment of status, attack on status, and neglect of status), which evoke different status-relevant behaviors (i.e., expressive, combative, and avoidant behaviors) and emotions (e.g., pride, anger, and shame).

Most previous studies that have examined the association between narcissism and status pursuit have focused on the stable trait level, but recent theoretical and methodological advances in psychology have opened up new opportunities to study narcissism-relevant states in the ongoing flow of everyday behavior (Ackerman et al., 2019; Edershile & Wright, 2022). Inspired by these developments, we adopted a process-based approach that is focused on the status dynamics that take place during real social interactions. More specifically, we conducted two large-scale experience sampling method (ESM) studies (total $N_{\text{participants}}$ = 1,462, total $N_{\text{observations}}$ = 54,110), in which participants repeatedly reported on their status

perceptions, behavioral states, and emotional states during their most recent social interaction. We used these data to examine (a) average status contingencies (i.e., the within-person relationships of status perceptions with behavioral and emotional states); (b) the magnitude, reliability, and stability of individual differences in mean levels of perceptual, behavioral, and emotional states as well as in status contingencies; and (c) the relationships of these individual differences with questionnaire-based trait narcissism (i.e., the narcissism scores from the commonly used dispositional narcissism questionnaires).

Narcissism and Social Status

Social status can be defined as the degree of influence, respect, and admiration one receives in a social situation (Anderson et al., 2015; Cheng et al., 2013). A growing body of research has shown that more narcissistic individuals tend to obtain higher social status in groups (for a review, see Grosz et al., 2020). However, the processes underlying narcissistic status pursuit are unclear. One idea is that more narcissistic individuals are more motivated to pursue status (Mahadevan & Jordan, 2022; Zeigler-Hill et al., 2019) and are therefore more sensitive to status cues in their social environments, such as the perceived admiration and respect of others (Grapsas et al., 2020). This means that more narcissistic individuals should pay more attention to status cues (e.g., monitor more closely how much admiration and respect is paid to them during social interactions) and react more strongly to the perception of these cues (e.g., experience more pleasure in response to status assignment and more displeasure in response to status loss). Previous research has provided initial support for the link between narcissism and heightened reactivity to status cues. In a rigged video-game tournament, individuals with high narcissism tended to display more status-enhancing behaviors (rank buying) in response to victories and more combative behaviors (point stealing) in response to defeat (Szücs et al., 2022). On an emotional level, more narcissistic individuals displayed greater increases in positive affect after status satisfaction and greater increases in negative affect after status frustration (Grapsas et al., 2021, 2022).

Here, we extend previous research on narcissism's links to behavioral and emotional reactivity by examining whether different aspects of narcissism (i.e., agentic, antagonistic, and neurotic narcissism) are activated by different *kinds* of status perceptions (i.e., the perceived assignment of status, attack on status, and neglect of status). Moreover, we zoom in on specific interpersonal behaviors (i.e., expressive, combative, and avoidant behaviors) and emotions (e.g., pride, anger, and shame), which are theoretically relevant for narcissism-status dynamics. We explain our conceptual model of different aspects of narcissism as well as their hypothesized associations with different status perceptions, behaviors, and emotions below.

Disentangling Agentic, Antagonistic, and Neurotic Narcissism

Traditionally, narcissism has been dealt with as a unitary construct even though different aspects of narcissism have often been acknowledged (e.g., Brown et al., 2009; Kernberg, 1975). More recent conceptual and empirical research has converged on the view that there are three interrelated aspects of narcissism that need to be distinguished due to their divergent patterns of correlates and consequences (Back, 2018; Crowe, Lynam, et al., 2019; Krizan & Herlache, 2018; Miller et al., 2017; Wright & Edershile, 2018): *agentic* narcissism (e.g., assertiveness, charmingness, enjoyment of social attention), *antagonistic* narcissism (e.g., arrogance, aggressive reactions when criticized, exploitation), and *neurotic* narcissism (e.g., insecurity, shame, hypersensitivity). The classical distinction between grandiose and vulnerable narcissism (Cain et al., 2008; Wink, 1991) conflates either the agentic and antagonistic aspects of narcissism (i.e., grandiose narcissism) or its antagonistic and neurotic aspects (i.e., vulnerable narcissism; Back, 2018) and will therefore not be adopted in the present study.

Narcissism and Behavioral Strategies

According to a working model of narcissistic modes (Back, 2018), all aspects of narcissism arise out of a unitary overarching goal (i.e., to create and maintain a grandiose

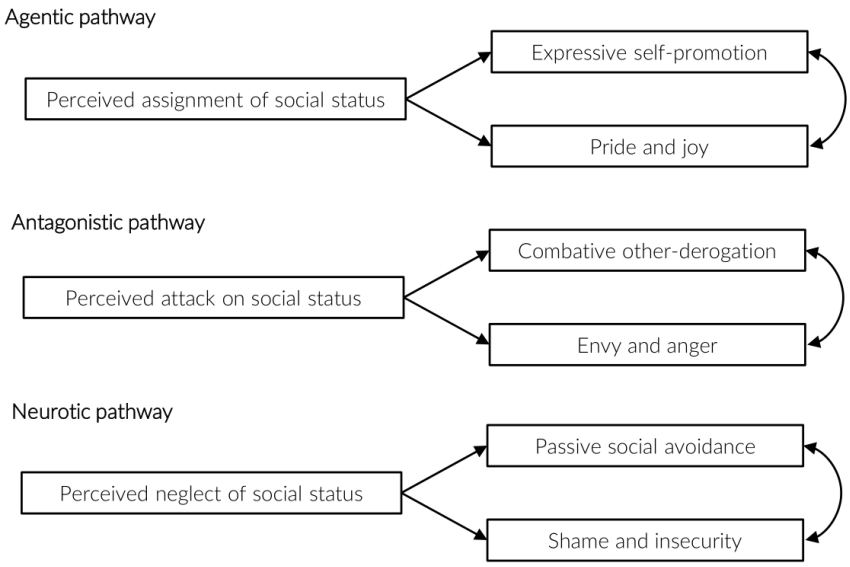
self), but they differ in when they are activated and how they are expressed. An overview of the three different dynamics is presented in Figure 1.

The agentic aspect is thought to be the "default mode" in individuals with high narcissism. It is activated when individuals perceive themselves to have high status, for example, when they feel admired, respected, and influential (see "Perceived assignment of social status" in Figure 1; Grapsas et al., 2020). The agentic aspect of narcissism is related to extraversion, self-enhancement, and a self-promotional strategy characterized by self-assured and expressive interactive behaviors (see "Expressive self-promotion" in Figure 1; Back et al., 2013; Grove et al., 2019; Leckelt et al., 2015). These behaviors reflect a prestige-based strategy to status pursuit where individuals aim to demonstrate superior competence to impress others (Cheng et al., 2013). Agentic narcissism is typically linked to positive social outcomes, particularly indicators of social potency, such as peer popularity and leadership emergence (Back et al., 2013; Härtel et al., 2023; Leckelt et al., 2015).

The antagonistic aspect of narcissism is activated in response to status-related threats, such as being criticized or outperformed by others (see "Perceived attack on social status" in Figure 1; Grapsas et al., 2020). It is related to low agreeableness, self-protection, and a self-defensive strategy characterized by other-derogative and combative interactive behaviors (see "Combative other-derogation" in Figure 1; Back et al., 2013; Grove et al., 2019; Leckelt et al., 2015). These behaviors reflect a dominance-based strategy to status pursuit where individuals use aggression to intimidate others (Cheng et al., 2013). Antagonistic narcissism is typically linked to negative social outcomes, particularly indicators of social conflict and declining peer approval (Back et al., 2013; Leckelt et al., 2015).

Figure 1

Research Model



The third aspect of narcissism—neurotic narcissism—comes into play when the status-related needs of individuals with high narcissism have been neglected, and there is a low probability that the individual can regain admiration through the use of aggressive behavior (see "Perceived neglect of social status" in Figure 1; Back, 2018). Neurotic narcissism is characterized by attributions of hopelessness and defeat and is related to passive and avoidant interactive behaviors (see "Passive social avoidance" in Figure 1; Back, 2018). For instance, vulnerable narcissism (which incorporates neurotic narcissism) has been shown to be related to cold behavior in social interactions (Edershile et al., 2019; Edershile & Wright, 2021b; Miller et al., 2012) and interpersonal problems (Dashineau et al., 2019; Kealy et al., 2022; Pincus et al., 2009).

Narcissism and Emotional Outcomes

The model described above outlines clear expectations regarding the emotional lives of more narcissistic individuals, particularly with respect to self-conscious emotions (e.g.,

pride, shame, envy) and anger. Self-conscious emotions play a central role in the regulation of social status and hierarchies (Cheng et al., 2010; Lange et al., 2016). As individuals with high narcissism are particularly concerned with attaining superior status (Grapsas et al., 2020; Mahadevan & Jordan, 2022; Zeigler-Hill et al., 2019), they are thought to be more prone to experiencing self-conscious emotions. The link between narcissism and anger is in accordance with classical notions of "narcissistic rage," which suggest that more narcissistic individuals should react with anger and aggression when their self is threatened (Kjærvik & Bushman, 2021; Kohut, 1972; Krizan & Johar, 2015).

According to the working model of narcissistic modes (Back, 2018), agentic narcissism should be related to positive emotions that signal status gains, such as pride and joy (see "Pride and joy" in Figure 1; Durkee et al., 2019). Antagonistic and neurotic narcissism, by contrast, should be related to distinct sets of negative emotions. Antagonistic narcissism should be related to high-arousal negative emotions that signal status threats, such as envy and anger (see "Envy and anger" in Figure 1). By contrast, neurotic narcissism should be linked to low-arousal negative emotions that signal status loss, such as shame and insecurity (see "Shame and insecurity" in Figure 1; Durkee et al., 2019).

Previous research has provided initial evidence for these assumptions. For instance, agentic narcissism has been found to be related to higher subjective well-being and more positive affect, whereas both antagonistic and neurotic narcissism have been found to be related to lower subjective well-being and more negative emotions (e.g., Grove et al., 2019; Kaufman et al., 2020). In addition, agentic, antagonistic, and neurotic narcissism have shown differential associations with more specific emotions: Only agentic narcissism was positively related to authentic pride (Rogoza et al., 2018), whereas only antagonistic narcissism was related to malicious envy (Lange et al., 2016) and state anger (Fatfouta et al., 2015). Vulnerable or neurotic narcissism, by contrast, have been linked to internalizing negative

emotions, such as shame, guilt, and depression (Di Sarno et al., 2020; Kaufman et al., 2020; Morf et al., 2017).

These empirical results align with the conceptual model of different narcissistic aspects outlined above, but little research has tested whether specific behavioral and emotional reactions are activated by different kinds of status perceptions. In addition, more research is needed to examine the proposed associations by applying truly dynamic approaches that can capture the behavioral and emotional functioning of individuals with high narcissism as it actually happens—on the repeated momentary within-person state level.

Narcissism on a Within-Person State Level

Previous research has mostly focused on the between-person level, correlating questionnaire-based trait narcissism with reports of typical levels of status-relevant behaviors or emotions. However, this approach has provided little insight into the actual state-dynamics that characterize more narcissistic individuals (Edershile & Wright, 2022). Modern dynamic approaches to personality (e.g., Back, 2021; Baumert et al., 2017; Fleeson & Jayawickreme, 2015; Geukes et al., 2018; Kuper et al., 2021) characterize individuals by stable behavioral, emotional, cognitive, and motivational tendencies around which they systematically vary across situations and time (i.e., personality states; Fleeson, 2001). Building on these approaches, we conceptualize narcissism as between-person differences in within-person state networks (see Figure 5 from Back, 2021), which encompass mean levels of states (e.g., average behavioral and emotional states) as well as relationships between state components (i.e., how much variation in one state is linked to variation in another). This conceptualization means that individuals with high narcissism differ from others both in the frequency with which they experience specific narcissism-relevant states in their everyday lives (mean state levels) and in the strengths of the relationships between these states (state contingencies; Kuper et al., 2022). The concept of state contingences is central to many theories of personality (e.g., Denissen & Penke, 2008; Mischel & Shoda, 1995), including theoretical

accounts of narcissism (e.g., self-regulatory models; Morf & Rhodewalt, 2001). Also, many narcissism questionnaires include if-then contingencies between interpersonal perceptions, emotions, and behaviors (e.g., "I often get annoyed when I am criticized"; Back et al., 2013). Here, we aim to capture these if-then contingencies more directly via associations between repeatedly sampled narcissistic states.

Empirical research has just begun to investigate narcissistic states in everyday life using ESM or daily diary designs (e.g., Ackerman et al., 2019; Edershile & Wright, 2022). Most recent ESM studies have used adjective measures of either grandiose (e.g., brilliant, glorious, powerful, prestigious; Crowe et al., 2016) or vulnerable states (e.g., ignored, resentful, misunderstood, underappreciated; Crowe et al., 2018). These initial studies have demonstrated that both grandiose and vulnerable narcissism vary substantially within persons (i.e., people are more narcissistic in some moments than others; Edershile et al., 2019) and that within-person changes in narcissism can be linked to status-related events and perceptions (Giacomin & Jordan, 2016b; Mahadevan et al., 2020), interpersonal behaviors (Edershile & Wright, 2021b; Mahadevan et al., 2020), as well as affective and emotional states (Di Sarno et al., 2020; Edershile et al., 2019; Giacomin & Jordan, 2016a). In addition, a recent daily diary study provided initial support for two distinct status modes on the within-person state level (Mota et al., 2023): Status success was related to more assertive behavior and more positive affect within persons (agentic mode), whereas status failure was related to more hostile behavior and more negative affect (antagonistic mode).

Associations of Trait Narcissism With Mean Levels and Contingencies

Moving toward an integration of dynamic, within-person approaches with classical trait approaches, there is considerable evidence that mean levels of narcissism-relevant states are related to trait measures of narcissism (e.g., Edershile et al., 2019; Giacomin & Jordan, 2016a, 2016b; Roche et al., 2013; Wright et al., 2017). Moreover, individuals with high trait narcissism fluctuate more in their self-esteem, grandiose states, and vulnerable states

(Edershile et al., 2021; Edershile & Wright, 2021a; Geukes et al., 2017). However, previous studies concerning narcissism dynamics have often been decontextualized (Edershile & Wright, 2022). As such, it is unclear what causes such fluctuations in narcissism. Here, we examine if-then contingencies between narcissistic interpersonal perceptions, emotions, and behaviors to shed more light on the triggers of narcissistic states. We focus on status contingencies (i.e., behavioral and emotional reactivities to perceived status cues), as these contingencies are central to process models of narcissistic status pursuit (see "Narcissism and Social Status" above).

ESM studies have suggested that trait narcissism may be related to individual differences in contingencies. Regarding agentic narcissism, Zeigler-Hill et al. (2019) suggested that the relationship between daily perceptions of status and state self-esteem may be more pronounced in individuals with high agentic narcissism. However, this effect was only marginally significant. Similarly, in Mota et al. (2023), the positive effect of perceived status success on state admiration was stronger for individuals with high agentic narcissism, but only in one of two studies. In Wright et al. (2017), the contingencies of perceiving another person as dominant (which can be seen as a form of status threat) with quarrelsome behavior and negative affect were stronger in individuals with higher levels of features of narcissistic personality disorder. Regarding antagonistic narcissism specifically, Geukes et al. (2017) showed that the link between a perceived lack of social inclusion and state self-esteem was stronger in individuals with high antagonistic narcissism. Thus, the overall evidence for a link between different aspects of narcissism and individual differences in status contingencies remains ambiguous.

Importantly, previous ESM or daily diary studies have had some limitations, which may explain the lack of consistent associations between narcissism and status contingencies. First, most previous studies have focused on the daily level (e.g., Mahadevan et al., 2020; Mota et al., 2023; Zeigler-Hill et al., 2019), with relatively few studies examining narcissism

and status dynamics on the momentary level (for ESM studies assessing related constructs, see Roche et al., 2013; Wright et al., 2017). A more granular time-resolution may be more appropriate for capturing processes that occur during social interactions. Second, most previous studies used unidimensional measures (e.g., for status) and did not differentiate between modalities (e.g., behavioral and emotional states) that need to be disentangled to examine contingencies between different types of narcissistic states (e.g., how narcissism-relevant behaviors are associated with narcissism-relevant emotions). Third, most previous studies either used blends of different aspects of narcissism or focused exclusively on agentic and antagonistic narcissism but did not examine all three aspects of narcissism together. Lastly, previous studies may have been underpowered to detect small cross-level interaction effects. To address this gap in the extant literature, we used ESM data from 1,462 individuals and more than 50,000 observations to identify (a) the momentary patterns of behaving and feeling that characterize agentic, antagonistic, and neurotic narcissism and (b) whether these patterns are triggered by different kinds of status perceptions.

Summary and Hypotheses

In the present work, we aim to zoom in on the behavioral and emotional dynamics of narcissism in everyday life. Importantly, we distinguish between the agentic, antagonistic, and neurotic aspects of narcissism and analyze specific status-related perceptions as underlying motivational triggers of their behavioral and emotional effects.

Our hypotheses are summarized in Table 1.[1] On the basis of the conceptual framework in Figure 1, we expected to observe (a) significant average status contingencies (i.e., within-person relationships between perceived status cues, behavioral states, and emotional states; Hypotheses H1 and H2), (b) significant between-person variance in both the mean levels of states (H3a) and the strengths of the status contingencies (H3b), (c) that individual differences

[1] We preregistered two additional hypotheses that are summarized in the Supplement (https://osf.io/nxyh3/) along with the respective results.

in mean levels and status contingencies are reliable and stable over time (H4a and H4b), and (d) that narcissistic aspects on the trait level (as measured by the commonly used dispositional narcissism questionnaires) predict the respective relevant mean state levels (H5a) and the strengths of the respective relevant status contingencies (i.e., moderate the narcissistic reactivities; H5b).

Table 1

Hypotheses

Number	Description
Average status contingencies	
H1	Perceived status cues are related to behavioral states. - Perceived assignment of status → expressive behavior - Perceived attack on status → combative behavior - Perceived neglect of status → avoidant behavior
H2	Perceived status cues are related to emotional states. - Perceived assignment of status → agentic emotions - Perceived attack on status → antagonistic emotions - Perceived neglect of status → neurotic emotions
Interindividual differences in mean levels and status contingencies	
H3a	Mean levels of perceived status cues, behavioral states, and emotional states differ between persons.
H3b	The strengths of the status contingencies (H1 and H2) differ between persons.
H4a	Individual differences in mean levels are reliable and stable over time. The strengths of the stabilities will be examined in an exploratory fashion.
H4b	Individual differences in status contingencies (H1 and H2) are reliable and stable over time. The strengths of the stabilities will be examined in an exploratory fashion.
Effects of trait narcissism on mean levels and status contingencies	
H5a	Mean state levels are related to the respective relevant aspects of narcissism. - Agentic: perceived assignment of status, expressive behavior, agentic emotions - Antagonistic: perceived attack on status, combative behavior, antagonistic emotions - Neurotic: perceived neglect of status, avoidant behavior, neurotic emotions
H5b	We will explore whether the strengths of the status contingencies are moderated by narcissism. Specifically, we will examine whether the status contingencies detailed in H1 and H2 are stronger for people with higher trait levels on the respective relevant aspect of narcissism.

Method

In this Method section, we describe the sample, procedures, and measures of the relevant data collection project. A codebook with a full description of all procedures and measures applied in this project can be retrieved from https://osf.io/6kzx3/. In addition, the data collection is described in Ryvkina et al. (2023). The data and statistical code necessary to reproduce the reported results can be retrieved from https://osf.io/nxyh3/. The hypotheses for the studies, data cleaning procedures, and statistical analyses were preregistered; see https://osf.io/nxyh3/. All procedures used in this study were approved by the review board of the University of Münster.

Participants

Participants came from two studies, which both comprised two data collection waves. Data for Study 1 were provided by 285 participants (78.8% female, 20.8% male, 0.4% identified as other than female or male; M_{age} = 22.8 years, SD_{age} = 7.1, Range: 16–67) who were mostly college students. Of these, 179 participants took part in both waves, 95 participants took part in Wave 1 only, and 11 participants took part in Wave 2 only. The average participant completed 63.3 valid ESM surveys with social interactions. The participants were recruited via advertisements in lectures, via posters and flyers, which were distributed at the university and in other public spaces, and via announcements in social media groups and Internet forums. We offered three different types of compensation: In both waves, participants received research credit (proportional to the number of ESM surveys completed) and personalized feedback on their emotional experiences. Moreover, highly compliant participants could participate in a lottery with the chance to win one of 25 Amazon vouchers (€50 each) in Wave 1, and they could earn up to €30 in Wave 2.

Data for Study 2 were provided by 1,177 participants (80.8% female, 18.9% male, 0.3% identified as other than female or male; M_{age} = 38.2 years, SD_{age} = 13.2, Range: 16–77) from the general population. Of these, 259 participants took part in both waves, 590

participants took part in Wave 1 only, and 328 participants took part in Wave 2 only. The average participant completed 30.6 valid ESM surveys with social interactions. Participants were recruited via media announcements and Facebook ads and compensated with personalized feedback. The data from Study 2 were used in Kroencke et al. (2020) and Zettler et al. (2022) to examine the associations between personality and emotional and behavioral reactions to the COVID-19 pandemic. In addition, the data from Studies 1 and 2 were used in an article (Kroencke, Humberg, et al., 2023) concerning the associations between extraversion, social participation, and social reactivity processes.

Data Cleaning

We took several steps to ensure the quality of the data. First, we excluded expired reports, reports that were completed too close to each other (i.e., less than 40 min between consecutive surveys), and reports that were sent out during the night due to a technical error. Second, we excluded participants who provided fewer than 10 valid state assessments (42 participants in Study 1; 1,109 participants in Study 2). We only counted state assessments that referred to a previous social interaction (instead of spending time alone) because the variables used in the analyses pertained to social experiences (see "State Measures" below). For the stability analyses (see "Analytical Strategy" below), we excluded participants with fewer than 10 state assessments per data half (i.e., at least 20 state assessments per wave for stability analyses within waves and at least 10 state assessments per wave for stability analyses across waves). Lastly, we excluded one participant who did not provide a narcissism score in Study 1.

Procedures

The data collection for Study 1 Wave 1 began on January 13, 2020. It consisted of a 2-week-long ESM phase (see "ESM surveys" below). Before and after the ESM phase, all participants completed trait questionnaires (see "Initial Questionnaire Package" and "End of

Study Questionnaire Package" below). All questionnaires were programmed in formR (Arslan et al., 2020), and the entire study took place online.

In March 2020, we decided to extend Study 1 by adding a second data collection wave. To this end, we invited all participants from the first wave to participate a second time. The second wave started on March 16, 2020 and consisted of the same three phases as in Wave 1 (Initial Questionnaire Package, 2-week-long ESM phase, End of Study Questionnaire Package).

The data collection for Study 2 with participants from the general population also started in March 2020. It also consisted of two waves, which began on March 18, 2020 and May 13, 2020, respectively. The procedures were identical to Study 1. Thus, participants from both studies completed up to 4 weeks of experience sampling.

Initial Questionnaire Package

When clicking on the link to the study, participants first read a brief introduction and provided informed consent. They then completed a range of trait surveys, including demographic information and trait measures of narcissism,[2] chose their personal start and end times, and indicated their preferred email address.

ESM Surveys

The next day, participants entered the ESM phase, during which they completed six ESM surveys per day for a total of 14 days. The surveys were sent out on a time-based schedule: Participants received one survey at a randomly selected time within each of six equally spaced blocks between their personal start and end times, with the stipulation that the surveys had to be at least 40 min apart. The surveys were sent out via email and had to be

[2] Demographic information and trait measures of narcissism were not included in the initial questionnaire package of Study 1 Wave 2, which focused exclusively on COVID-19-related questions.

completed within 45 min after receiving the prompt. If participants did not react to the email, they were reminded once after 20 min. Each survey took approximately 2 min to complete.

As part of the ESM surveys, participants were asked whether they had engaged in a social interaction that lasted longer than 5 min since the last assessment. If they answered affirmatively, participants were shown several questions about their most recent social interaction (see "State Measures" below). If participants did not report a social interaction, they were asked to complete similar items on their most recent activity, which are not relevant to the present manuscript.

End of Study Questionnaire Package

At the end of the study, participants completed another set of trait surveys, including trait measures of narcissism, and were debriefed.

Trait Measures

Demographic variables were completed once in Study 1 (*t1* = prior to the first ESM wave) and twice in Study 2 (*t1* = prior to the first ESM wave, *t3* = prior to the second ESM wave). In both studies, we used the first assessment per participant for our analyses.[3]

The narcissism measures were completed up to three times in Study 1 (*t1* = prior to the first ESM wave, *t2* = after the first ESM wave, *t4* = after the second ESM wave) and up to four times in Study 2 (*t1* = prior to the first ESM wave, *t2* = after the first ESM wave, *t3* = prior to the second ESM wave, *t4* = after the second ESM wave). These assessments were highly correlated (Study 1: .76–.93; Study 2: .73–.90). To increase the reliability and the variance that could be attributed to stable individual differences, we decided to average across all available trait assessments. That is, per participant, we first computed a mean across items for each trait assessment, and second, we averaged across all available trait assessments.

[3] The 11 participants who took part in Study 1 Wave 2 only were excluded from the analyses using demographic control variables.

Demographic Variables

As part of the demographic survey, participants indicated their age (in years) and gender. These variables were used as control variables in additional exploratory analyses (see "Exploratory Analyses" below).

Narcissism

In Study 1, we used the 18-item Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013) to measure agentic and antagonistic narcissism (on 6-point Likert scales) and the 10-item Hypersensitive Narcissism Scale (HSNS; Hendin & Cheek, 1997) to measure neurotic narcissism (on a 5-point Likert scale).

In Study 2, we used the short version of the Narcissistic Admiration and Rivalry Questionnaire (NARQ-S; Leckelt et al., 2018) to measure agentic and antagonistic narcissism (on 6-point Likert scales). We did not administer the HSNS (Hendin & Cheek, 1997) to measure neurotic narcissism in Study 2. However, we administered the short form of the Big Five Inventory-2 (BFI-2-S; Soto & John, 2017), which was designed to measure the Big Five personality traits (on 5-point Likert scales). Previous research has shown that scores on the HSNS are related to high neuroticism and low agreeableness (Crowe, Weiss, et al., 2019), particularly to the facets of anxiety, depression, and compassion (reverse-scored).[4] Therefore, we decided to create a BFI-2-S-based measure of neurotic narcissism by averaging these three facets.

State Measures

[4] We examined the relationships between the HSNS and the BFI-2-S neuroticism and agreeableness facets in an independent sample (N = 559), using a cross-validation procedure. Our results showed that the three facets of anxiety (β = .32), depression (β = .28), and compassion (β = -.24) significantly predicted scores on the HSNS, above and beyond the other facets of neuroticism and agreeableness. Moreover, the mean of anxiety, depression, and compassion (reverse-scored) correlated as strongly with the HSNS ($r_{\text{BFI-2-S-based, HSNS}}$ = .63) as an alternative measure of neurotic narcissism based on the Five Factor Narcissism Inventory (Miller et al., 2016; $r_{\text{FFNI Neuroticism, HSNS}}$ = .58; $r_{\text{BFI-2-S-based, FFNI Neuroticism}}$= .61).

All perceptual, behavioral, and emotional states were answered on a 6-point Likert scale. Whenever items were aggregated to form a composite score, we computed a mean per time point for each participant.

Status Perceptions

Whenever participants had engaged in a social interaction since the last prompt (see above), they were asked to rate what they perceived during the interaction. We averaged two items to create composite scores for the perceived assignment of status (i.e., "I was admired," "I was respected"), perceived attack on status (i.e., "I was criticized," "Others tried to steal the show from me"), and perceived neglect of status (i.e., "I was ignored," "I was sidelined").

Behavioral States

Next, participants indicated which behaviors they exhibited during the interaction. We averaged two items to create composite scores for expressive behavior (i.e., "I took the lead," "I was self-assured"), combative behavior (i.e., "I criticized others," "I was unfriendly"), and avoidant behavior (i.e., "I did not get involved," "I was reserved").

Emotional States

Next, participants indicated how they felt immediately after the interaction. We averaged items to create composite scores for agentic emotions (i.e., "proud," "successful," "superior"), antagonistic emotions (i.e., "angry," "envious," "resentful"), and neurotic emotions (i.e., "ashamed," "insecure"). For further exploratory analyses, we also assessed general positive and general negative affect with two items each, reflecting high and low arousal states, respectively: "enthusiastic," "relaxed" (positive affect), and "anxious," "sad" (negative affect). Lastly, we measured general valence by asking participants how dissatisfied versus satisfied they felt overall, using a slider from 0–100.[5]

Social Context

[5] This variable was transformed to a scale ranging from 1–6 for the analyses.

Regarding the social context, participants indicated (a) whether the interaction took place *directly/in person* versus *via phone/chat* and (b) the role of up to five interaction partners in relation to themselves. We created binary variables for face-to-face (*directly/in person*) versus online (*via phone/chat*) interactions and for interactions with close ties (*friend/acquaintance, partner, my child, parent, sibling, other relatives*) versus weak ties (*supervisor, my employee, co-worker, customer/client/patient, other persons*).[6]

Analytical Strategy

The data were analyzed with Multilevel Structural Equation Modeling (MSEM) in M*plus* (Muthén & Muthén, 1998-2017). We used Bayesian estimation with the default, noninformative priors. Our confirmatory analyses (for hypotheses, see Table 1) followed four steps, which are described next.

Confirmatory Analyses

First, we computed descriptive statistics for all measures, including the intraclass correlation, ICC1 (i.e., the proportion of between-person variance; H3a) and ICC2 (i.e., the reliability of person means; H4a) for all perceptual, behavioral, and emotional states.

Second, we examined status–behavior and status–emotion contingencies. We ran three models for behavioral states (perceived assignment of status → expressive behavior, perceived attack on status → combative behavior, perceived neglect of status → avoidant behavior) and three models for emotional states (perceived assignment of status → agentic emotions, perceived attack on status → antagonistic emotions, perceived neglect of status → neurotic emotions). The models were specified as:

Within-person level:

$$y_{ti} = \beta_{0i} + \beta_{1i} Status_{w,ti} + \varepsilon_{ti}$$

[6] Whenever participants chose interaction partners from both categories (i.e., interaction with close *and* weak ties), this observation was removed from the analyses (Study 1: 2.6%; Study 2: 3.2%).

Between-person level:

$$\beta_{0i} = \gamma_{00} + \mu_{0i}$$

$$\beta_{1i} = \gamma_{10} + \mu_{1i}$$

where y_{ti} denoted a behavioral or emotional state at time *t* for person *i*, which was modeled as a function of a random intercept (β_{0i}), the random effect of the respective status perception (β_{1i}), and an error term (ε_{ti}). Status perceptions were centered around latent person means because our focus was on within-person effects (as denoted by the subscript *w*; Enders & Tofighi, 2007; Lüdtke et al., 2008). All random effects were allowed to covary on Level 2.

We used the status contingency models to estimate average contingencies (i.e., fixed within-person effects [γ_{10}] of perceived status cues on behavioral [H1] and emotional states [H2]) and interindividual differences in contingencies (i.e., random slope [μ_{1i}] standard deviations [H3b]). In addition, we estimated the reliabilities of the individual contingencies (H4b) using the following equation (Neubauer et al., 2020):

$$Reliability_i = \frac{\tau_{11}^2}{\tau_{11}^2 + \frac{\sigma_e^2}{(T_i - 1)\sigma_x^2}}$$

where τ_{11}^2 represented the random slope variance, σ_e^2 represented the residual variance at Level 1, σ_x^2 represented the within-person variance of the predictor, and T_i represented participant *i*'s number of repeated measurement occasions. In accordance with Neubauer et al. (2020), the reliability was calculated separately for every participant and then averaged across participants.

Third, we estimated the stability of individual differences in mean levels and contingencies (a) within the first wave, (b) within the second wave, and (c) across the two waves. To this end, we restructured the data such that the two data halves were represented by separate variables (see Hamaker et al., 2023, for a similar approach). To estimate the stability of mean levels, we modeled two random intercepts for each state variable, representing the

mean levels of perceptual, behavioral, or emotional states in the first and second data halves, respectively. Stabilities were estimated as latent random intercept correlations, which indicated the extent to which individual differences in mean levels were similar across data halves (H4a). To estimate the stability of contingencies, we modeled two random slopes for each contingency (i.e., the within-person effects of perceived status cues on behavioral and emotional states in the first and second data halves, respectively) and estimated the latent random-slope correlations (H4b).[7]

We added the stabilities of self-reported narcissism traits as a benchmark against which to compare the stabilities of the mean levels and contingencies. To this end, trait measures were correlated across *t1* and *t2* (Studies 1 and 2), across *t3* and *t4* (only Study 2), and across the two waves (i.e., Study 1: average of *t1* and *t2* was correlated with *t4*, Study 2: average of *t1* and *t2* was correlated with average of *t3* and *t4*).

Fourth, we added the effects of questionnaire-based trait narcissism on the mean levels and contingencies to the status contingency models. Thus, the regression equation became:

Within-person level:

$$y_{ti} = \beta_{0i} + \beta_{1i} Status_{w,ti} + \varepsilon_{ti}$$

Between-person level:

$$\beta_{0i} = \gamma_{00} + \gamma_{01} Narcissism_i + \mu_{0i}$$

$$\beta_{1i} = \gamma_{10} + \gamma_{11} Narcissism_i + \mu_{1i}$$

where γ_{01} represented the relationship between narcissism and a participant's mean level on the respective behavioral or emotional state (H5a) and γ_{11} indicated whether the strength of the status contingency was related to narcissism (H5b). In addition, we report the correlations between the mean levels and contingencies (i.e., random intercept–random slope correlations) from the unconditional models (i.e., without narcissism as a predictor).

[7] We used manual centering for status perceptions to decrease the number of latent random effect covariances on Level 2.

Exploratory Analyses

We ran five sets of exploratory analyses. The results of these exploratory analyses can be found in the Supplement (Tables S1 to S13, https://osf.io/nxyh3/). First, we included additional control variables (Tables S1 and S2): To control for potential time trends in the data, we added a variable indicating the number of the measurement occasion (i.e., 0 for the first assessment, 1 for the second assessment, etc.) and a variable indicating the wave (i.e., 0 for the first wave, 1 for the second wave). The effects of the timing variable and wave were allowed to vary between participants. To control for potential gender and age differences, we included gender (dummy coded; 0 = *male*, 1 = *female*[8]) and age as Level 2 predictors. We controlled for both main and interaction effects. Second, we reran all analyses using both more specific, single emotions (proud, successful, superior, angry, envious, resentful, ashamed, insecure) and broader measures of affect (general valence, general positive and negative affect) instead of the narcissism-specific affect measures used in the present manuscript (Tables S3 to S5). Third, we examined status–behavior and status–emotion contingencies simultaneously in one model (Table S6). We were interested in the correlations between the within-person state residuals of behaviors and emotions (i.e., the extent to which behavioral and emotional states were correlated after status perceptions were accounted for) and the latent correlations between different random slopes (e.g., the extent to which behavioral and emotional reactivities were correlated). Fourth, we investigated differences and consistencies in mean levels and status contingencies across communication channels (face-to-face vs. computer-mediated interactions) and interaction partners (interactions with strong ties vs. weak ties; Table S7). Lastly, we conducted several analyses to test the distinctiveness of our findings. Specifically, we reran the analyses for cross-aspect status contingencies as well as cross-aspect trait–contingency and trait–mean-level associations

[8] The third option, *Other*, was set to missing due to the low frequency of this response.

(Tables S8 to S10), examined the unique effects of status perceptions by regressing the behavioral and emotional states on all three status perceptions simultaneously (Table S11), examined the unique effects of self-reported narcissism traits by regressing the status contingencies and mean levels on all three narcissism traits simultaneously (Table S12), and investigated the effects of an overall narcissism trait on the status contingencies and mean levels (Table S13). We briefly summarize the results in the manuscript but refer to the tables in the Supplement (https://osf.io/nxyh3/) for full details.

Additional Specifications

We report both unstandardized and standardized effects for all regression coefficients. We standardized with respect to level-specific variances (Schuurman et al., 2016): Within-person effects were standardized with respect to the within-person standard deviation, between-person effects were standardized with respect to the between-person standard deviation, and cross-level interactions were standardized with respect to the random slope standard deviation. According to the conventions by Funder and Ozer (2019), standardized effects of .10, .20, .30, and .40 can be considered small, medium, large, and very large, respectively. To provide robust estimates of effects, we report meta-analytic results for: (a) average status contingencies, (b) main effects of trait narcissism on mean levels, and (c) main effects of trait narcissism on contingencies. To this end, we ran fixed-effects meta-analyses of the standardized coefficients using the *metafor* package (Viechtbauer, 2010) in R (R Core Team, 2021). To determine significance, we used the conservative $p < .01$ (one-tailed) threshold given the large number of analyses.

Results

We first provide an overview of the descriptive statistics (e.g., means and standard deviations, reliabilities, and intercorrelations; Table 2). Second, we present the results of the confirmatory analyses (for hypotheses, see Table 1). Third, we provide a condensed presentation of the results from the exploratory analyses, that is, analyses with control

variables, analyses for specific emotions and general affect, multicontingency models, cross-context differences and consistencies in mean levels and contingencies, and cross-aspect associations as well as unique and shared effects (a more detailed presentation can be found in the Supplement in Tables S1 to S13; https://osf.io/nxyh3/).

Average Status Contingencies

We first examined whether perceived status cues were related to behavioral and emotional states within persons on average (i.e., average status–behavior and status–emotion contingencies). As hypothesized (H1 and H2), the perceived assignment of status, attack on status, and neglect of status were related to the expected interpersonal behaviors and emotions (Table 3). For instance, in social interactions when participants felt more admired and respected (perceived assignment of status), they tended to behave in a more self-assured manner (expressive behavior) and to feel more proud, successful, and superior (agentic emotions). The average status–behavior and status–emotion contingencies were significant in both studies and ranged from medium to very large in size (average meta-analytic $\beta = .36$).

Interindividual Differences in Mean Levels and Status Contingencies

As hypothesized (H3a), mean levels of perceived status cues, behavioral states, and emotional states showed substantial between-person variability, as indicated by the ICC1s in Table 2. In Study 1, 18%–48% of the variance in perceptual, behavioral, and emotional states was located between persons. In Study 2, 22%–46% of the variance was located between persons.

Table 2

Descriptive Information

Variable	*M* (*SD*)	ICC1	Rel	1	2	3	4	5	6	7	8	9	10	11	12
Study 1															
1: Status assignment	3.69 (0.95)	.36	.97		-.17	-.26	.37	-.16	-.24	.45	-.24	-.20			
2: Status attack	1.32 (0.60)	.25	.95	-.01		.29	-.05	.44	.10	-.02	.41	.27			
3: Status neglect	1.24 (0.57)	.22	.95	-.12	.79		-.18	.20	.38	-.13	.33	.21			
4: Expressive behavior	3.64 (1.01)	.34	.97	.60	.06	-.03		.09	-.37	.40	-.08	-.25			
5: Combative behavior	1.44 (0.77)	.18	.93	-.09	.83	.70	.05		.06	-.02	.50	.19			
6: Avoidant behavior	1.48 (0.87)	.20	.94	-.12	.62	.77	.01	.67		-.22	.16	.22			
7: Agentic emotions	2.43 (1.09)	.48	.98	.65	.34	.22	.49	.25	.12		-.14	-.20			
8: Antagonistic emotions	1.23 (0.51)	.22	.95	-.05	.79	.75	.01	.82	.65	.27		.39			
9: Neurotic emotions	1.46 (0.78)	.25	.96	-.07	.58	.58	-.11	.58	.56	.08	.69				
10: Trait agentic narcissism	3.14 (0.76)		.86	.27	.21	.18	.31	.16	.11	.33	.15	-.01			
11: Trait antagonistic narcissism	2.08 (0.70)		.84	.00	.41	.38	.13	.43	.37	.25	.44	.30	.27		
12: Trait neurotic narcissism	2.83 (0.46)		.61	-.05	.24	.27	-.10	.31	.24	.07	.37	.43	-.10	.41	
Study 2															
1: Status assignment	3.26 (1.01)	.40	.95		-.20	-.26	.34	-.16	-.19	.45	-.25	-.17			
2: Status attack	1.29 (0.66)	.28	.92	.02		.41	-.02	.45	.14	-.03	.47	.30			
3: Status neglect	1.24 (0.66)	.29	.93	-.09	.80		-.12	.25	.35	-.11	.40	.25			
4: Expressive behavior	3.65 (1.15)	.41	.95	.60	.01	-.09		.09	-.28	.43	-.05	-.17			
5: Combative behavior	1.49 (0.86)	.22	.90	.04	.72	.57	.14		.07	-.01	.53	.25			
6: Avoidant behavior	1.44 (0.86)	.25	.91	-.03	.60	.71	-.12	.51		-.16	.18	.20			
7: Agentic emotions	2.28 (1.14)	.46	.96	.65	.27	.15	.55	.25	.13		-.10	-.14			
8: Antagonistic emotions	1.24 (0.55)	.28	.92	-.03	.74	.71	-.03	.75	.58	.17		.45			
9: Neurotic emotions	1.36 (0.73)	.35	.94	-.03	.65	.67	-.18	.55	.61	.08	.75				
10: Trait agentic narcissism	2.55 (0.94)		.78	.21	.14	.08	.20	.15	.06	.25	.12	.04			
11: Trait antagonistic narcissism	2.01 (0.72)		.62	-.05	.23	.17	.02	.26	.16	.11	.25	.15	.43		
12: Trait neurotic narcissism	2.42 (0.58)		.65	-.21	.23	.25	-.27	.26	.23	-.10	.25	.40	-.11	.33	

Note. Descriptive statistics are shown for the main variables of the study. Reliability was calculated as ICC2 for the Level 1 measures and as ω_{total} for the Level 2 measures (averaged across assessments). Within-person correlations are shown in the upper triangle, between-person correlations are shown in the lower triangle. *M* = global mean, *SD* = global standard deviation, ICC1 = proportion of between-person variance, Rel = Reliability.

Table 3

Status Contingencies: Average Effects and Individual Differences

	Study 1				Study 2				Meta-analysis
Contingency	*B*	β	σ_B	Rel_σ	*B*	β	σ_B	Rel_σ	β
Agentic narcissism contingencies									
Status assignment → expressive behavior	0.40 [0.37, 0.42], $p < .001$	.35	0.21 [0.18, 0.23]	.69	0.38 [0.36, 0.40], $p < .001$	.32	0.22 [0.20, 0.24]	.53	.33
Status assignment → agentic emotions	0.46 [0.43, 0.49], $p < .001$	.44	0.21 [0.18, 0.23]	.72	0.47 [0.45, 0.48], $p < .001$	.43	0.21 [0.19, 0.22]	.54	.43
Antagonistic narcissism contingencies									
Status attack → combative behavior	0.57 [0.53, 0.61], $p < .001$	.41	0.29 [0.26, 0.33]	.75	0.63 [0.60, 0.66], $p < .001$	.44	0.38 [0.35, 0.41]	.71	.43
Status attack → antagonistic emotions	0.31 [0.28, 0.34], $p < .001$	.35	0.21 [0.19, 0.23]	.79	0.37 [0.35, 0.39], $p < .001$	.42	0.25 [0.23, 0.27]	.74	.40
Neurotic narcissism contingencies									
Status neglect → avoidant behavior	0.62 [0.56, 0.68], $p < .001$	.38	0.40 [0.35, 0.45]	.80	0.53 [0.50, 0.57], $p < .001$	.36	0.43 [0.41, 0.47]	.74	.36
Status neglect → neurotic emotions	0.32 [0.27, 0.36], $p < .001$	.22	0.28 [0.24, 0.32]	.69	0.22 [0.19, 0.24], $p < .001$	.19	0.29 [0.26, 0.31]	.66	.20
Average: *M* (*SD*)	0.45 (0.13)	.36 (.07)	0.27 (0.08)	.74 (.05)	0.43 (0.14)	.36 (.09)	0.30 (0.09)	.66 (.10)	.36 (.09)

Note. *B* = unstandardized within-person effects with 95% credible intervals and one-tailed *p*-values, β = standardized within-person effects based on average within-person variances, σ_B = standard deviations of individual differences in unstandardized within-person effects with 95% credible intervals, Rel_σ = reliabilities of individual differences in within-person effects, *M* = mean, *SD* = standard deviation. Study 1: $N_{participants}$ = 285, $N_{observations}$ = 18,036; Study 2: $N_{participants}$ = 1,177, $N_{observations}$ = 36,074.

Similarly, and in line with H3b, the strengths of the status contingencies differed between individuals, as indicated by the standard deviations in Table 3. For instance, in Study 1, an average unstandardized within-person effect of 0.45 with an average standard deviation of 0.27 indicates that 95% of the person-specific coefficients would fall between -0.08 and 0.98 (assuming a normal distribution). Similarly, in Study 2, based on the average unstandardized within-person effect and the average standard deviation, 95% of the person-specific coefficients would fall between -0.16 and 1.02. Thus, in both studies, some participants displayed extremely positive associations (i.e., more than twice the size of the average effect), whereas others showed considerably smaller associations that were sometimes even negative.

Next, we examined whether these individual differences represent trait-like constructs by examining their reliability and stability over time. As indicated in Table 2, the person means of perceptual, behavioral, and emotional states were highly reliable (range of ICC2s: .93–.98 [Study 1] and .90–.96 [Study 2]; H4a). Moreover, as shown in Table 4, the person means demonstrated considerable stability, both within and across waves (H4a): Within waves, participants who had higher mean levels in the first half of the ESM phase also tended to have higher mean levels in the second half of the ESM phase ($\bar{r}$ = .89/.90 [Study 1] and .89/.92 [Study 2]). Across waves, participants who had higher mean levels in the first wave also tended to have higher mean levels in the second wave ($\bar{r}$ = .84 [Study 1] and .73 [Study 2]). Importantly, both the reliability and stability were comparable to those of the questionnaire-based trait measures.

Table 4

Stability of Individual Differences: Contingencies and Mean Levels

	Study 1			Study 2		
Variables	r_{wave1}	r_{wave2}	r_{across}	r_{wave1}	r_{wave2}	r_{across}
Agentic narcissism contingencies						
Status assignment → expressive behavior	.56 [.32, .75], $p < .001$	.31 [-.05, .62], $p = .045$	.64 [.39, .83], $p < .001$	.61 [.44, .76], $p < .001$	.61 [.36, .81], $p < .001$	.64 [.39, .82], $p < .001$
Status assignment → agentic emotions	.66 [.43, .84], $p < .001$	.62 [.37, .81], $p < .001$	.66 [.46, .81], $p < .001$	.72 [.57, .86], $p < .001$	.56 [.34, .73], $p < .001$	.56 [.32, .74], $p < .001$
Antagonistic narcissism contingencies						
Status attack → combative behavior	.28 [.03, .51], $p = .015$	.31 [.04, .55], $p = .011$	.60 [.39, .76], $p < .001$	.40 [.24, .53], $p < .001$	.44 [.23, .62], $p < .001$	.55 [.30, .74], $p < .001$
Status attack → antagonistic emotions	.28 [.06, .47], $p = .006$	.60 [.40, .76], $p < .001$	.60 [.41, .75], $p < .001$	.25 [.09, .40], $p = .002$	.51 [.30, .68], $p < .001$	.52 [.29, .70], $p < .001$
Neurotic narcissism contingencies						
Status neglect → avoidant behavior	.52 [.31, .70], $p < .001$	.36 [-.01, .68], $p = .029$	.53 [.27, .73], $p < .001$	.34 [.18, .49], $p < .001$	.56 [.34, .74], $p < .001$	.51 [.26, .70], $p < .001$
Status neglect → neurotic emotions	.29 [.01, .54], $p = .022$	.17 [-.22, .51], $p = .194$	.42 [.11, .67], $p = .004$	.60 [.44, .74], $p < .001$	.01 [-.30, .31], $p = .478$	.29 [-.08, .60], $p = .062$
Average: *M* (*SD*)	.43 (.17)	.39 (.18)	.57 (.09)	.49 (.18)	.45 (.22)	.51 (.12)
Mean levels						
Status assignment	.89 [.84, .92], $p < .001$	.91 [.87, .94], $p < .001$	.84 [.78, .89], $p < .001$	.91 [.89, .93], $p < .001$	.92 [.89, .94], $p < .001$	.86 [.81, .90], $p < .001$
Status attack	.95 [.91, .98], $p < .001$	.91 [.86, .95], $p < .001$	.89 [.84, .93], $p < .001$	.90 [.87, .94], $p < .001$	.92 [.88, .94], $p < .001$	.68 [.57, .76], $p < .001$
Status neglect	.85 [.79, .90], $p < .001$	.85 [.78, .90], $p < .001$	.84 [.77, .89], $p < .001$	.90 [.87, .92], $p < .001$	.94 [.90, .96], $p < .001$	.70 [.60, .78], $p < .001$
Expressive behavior	.86 [.80, .90], $p < .001$	.92 [.88, .95], $p < .001$	.81 [.74, .86], $p < .001$	.91 [.89, .93], $p < .001$	.94 [.91, .96], $p < .001$	.88 [.83, .91], $p < .001$
Combative behavior	.93 [.87, .97], $p < .001$	.90 [.84, .95], $p < .001$	.78 [.69, .85], $p < .001$	.92 [.88, .96], $p < .001$	.85 [.79, .90], $p < .001$	.64 [.52, .73], $p < .001$
Avoidant behavior	.86 [.80, .91], $p < .001$	.85 [.78, .91], $p < .001$	.79 [.71, .86], $p < .001$	.84 [.79, .88], $p < .001$	.97 [.94, .99], $p < .001$	.81 [.73, .87], $p < .001$
Agentic emotions	.93 [.90, .95], $p < .001$	.95 [.93, .97], $p < .001$	.85 [.79, .89], $p < .001$	.92 [.90, .94], $p < .001$	.92 [.90, .95], $p < .001$	.89 [.85, .92], $p < .001$
Antagonistic emotions	.87 [.81, .92], $p < .001$	.92 [.86, .96], $p < .001$	.90 [.85, .94], $p < .001$	.81 [.75, .85], $p < .001$	.90 [.86, .93], $p < .001$	.45 [.31, .57], $p < .001$
Neurotic emotions	.83 [.77, .88], $p < .001$	.91 [.86, .95], $p < .001$	.87 [.81, .91], $p < .001$	.85 [.81, .88], $p < .001$	.94 [.91, .96], $p < .001$	.70 [.61, .77], $p < .001$
Average: *M* (*SD*)	.89 (.04)	.90 (.03)	.84 (.04)	.89 (.04)	.92 (.03)	.73 (.14)
Self-reported traits						
Agentic narcissism	.87 [.84, .90], $p < .001$	-	.93 [.90, .95], $p < .001$	.73 [.69, .76], $p < .001$	.80 [.77, .83], $p < .001$	.83 [.78, .86], $p < .001$
Antagonistic narcissism	.85 [.81, .88], $p < .001$	-	.88 [.84, .91], $p < .001$	.76 [.73, .79], $p < .001$	.73 [.69, .77], $p < .001$	.81 [.76, .85], $p < .001$
Neurotic narcissism	.76 [.70, .81], $p < .001$	-	.77 [.70, .83], $p < .001$	.84 [.82, .86], $p < .001$	.88 [.85, .89], $p < .001$	.90 [.87, .92], $p < .001$

Note. Correlation coefficients with 95% credible intervals and one-tailed *p*-values are shown. Stabilities of random slopes and intercepts are latent, stabilities of traits were computed as Pearson correlations of sum scores. r_{wave1} = stability correlations within the first wave, r_{wave2} = stability correlations within the second wave, r_{across} = stability correlations across the two waves, *M* = mean, *SD* = standard deviation, - = does not apply. For stability analyses of contingencies and mean levels, only participants with at least 10 assessments for each data half were retained. Study 1 Wave 1: $N_{participants}$ = 247, $N_{observations}$ = 10,121; Wave 2: $N_{participants}$ = 161, $N_{observations}$ = 7,262; across waves:

633 $N_{participants}$ = 162, $N_{observations}$ = 13,621. Study 2 Wave 1: $N_{participants}$ = 534, $N_{observations}$ = 18,330; Wave 2: $N_{participants}$ = 303, $N_{observations}$ = 10,103; across waves: $N_{participants}$ = 182,

634 $N_{observations}$ = 10,564. The stability analysis of traits was conducted for all participants who completed the respective personality assessments. Study 1 Wave 1: $N_{participants}$ = 261;

635 across waves: $N_{participants}$ = 159. Study 2 Wave 1: $N_{participants}$ = 724; Wave 2: $N_{participants}$ = 512; across waves: $N_{participants}$ = 259.

The reliability of individual differences in status contingencies was lower than that of the mean levels but acceptable (average reliability = .74 [Study 1] and .66 [Study 2]; Table 3; H4b). Moreover, individual differences in status contingencies demonstrated some stability, both within ($\bar{r}$ = .43/.39 [Study 1] and .49/.45 [Study 2]) and across waves ($\bar{r}$ = .57 [Study 1] and .51 [Study 2]; Table 4; H4b).

Effects of Trait Narcissism on Mean Levels and Status Contingencies

As hypothesized (H5a), questionnaire-based trait narcissism scores showed the expected associations with mean levels of perceptual (Table 2), behavioral, and emotional states (Table 5): Agentic narcissism was related to perceiving more assignment of status, behaving more expressively, and feeling more agentic emotions on average. Antagonistic narcissism was related to perceiving more attacks on status, behaving more combatively, and feeling more antagonistic emotions on average. Finally, neurotic narcissism was related to perceiving more neglect of status, behaving more avoidantly, and feeling more neurotic emotions on average.

Moreover, narcissism predicted individual differences in status–emotion contingencies in line with our expectations (Table 5, Figure 2; H5b). In the meta-analysis, individuals with high levels of agentic narcissism reported greater increases in agentic emotions when they were admired and respected, compared with individuals with low agentic narcissism (meta-analytic $\beta = .10$, $p < .001$). Individuals with high levels of antagonistic narcissism reacted with more antagonistic emotions when they were criticized and threatened, compared with individuals with low antagonistic narcissism (meta-analytic $\beta = .07$, $p = .001$). Finally, individuals with high levels of neurotic narcissism reacted with more neurotic emotions when they were ignored and sidelined, compared with individuals with low neurotic narcissism (meta-analytic $\beta = .07$, $p = .004$). The effect for antagonistic narcissism was significant only in Study 1, and the effect for neurotic narcissism was significant only in Study 2.

Table 5

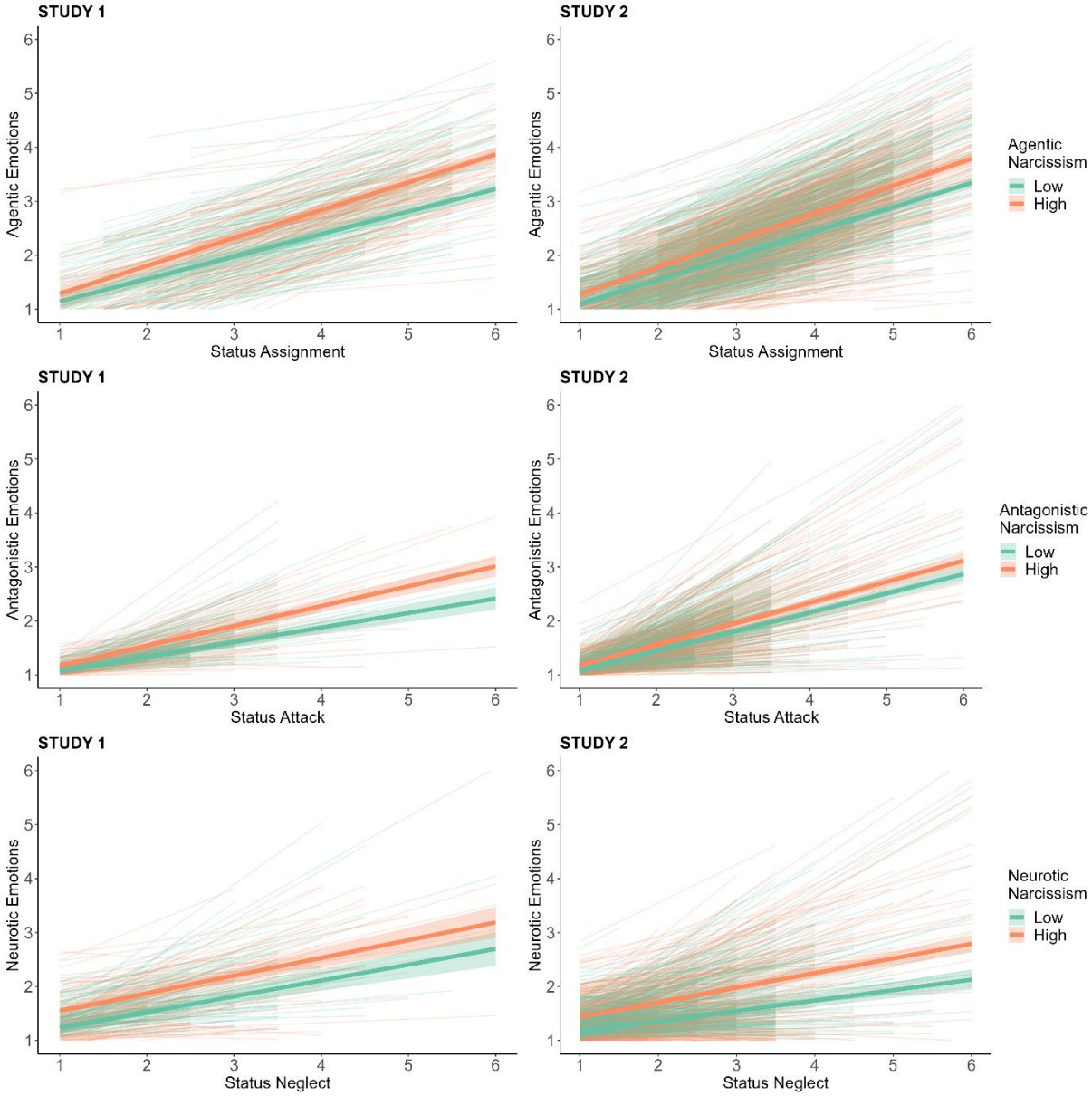
Associations Between Self-Reported Narcissism Traits, Status Contingencies, and Mean Levels

Variables	Narcissism trait → contingency		Narcissism trait → mean level		Contingency ↔ mean level
	B	β	*B*	β	*r*
Study 1					
Agentic narcissism variables					
Status assignment → expressive behavior	0.02 [-0.01, 0.05], $p = .108$	.06	0.17 [0.11, 0.24], $p < .001$	.21	-.13 [-.28, .02], $p = .046$
Status assignment → agentic emotions	0.05 [0.02, 0.08], $p < .001$	.17	0.27 [0.18, 0.35], $p < .001$	.25	.15 [.00, .29], $p = .024$
Antagonistic narcissism variables					
Status attack → combative behavior	0.04 [0.00, 0.08], $p = .036$	.09	0.14 [0.10, 0.17], $p < .001$	.32	.13 [-.02, .27], $p = .041$
Status attack → antagonistic emotions	0.04 [0.02, 0.07], $p = .001$	.15	0.11 [0.08, 0.13], $p < .001$	.34	.36 [.23, .48], $p < .001$
Neurotic narcissism variables					
Status neglect → avoidant behavior	-0.01 [-0.07, 0.04], $p = .316$	-.02	0.09 [0.05, 0.14], $p < .001$	.17	.09 [-.05, .23], $p = .108$
Status neglect → neurotic emotions	0.02 [-0.03, 0.06], $p = .217$	.04	0.17 [0.13, 0.22], $p < .001$	.32	.12 [-.03, .27], $p = .055$
Average: *M* (*SD*)	0.02 (0.02)	.08 (.07)	0.16 (0.06)	.27 (.07)	.12 (.15)
Study 2					
Agentic narcissism variables					
Status assignment → expressive behavior	0.00 [-0.02, 0.02], $p = .403$	.01	0.14 [0.10, 0.19], $p < .001$	.14	-.19 [-.27, -.11], $p < .001$
Status assignment → agentic emotions	0.02 [0.01, 0.04], $p = .003$	.08	0.21 [0.17, 0.26], $p < .001$	.20	.41 [.34, .48], $p < .001$
Antagonistic narcissism variables					
Status attack → combative behavior	0.01 [-0.01, 0.04], $p = .171$	.03	0.12 [0.10, 0.14], $p < .001$	.21	.19 [.11, .26], $p < .001$
Status attack → antagonistic emotions	0.01 [0.00, 0.03], $p = .061$	.04	0.08 [0.06, 0.10], $p < .001$	.20	.33 [.26, .39], $p < .001$
Neurotic narcissism variables					
Status neglect → avoidant behavior	0.05 [0.02, 0.08], $p = .001$	.08	0.10 [0.07, 0.13], $p < .001$	.16	.09 [.00, .17], $p = .021$
Status neglect → neurotic emotions	0.03 [0.01, 0.06], $p = .003$	.08	0.17 [0.15, 0.20], $p < .001$	.30	.32 [.25, .40], $p < .001$
Average: *M* (*SD*)	0.02 (0.02)	.05 (.03)	0.14 (0.05)	.20 (.05)	.19 (.22)
Meta-analysis					
Agentic narcissism variables					
Status assignment → expressive behavior	0.01 [-0.01, 0.02], $p = .210$	.02	0.15 [0.12, 0.19], $p < .001$	.16	-.18 [-.25, -.11], $p < .001$
Status assignment → agentic emotions	0.03 [0.02, 0.04], $p < .001$	.10	0.22 [0.19, 0.26], $p < .001$	.21	.36 [.29, .42], $p < .001$
Antagonistic narcissism variables					
Status attack → combative behavior	0.02 [0.00, 0.04], $p = .032$	.04	0.13 [0.11, 0.15], $p < .001$	.23	.17 [.11, .24], $p < .001$
Status attack → antagonistic emotions	0.02 [0.01, 0.04], $p = .001$	.07	0.09 [0.08, 0.11], $p < .001$	.23	.33 [.27, .39], $p < .001$
Neurotic narcissism variables					
Status neglect → avoidant behavior	0.03 [0.01, 0.06], $p = .010$	.06	0.10 [0.08, 0.12], $p < .001$	.17	.09 [.02, .16], $p = .008$
Status neglect → neurotic emotions	0.03 [0.01, 0.05], $p = .004$	.07	0.17 [0.15, 0.19], $p < .001$	.30	.29 [.22, .35], $p < .001$
Average: *M* (*SD*)	0.02 (0.01)	.06 (.03)	0.14 (0.05)	.22 (.05)	.18 (.20)

Note. Effects of self-reported narcissism traits on status contingencies and mean levels of behaviors and emotions are shown. *B* = unstandardized within-person effects with 95% credible intervals and one-tailed *p*-values, β = standardized effects based on random slope variances (traits predicting contingencies) or between-person variances (traits predicting mean levels), *M* = mean, *SD* = standard deviation. Self-reported narcissism traits were *z*-standardized on the between-person level prior to the analyses (i.e., also for the unstandardized coefficients). Correlations between status contingencies and mean levels were computed in unconditional models (i.e., without trait narcissism as a predictor; see Table 3) and are shown along with 95% credible intervals and one-tailed *p*-values. Study 1: $N_{participants}$ = 285, $N_{observations}$ = 18,036; Study 2: $N_{participants}$ = 1,177, $N_{observations}$ = 36,074.

Figure 2

Individual Differences in Status–Emotion Contingencies



Note. Contingencies between status perceptions and emotions are shown. For visualization purposes, status was retained on its original scale and not person-mean centered. The bold green and orange lines depict predicted average contingencies with 95% confidence bands for participants 1 *SD* below and above the mean of self-reported trait narcissism, respectively. The transparent lines depict extracted random slopes for individual participants (green = below the median of trait narcissism, orange = above the median).

Narcissism did not predict individual differences in status–behavior contingencies (Table 5, Figure 3; except for an interaction between neurotic narcissism and status neglect in the prediction of avoidant behavior in Study 2, which was, however, not significant in the meta-analysis). Taken together, we found evidence for a significant association between trait narcissism and emotional reactivity to perceived status cues, but not with behavioral reactivity. Lastly, mean levels and status reactivities were weakly to moderately correlated on average (Table 5).

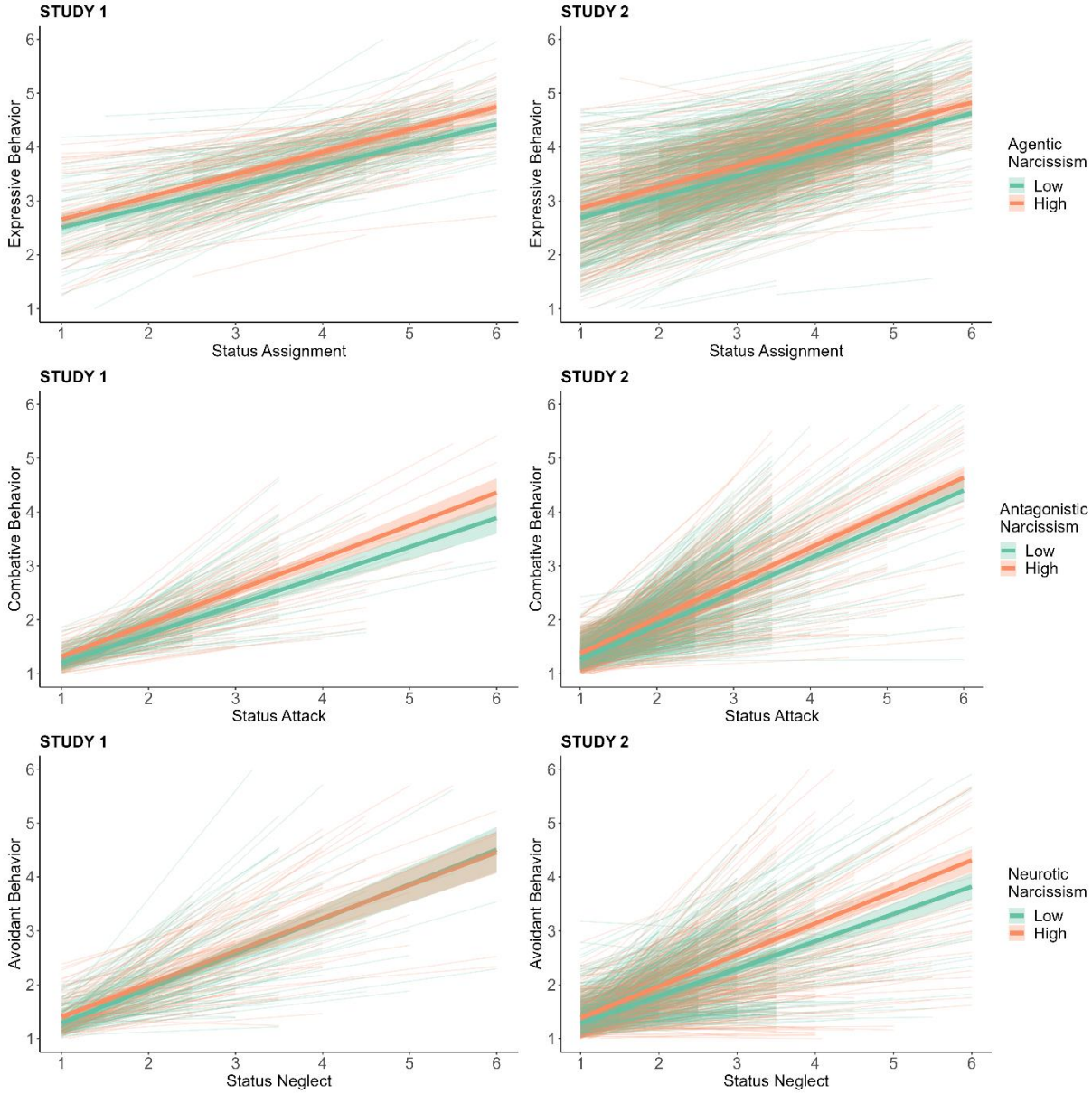
Exploratory Analyses

As can be seen in the Supplement (https://osf.io/nxyh3/), results for average contingencies (Table S1) and main effects of trait narcissism (Table S2) did not change substantially when we controlled for gender, age, assessment number, and data collection wave.

When using alternative emotional and affective states (Tables S3 to S5), we found that the effects of questionnaire-based trait narcissism were generally stronger for theoretically expected emotional states than for more general affective states. For example, agentic narcissism was positively related to mean levels of the emotions proud, successful, and superior but not significantly related to mean levels of general valence (Table S5). Similarly, cross-level interaction effects that replicated across studies were present only for specific emotions (e.g., status assignment → superior, status attack → resentful) but not for general affect (Table S5).

Figure 3

Individual Differences in Status–Behavior Contingencies



Note. Contingencies between status perceptions and behaviors are shown. For visualization purposes, status was retained on its original scale and not person-mean centered. The bold green and orange lines depict predicted average contingencies with 95% confidence bands for participants 1 *SD* below and above the mean of self-reported trait narcissism, respectively. The transparent lines depict extracted random slopes for individual participants (green = below the median of trait narcissism, orange = above the median).

In the multicontingency models (Table S6), we found that behavioral and emotional states were substantially correlated even after we accounted for status perceptions in both studies. Moreover, the status–behavior and status–emotion contingencies for agentic and antagonistic narcissism were significantly correlated with each other in both studies. That is, individuals who tended to react with more expressive behavior to the assignment of status also tended to react with more agentic emotions, and individuals who tended to react with more combative behavior to the attack on status also tended to react with more antagonistic emotions.

In our analyses on cross-context differences and consistencies in contingencies (Table S7), we found that average status contingencies did not differ significantly between face-to-face and computer-mediated interactions, except for the effect of status attack on combative behavior, which was stronger in face-to-face interactions. Moreover, individual differences in status contingencies were relatively consistent across face-to-face and computer-mediated communication (i.e., individuals who had stronger status contingencies during face-to-face interactions also tended to have stronger status contingencies during computer-mediated interactions; $\bar{r}$ = .44, Range: .31–.60).

Individual differences in status contingencies were slightly less consistent across interaction partners ($\bar{r}$ = .40, Range: .27–.53). Moreover, agentic narcissism contingencies (status assignment → expressive behavior, status assignment → agentic emotions) and neurotic narcissism contingencies (status neglect → avoidant behavior) were more pronounced when interacting with weak ties on average, whereas antagonistic narcissism contingencies (status attack → combative behavior) were more pronounced when interacting with close ties. For results regarding mean levels, see Table S7.

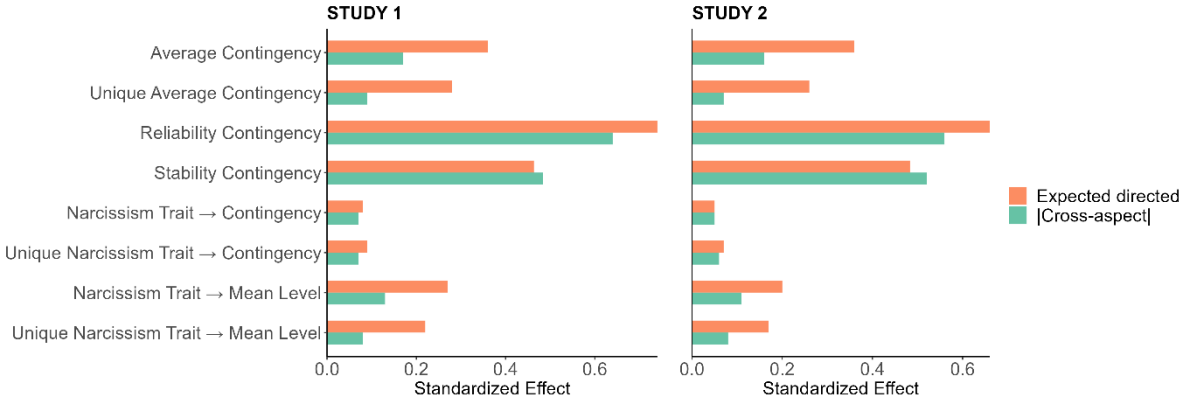
Lastly, theoretically expected effects were generally larger than cross-aspect effects (see Figure 4). For instance, the expected status contingencies were more than twice the size of the cross-aspect contingencies, and this difference became even more pronounced when

looking at unique effects. Moreover, the theoretically expected contingencies were descriptively slightly more variable and more reliable than the cross-aspect contingencies but not more stable. Similarly, the effects of self-reported narcissism traits on mean levels were larger for theoretically expected effects, particularly for unique effects. Moreover, the effects were larger for specific narcissism traits (i.e., agentic, antagonistic, or neurotic narcissism) than for the overall narcissism trait. By contrast, we observed no strong differences between theoretically expected and cross-aspect cross-level interaction effects.

A closer look at the specific associations showed some overlap between antagonistic and neurotic dynamics. For instance, the perceptual and emotional states of the antagonistic and neurotic modes were highly correlated with each other (i.e., status attack with status neglect: r_{BP} = .79/.80, r_{WP} = .29/.41; antagonistic emotions with neurotic emotions: r_{BP} = .69/.75, r_{WP} = .39/.45; see Table 2). Moreover, both status neglect and status attack showed sizable associations with antagonistic and neurotic emotions, respectively (Table S8), even when their shared variance was controlled for (Table S11). In addition, neurotic narcissism was related to higher mean levels of combative behavior and antagonistic emotions as well as to lower mean levels of expressive behavior (Table S10), above and beyond the effects of the other aspects of narcissism (Table S12). Lastly, we observed some cross-aspect cross-level interaction effects. For example, the lack of admiration and respect (i.e., low status assignment) was related to more neurotic and antagonistic emotions in individuals with high neurotic narcissism and to more antagonistic emotions in individuals with high antagonistic narcissism (Table S10).

Figure 4

Overview of Effect Sizes for Theoretically Expected and Cross-Aspect Effects



Note. The average effect sizes for theoretically expected effects were calculated using directed values. The average effect sizes for cross-aspect effects were calculated using absolute values.

Discussion

In the present manuscript, we shed light on the processes by which more narcissistic individuals pursue status in their everyday social interactions. Our results support the status-driven nature of narcissism by (a) providing empirical support for the proposed average status contingencies, (b) showing reliable and stable individual differences in mean levels of status-relevant states as well as in status contingencies, and (c) demonstrating that these individual differences are associated with questionnaire-based trait narcissism. We turn to each of these points below. We then discuss strengths, limitations, and future directions. A summary of our main findings is presented in Table 6.

Table 6

Summary of Findings

Domain	Main Findings	Conclusions
Average status contingencies	Expected contingencies: • Perceived assignment of status related to expressive behavior and agentic emotions • Perceived attack on status related to combative behavior and antagonistic emotions • Perceived neglect of status related to avoidant behavior and neurotic emotions Distinctiveness of findings: • Expected contingencies larger than cross-aspect contingencies • Expressive behavior and agentic emotions clearly most strongly related to status assignment • Cross-aspect associations of status attack with neurotic emotions and status neglect with antagonistic emotions	• Findings support the existence of different modes in line with (a) process models of narcissistic status pursuit and (b) three-factor models of narcissism • Agentic mode most distinct, some overlap between antagonistic and neurotic modes with respect to emotional outcomes
Interindividual differences in mean levels and status contingencies	Mean levels: • Vary across participants • Can be measured reliably • Are stable within (1 week) and across (2 months) waves Status contingencies: • Vary across participants • Can be measured reliably with sufficient observations • Show some degree of short-term and especially longer term stability	• Findings support the conceptualization of mean levels and status contingencies as meaningful individual difference variables

	• Are consistent across interpersonal contexts • Intercorrelate meaningfully	
Effects of trait narcissism on mean levels and status contingencies	Expected effects: • Agentic narcissism related to (a) mean levels of the perceived assignment of status, expressive behavior, and agentic emotions, and (b) the within-person link between status assignment and agentic emotions • Antagonistic narcissism related to (a) mean levels of the perceived attack on status, combative behavior, and antagonistic emotions, and (b) the within-person link between status attack and antagonistic emotions • Neurotic narcissism related to (a) mean levels of the perceived neglect of status, avoidant behavior, and neurotic emotions, and (b) the within-person link between status neglect and neurotic emotions Distinctiveness of findings: • Expected effects on mean levels larger than cross-aspect effects • Agentic narcissism clearly most strongly related to mean levels of expressive behavior and agentic emotions • Some cross-pathway associations between antagonistic and neurotic narcissism with respect to mean levels of status perceptions, combative behavior, and antagonistic emotions • No difference between expected and cross-aspect cross-level interaction effects • Some cross-aspect cross-level interaction effects (e.g., antagonistic and neurotic narcissism linked to more negative reactions to a lack of status assignment)	• Findings support the relevance of status dynamics for narcissism in line with process models of narcissistic status pursuit • Findings support the distinctiveness of agentic narcissism, but suggest some overlap between antagonistic and neurotic aspects • Findings support modern dynamic approaches to personality and theories that emphasize individual differences in situational contingencies as important aspects of personality

Average Status Contingencies

On the basis of process models of narcissistic status pursuit (Grapsas et al., 2020) and three-factor models of narcissism (e.g., Krizan & Herlache, 2018; Miller et al., 2017; Wright & Edershile, 2018), we examined different reactions to status-relevant situations in everyday social interactions. We expanded the understanding of these reactions in three important ways: First, we showed that agentic versus antagonistic behaviors are activated by different *kinds* of status perceptions. That is, agentic behaviors are activated when individuals perceive assignment of status (e.g., when they feel admired and respected by others), whereas antagonistic behaviors are activated when their status is attacked (e.g., when they feel criticized or threatened by others). The assignment of status may be seen as an indicator that others are willing to accept one's superior competence and worth, which suggests that further self-enhancement is likely to be successful (Grapsas et al., 2020). Thus, individuals may feel encouraged to engage in self-promoting behaviors to further enhance their status (Grapsas et al., 2020). By contrast, the attack on status may be seen as an indicator that situational demands surpass one's own resources and that self-promotion is unlikely to be successful (Grapsas et al., 2020). Thus, individuals may decide to rely on other-derogation in order to restore their status (Grapsas et al., 2020).

Second, we showed that the perceived assignment of and attack on status are linked to different emotional states: Whereas the assignment of status is accompanied by positive emotions, such as pride and joy, the attack on status is accompanied by negative emotions, including envy and anger and (to a lesser extent) shame and insecurity. The associations with pride and envy emphasize the important role that self-conscious emotions play in the regulation of social status and hierarchies. For instance, pride is thought to track status gains and to motivate status-enhancing behaviors (Cheng et al., 2010; Durkee et al., 2019), whereas malicious envy is thought to prompt dominant and aggressive behaviors to obtain status (Lange et al., 2016).

Third, whereas previous studies considered two modes of behavioral and affective reactions to status-relevant situations, we examined a third mode on the basis of the trifurcated structure of narcissism. Specifically, we showed that participants tended to act more reserved and to feel more ashamed and insecure when they felt ignored and sidelined (neurotic mode). Please note that we also observed sizable associations of status neglect with antagonistic emotions, suggesting there is at least some overlap between the antagonistic and neurotic modes. Thus, whereas the agentic mode was quite distinct, the antagonistic and neurotic modes were more difficult to distinguish from each other.

Process models of narcissism suggest that the agentic mode is the narcissistic default mode, from which more narcissistic individuals deviate only when their status is threatened (Back, 2018). In this instance, they should first enter an antagonistic phase, in which they try to regain high status via aggressive behavior, and only resort to the neurotic phase if the antagonistic strategy is not successful. According to our results, the two latter phases may overlap. For instance, the same input may activate states from both the antagonistic and neurotic modes, such that states from these modes can partly co-occur. It may be beneficial for future research to take a closer look at the factors that moderate how much, when, and why the antagonistic and neurotic modes overlap.

Individual Differences in Mean Levels and Status Contingencies

In line with previous work, we found that the mean levels of perceptual, behavioral, and emotional states varied across individuals. The amount of between-person variance was lower than usual: Whereas previous daily diary or ESM studies reported between-person variabilities of ~50%–70% for state narcissism (Di Sarno et al., 2020; Edershile et al., 2019; Giacomin & Jordan, 2016a, 2016b; Mahadevan et al., 2020), the between-person variability was below 50% for all perceptual, behavioral, and emotional states in our study. One reason for this discrepancy may be that other studies have primarily relied on reformulated trait measures (e.g., adjective measures adopted from cross-sectional research), which are typically

relatively abstract and therefore well-suited for assessing generalized tendencies (i.e., between-person variance), but these measures may have difficulty capturing situation-dependent fluctuations in states (i.e., within-person variance). By contrast, we used concrete perceptual, behavioral, and emotional states (for a similar approach, see Mota et al., 2023), which may be more sensitive to momentary situations and thus better able to capture within-person variation (Ringwald et al., 2022). Despite the lower amount of between-person variance in our study, individual differences in mean levels were highly reliable and stable over time. Notably, the sizes of the reliability and stability coefficients were comparable to those of questionnaire-based trait measures. These findings suggest that mean levels of perceptual, behavioral, and emotional states represent trait-like constructs.

We also observed considerable between-person variance in status contingencies. This finding is in line with other studies that found sizable heterogeneity in contingencies linking behavioral or emotional states with interpersonal perceptions (e.g., Edershile & Wright, 2021b; Mota et al., 2023; Wright et al., 2017) or situational measures (e.g., Beckmann et al., 2021; Kroencke, Harari, et al., 2023; Kuper et al., 2022). What is unclear is whether these contingencies represent meaningful individual difference variables. To examine this idea, we first showed that individual differences in status contingencies can be measured reliably. Specifically, the average reliability of status contingencies was .74 in Study 1 and .66 in Study 2. Whereas these reliability coefficients are lower than those for mean levels, they are relatively large compared with the ones found in previous studies (e.g., Kuper et al., 2022; Mota et al., 2023). Please note that the reliability of contingencies strongly depends on the number of assessments per person (Neubauer et al., 2020). For instance, the reliability was larger in Study 1 with an average of 63.3 social interactions per person than in Study 2 with an average of 30.6 social interactions per person. Future studies with an even larger number of assessments per person will most likely achieve even higher reliabilities. In addition, we showed that the individual differences in status contingencies were somewhat stable over

time. The short-term stability correlations within waves (Study 1: .43/.39, Study 2: .49/.45) were comparable to those found in previous research (Kuper et al., 2022). Importantly, the stabilities were relatively large across longer timeframes (i.e., .57 [Study 1] and .51 [Study 2] for a time lag of 2 months between waves), supporting the conceptualization of contingencies as stable individual difference variables. This finding extends previous work that focused on short-term stabilities of situational contingencies (Kuper et al., 2022) or work that analyzed manifest rather than latent stabilities (Beckmann et al., 2021; Mota et al., 2023).

In addition, we showed that individual differences in status contingencies generalize across different social contexts (i.e., communication channels or interaction partners). This cross-context consistency supports the notion of contingencies as general reaction tendencies rather than narrow individual differences. Lastly, our exploratory analyses demonstrated that status–behavior and status–emotion contingencies cluster together in the expected ways. This finding converges with a previous study that found meaningful factor structures among contingencies between situation characteristics and states (Kuper et al., 2022). Taken together, our findings lend strong support to the conceptualization of status contingencies as meaningful individual difference variables.

Effects of Trait Narcissism on Mean Levels

In line with our theoretical model, trait narcissism was related to higher mean levels of status perceptions. This finding converges with prior daily diary studies that reported positive effects of trait narcissism on mean levels of status perceptions (Mota et al., 2023; Zeigler-Hill et al., 2019). Importantly, we moved beyond previous studies that measured status as a unidimensional construct and examined more fine-grained associations of narcissism with different *kinds* of status perceptions. Specifically, we found that agentic narcissism was positively related to the perceived assignment of status (i.e., feeling admired and respected), whereas antagonistic and neurotic narcissism showed sizable associations with multiple status

perceptions (antagonistic: perceived attack on status and neglect of status; neurotic: perceived lack of assignment of status, perceived attack on status, perceived neglect of status).

Associations between trait narcissism and status perceptions may be attributable to different factors. First, they may indicate that people high in trait narcissism are indeed confronted with more status-relevant cues in their everyday lives, for instance, because they are more likely to seek out situations that contain such cues (Grapsas et al., 2020). Second, narcissism may affect how vigilantly individuals pay attention to such cues in a given situation (Grapsas et al., 2020). Lastly, narcissism may affect the interpretation of such cues. For instance, more narcissistic individuals may be more likely to interpret ambiguous behaviors (e.g., smiling or nodding) as signs of admiration, whereas less narcissistic individuals may interpret them as signs of friendliness.

Trait narcissism was also related to mean levels of status-relevant behaviors (i.e., expressive, combative, and avoidant behavior) and emotions (i.e., agentic, antagonistic, and neurotic emotions). These findings confirm previous associations between aspects of narcissism and distinct behavioral and emotional outcomes. For instance, the finding that agentic and antagonistic narcissism were associated with expressive and combative behavior, respectively, converges with previous cross-sectional (e.g., Grove et al., 2019), laboratory (e.g., Leckelt et al., 2015), and daily diary (e.g., Mota et al., 2023) studies. These results are consistent with those of previous studies that have shown that agentic narcissism is associated with the pursuit of status through the use of *prestige-based strategies* (which focus on displays of competence), whereas antagonistic narcissism is associated with the use of *dominance-based strategies* (which focus on the use of conflict) to pursue status (Zeigler-Hill et al., 2019, 2021). Fewer studies have focused on the behavioral and interpersonal correlates of neurotic narcissism, pointing to generally negative outcomes. For instance, vulnerable narcissism showed cross-sectional links to more interpersonal problems (Dashineau et al., 2019). In our study, we showed that this tendency is partly reflected in more avoidant

behavior in real-life interactions. Moreover, neurotic narcissism was related to more combative behavior in both studies (for similar findings, see Edershile et al., 2019; Edershile & Wright, 2021b), suggesting some overlap in the behavioral correlates of antagonistic and neurotic narcissism.

On an emotional level, many previous studies have emphasized the role of self-conscious emotions (e.g., pride, shame, envy; Di Sarno et al., 2020; Lange et al., 2016; Tracy et al., 2009) as well as anger (Krizan & Johar, 2015). Similarly, in our study, these emotions were positively related to narcissism, and the associations tended to be larger than those for more general measures (i.e., general positive and negative affect or affective valence), particularly for agentic narcissism. Moreover, we confirmed two other patterns found in previous studies: First, whereas agentic narcissism was linked to more positive emotions (e.g., pride), antagonistic and neurotic aspects were linked to more negative emotions (e.g., Grove et al., 2019; Kaufman et al., 2020). Second, we showed that antagonistic aspects were most strongly linked to high-arousal, externalizing emotions (e.g., envy and anger), whereas neurotic aspects were most strongly linked to low-arousal, internalizing emotions (e.g., shame). However, these associations were not distinct, given that neurotic narcissism also showed non-negligible associations with antagonistic emotions. These findings highlight the overlap between antagonistic and neurotic aspects of narcissism, also observed on the momentary level.

Taken together, our findings are in line with process models of narcissistic status pursuit (Grapsas et al., 2020), which posit that more narcissistic individuals should pursue status more strongly and, therefore, report status-related perceptions, behaviors, and emotions more often than their less narcissistic counterparts. The results partly support the trifurcated nature of narcissism (Krizan & Herlache, 2018; Miller et al., 2017; Wright & Edershile, 2018) by showing that not only can the three narcissism aspects be distinguished cross-sectionally, but they are also associated with different perceptual, behavioral, and emotional states in

everyday life. However, some future work is required on the distinction between antagonistic and neurotic narcissism. Lastly, our findings are in line with modern dynamic approaches to personality (e.g., Back, 2021; Baumert et al., 2017; Fleeson & Jayawickreme, 2015; Geukes et al., 2018; Kuper et al., 2021), which suggest that people's stable behavioral and emotional tendencies should be reflected in the mean levels of the respective relevant states.

Effects of Trait Narcissism on Status Contingencies

We also found evidence for the idea that individuals with higher levels of narcissism show higher levels of emotional reactivity. Most noteworthy, individuals with high agentic narcissism responded more strongly to the perceived assignment of status with agentic emotions. This effect was significant in both studies and is in line with previous studies that found associations between agentic narcissism and status contingencies. In particular, Zeigler-Hill et al. (2019) found greater increases in state self-esteem on days with higher perceived status in individuals with high (vs. low) agentic narcissism. In addition, Mota et al. (2023) showed that individuals with high agentic narcissism reacted with more state admiration to status success. Our results provide a higher powered test of these moderation effects and suggest that they also occur for emotional outcomes, in addition to cognitive states (Mota et al., 2023) and self-esteem (Zeigler-Hill et al., 2019). Moreover, we found similar reactivity effects for antagonistic and neurotic narcissism, although these effects were somewhat smaller and less consistent than those for agentic narcissism. In addition, they might not be limited to perceived attack or neglect of status but may also emerge for a lack of social approval. This finding is in line with a previous ESM study, which reported higher reactivity to perceived lack of social approval in individuals with high antagonistic narcissism (Geukes et al., 2017).

We observed no consistent associations between trait narcissism and status–behavior contingencies. Thus, whereas more narcissistic individuals experienced heightened emotional reactions to perceived status cues compared with their less narcissistic counterparts, more narcissistic individuals did not adjust their behaviors more strongly to these cues. Combined

with previous findings (Geukes et al., 2017; Mota et al., 2023; Zeigler-Hill et al., 2019), our findings may indicate that reactivity processes are stronger for internal states (e.g., emotions, cognitions, or self-esteem) than for external behaviors. However, we measured only *self-perceptions* of participants' behaviors but did not capture their *actual* behaviors (e.g., via behavioral observation in the laboratory). Future studies in everyday life should use alternative methods to assess behaviors, such as informant reports or smartphone sensing (see "Strengths, Limitations, and Future Directions").

We acknowledge that the correlations between trait measures of narcissism and individual differences in status contingencies were relatively small (.07–.10). When interpreting these effect sizes, it is important to highlight that narcissism questionnaires are just one method used to capture a conceptually complex construct. Specifically, self-report questionnaires assess the generalized self-concepts of individuals (Back et al., 2009). Assessing interindividual differences in status contingencies as they play out in the everyday lives of people represents an alternative method that arguably matches theoretical self-regulatory conceptualizations of narcissism more closely (Back et al., 2013; Morf & Rhodewalt, 2001; Morf et al., 2011). Given that self-report questionnaires and status contingencies represent two different conceptualizations of trait narcissism (i.e., general self-concepts vs. dynamic reactivities), these measures cannot be expected to be perfectly correlated. Moreover, even the correlations between trait narcissism and average narcissistic states, which arguably assess more similar constructs, were mostly moderate in size.

The present results concerning status contingencies have both theoretical and practical implications. First, whereas previous research showed associations between trait narcissism and variability in self-esteem, grandiose states, and vulnerable states (Edershile et al., 2021; Edershile & Wright, 2021a), the underlying situational triggers remained unclear (Edershile & Wright, 2022). Here, we add to the growing research on narcissism dynamics by showing that variation in status perceptions may contribute to these fluctuations. Second, our results are in

line with process models of narcissistic status pursuit (Grapsas et al., 2020), which suggest that narcissism can be conceptualized as part of a self-regulatory system that promotes status seeking. These theoretical accounts propose that interindividual differences in status-seeking processes (e.g., status reactivity) may underlie narcissism differences, which was partly confirmed here. Third, a better understanding of the links between narcissism and status reactivity could be used in occupational, therapeutic, and educational settings to identify situations that could trigger problematic behaviors in individuals with high narcissism.

More broadly, our findings are in line with theories that emphasize individual differences in situational contingencies as important aspects of personality (e.g., Denissen & Penke, 2008; Mischel & Shoda, 1995). Whereas much of the prior literature on contingencies found no significant associations with personality traits (Kuper et al., 2022; Sherman et al., 2015), we observed the expected associations between trait narcissism and emotional reactivities. One crucial difference is that we preregistered and examined contingencies derived from theoretical models, such as process models of narcissistic status pursuit (Grapsas et al., 2020) and three-factor models of narcissism (e.g., Krizan & Herlache, 2018; Miller et al., 2017; Wright & Edershile, 2018). By considering these theoretical perspectives, we were able to measure individual differences in contingencies that were theoretically meaningful, which likely contributed to their better psychometric properties (e.g., reliability, stability; Kuper et al., 2022) and convergent validity with trait measures.

Strengths, Limitations, and Future Directions

Our work has several strengths, including the implementation of Open Science practices (i.e., preregistration; open data, materials, and statistical code), the large sample size (total $N_{\text{participants}}$ = 1,462, total $N_{\text{observations}}$ = 54,110), the assessment of several waves to examine both short-term and longer term stability, and the fine-grained temporal resolution (i.e., multiple assessments per day). Moreover, we distinguished between different aspects of narcissism (i.e., agentic, antagonistic, and neurotic narcissism) and modalities (i.e.,

perceptual, behavioral, and emotional states) to examine narcissism dynamics in a way that is more closely aligned with conceptual models (e.g., Back et al., 2013; Grapsas et al., 2020).

Naturally, the studies presented here also come with a number of limitations, which point to directions for future research. First, the measure of neurotic narcissism in Study 2 was not ideal. We did not administer a specific questionnaire for neurotic narcissism in Study 2 and thus approximated it by combining selected facets of neuroticism (anxiety, depression) and agreeableness (compassion, reverse-scored) from the BFI-2-S. This approach was motivated by previous research, which showed that most of the variance in self-report questionnaire measures of vulnerable narcissism can be explained by these two traits (Miller et al., 2018). Similarly, we observed high correlations between our BFI-2-S-based measure and an alternative measure of neurotic narcissism in an independent sample. Moreover, the associations with mean state levels were relatively similar to those observed in Study 1 (where we had used the HSNS—an established measure of neurotic narcissism). These results suggested that our BFI-2-S-based measure of neurotic narcissism was sufficiently similar to other questionnaire measures of neurotic narcissism. Nevertheless, future studies should use more specific measures of neurotic narcissism, such as the HSNS, the neurotic narcissism subscale of the Five-Factor Narcissism Inventory (FFNI; Glover et al., 2012), or subscales from the Pathological Narcissism Inventory (PNI; Pincus et al., 2009), such as Contingent Self-Esteem, Hiding the Self, and Devaluing of the Self. It is important to note that our findings do not mean that neurotic aspects of narcissism do not exist independently from neuroticism in general. This perspective aligns with previous research showing that normal variants of Big Five traits are distinct from their maladaptive variants (Glover et al., 2012; Widiger et al., 2012). However, these differences seem to be poorly captured by generalized questionnaire self-reports. As mentioned before, these measures are just one approach to measure personality and, arguably, not the most compelling approach when it comes to

capturing personality dynamics. Therefore, future research should use additional methods to assess neurotic narcissism, such as individual differences in emotional reactivities.

Second, in line with previous work, our study was limited to social interactions that lasted at least 5 min (e.g., Geukes et al., 2019). This requirement may have had unintended consequences for the types of interactions that were recorded (e.g., relatively positive interactions may be more likely to last for at least 5 min). Future work should examine whether our findings generalize to even shorter social interactions (e.g., brief interactions with strangers).

Third, whereas our study focused on within-person effects, these associations were still correlational in nature and can therefore not be directly interpreted as causal (Rohrer & Murayama, 2021). To increase internal validity, future studies should aim to manipulate social status using experimental designs. For instance, studies could use computerized tasks (e.g., Grapsas et al., 2021; Szücs et al., 2022) or manipulate the social dynamics between individuals in actual group interactions (Cheng et al., 2014; Willer, 2009).

Fourth, because all our measures were based on self-reports, it is possible that the associations were partly affected by methodological artifacts, such as response styles (Nestler et al., 2021). In future studies, a multimethodological approach would be desirable. For instance, whereas self-reports are well-suited to measure subjective, internal states, such as emotions (Kuppens et al., 2022), behaviors could be assessed with alternative data sources, such as smartphone-sensing (Harari et al., in press) or other-reports (e.g., Breil et al., 2019). Studies including ratings made by interaction partners could also assess how expressive, combative, and avoidant behaviors of individuals with high narcissism influence their interaction partners' well-being.

Fifth, future studies should examine the extent to which our findings generalize to other populations. We intentionally included a sample from the general population to allow generalization beyond college students. However, it is important to note that this sample was

relatively educated, which limits generalizability. In addition, both samples were mostly female and from Germany. Given potential gender (Weidmann et al., 2023) and cross-cultural differences in narcissism (Fatfouta et al., 2021; Wetzel et al., 2021), future work should investigate whether our findings apply to more heterogeneous samples.

Lastly, the data were partly collected during the COVID-19 pandemic, which may have altered the social interaction processes examined in the present study. Although we cannot completely rule out such effects, we ran robustness analyses to gauge their potential influence. First, controlling for wave did not change any of the results. Second, individual differences in mean levels and contingencies were relatively stable across waves (i.e., the rank-ordering of individuals was similar before and during a lockdown [Study 1] and during and after a lockdown [Study 2]). These findings suggest that our main conclusions are robust to this potential issue.

Conclusion

In this study, we examined the relationships between narcissism and individual differences in status-seeking processes in everyday life. In line with process models of narcissistic status pursuit (Grapsas et al., 2020) and three-factor models of narcissism (e.g., Krizan & Herlache, 2018; Miller et al., 2017; Wright & Edershile, 2018), we found three distinct status pathways, which were (a) triggered by different kinds of status perceptions (i.e., the perceived assignment of status, attack on status, and neglect of status) and (b) related to different status-relevant behaviors (i.e., expressive, combative, and avoidant behavior) and emotions (e.g., pride, anger, and shame). Moreover, we demonstrated that both mean levels of perceptual, behavioral, and emotional states and status contingencies represent meaningful individual difference variables, which were partly related to questionnaire-based trait measures. Our results support the multifaceted and status-driven nature of narcissism and underline the importance of examining dynamic narcissism processes in daily life.

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