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Full Length Article

You are what you read: Antagonistic narcissism predicts increased preference for antisocial and reduced preference for prosocial information[☆]

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ABSTRACT

While narcissistic individuals tend to exhibit more antisocial (rather than prosocial) behavior in social contexts and evaluate antisocial information more positively, it is unclear how they first come to *select* social information. This is important to understand as it has bearing on their subsequent behavior. We hypothesized that individuals higher (vs. lower) on antagonistic narcissism select less prosocial and more antisocial information. In two studies, we investigated how antagonistic narcissism affects one's choice of news headlines. We also examined narcissists' social motives, (affective) empathy, and sensation seeking as potential underlying mechanisms (S2). Higher antagonistic narcissism predicted selection of less prosocial (S1–S2) and more antisocial information (S1), both of which were explained by lower empathy and higher sensation seeking (S2).

Narcissistic individuals are characterized by a grandiose sense of self (Morf & Rhodewalt, 2001), feelings of superiority (Krizan & Bushman, 2011), a greater self- rather than other-focus (Emmons, 1987), lower empathy (Burgmer et al., 2021), and higher risk-taking tendencies (Campbell et al., 2004). Prior research has demonstrated how these characteristics shape narcissists' behaviors as protagonists in social interactions, for example by showing that they engage in more antisocial and less prosocial behavior (Kjærviik & Bushman, 2021; Nehrlich et al., 2019). However, being part of social situations does not only entail acting as a protagonist, but also observing behaviors of others in one's social surroundings. Accordingly, a compatible line of research documents how narcissists relate to their social world as third parties (J. Chen et al., 2022; Exline & Geyer, 2004; Lamkin et al., 2014), by examining narcissists' perception and evaluation of and behavioral responses to others' antisocial and prosocial behaviors. Specifically, individuals higher on narcissism were found to show relatively more positive responses to others' antisocial traits or behaviors and more negative responses to others' prosocial traits or behaviors than those lower on narcissism (J. Chen et al., 2022; Hart & Adams, 2014; Lamkin et al., 2018). Such a pattern of reactions could lead to adverse societal consequences, such as increased antisocial behaviors and decreased prosocial behaviors in others through social learning processes (Fehr &

Fischbacher, 2004; Henrich et al., 2005), particularly as narcissistic individuals are more likely to rise to leadership positions (Grijalva et al., 2015) and serve as role models to their followers. Therefore, to gain a more holistic understanding of the psychological dynamics of narcissism, it is important to delve deeper into how narcissists, as observers, navigate social contexts characterized by both antisocial and prosocial behaviors.

However, a significant gap in the current literature lies in understanding how narcissistic individuals selectively gravitate towards certain social situations or information when navigating social contexts. Information selection represents the initial stage of social information processing, prior to any evaluation of or behavioral reactions to others (Crick & Dodge, 1994). Understanding such information selection is important because selective exposure to certain types of social information can activate associated behaviors in individuals (Anderson & Bushman, 2002; Anderson & Dill, 2000). For instance, exposure to antisocial information can lead to antisocial thoughts and behaviors (Eron et al., 1972; Meier et al., 2006), whereas exposure to prosocial information can promote prosocial emulation (Algoe & Haidt, 2009; Silvers & Haidt, 2008). Therefore, investigating narcissistic individuals' selective exposure to antisocial and prosocial information offers a novel perspective to better understand their behavior.

[☆] Materials (including the verbatim wording of all instructions and measures) and data (including datasets and codebook) can be found via the following link (https://osf.io/m4bqu/?view_only=8ef8e6e620d4420c9105e7c909c2657a).

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1. Antagonistic narcissism

Narcissism is defined as a pervasive pattern of grandiosity and self-importance (American Psychiatric Association, 1994). We focus on narcissism as a subclinical personality trait distributing individuals on a continuum from low to high narcissism. Generally, individuals who score relatively higher on narcissism believe themselves to be superior to others (Krizan & Bushman, 2011), have a greater need for status and power (Grapsas et al., 2020), and show less interest in and empathy for others (Burgmer et al., 2021; Morf & Rhodewalt, 2001).

Narcissism is a multidimensional construct, which can be grouped into three facets that reflect different ways in which narcissists maintain their grandiose self: antagonistic narcissism, agentic narcissism, and neurotic narcissism (J. D. Miller et al., 2021; Mota et al., 2020; Rogoza et al., 2022). Antagonistic narcissism is characterized by an underlying need to protect the grandiose self through antagonistic self-protection and pre-empting ego-threats, which manifests in aggression towards others, exploitativeness, arrogance, and manipulateness (Back et al., 2013; Rogoza et al., 2022). Agentic narcissism is characterized by an underlying need to bolster the grandiose self through assertive self-enhancement, which manifests in self-promotion, charmingness, and exhibitionism (Back et al., 2013; Mota et al., 2020). Neurotic narcissism is characterized by an underlying need to protect the grandiose self by avoiding ego-threats (Jauk et al., 2022; Krizan & Herlache, 2018) and manifests in hypersensitivity, insecurity, shame, and a tendency to withdraw from social interactions (Houlcroft et al., 2012). Compared to the other facets, antagonistic narcissism is more interpersonally maladaptive and relates to more antisocial behavior in social interactions (e.g., revenge-oriented reactions, social conflict, exploitativeness, and arrogant-aggressive behavior; Back et al., 2013; S. Chen et al., 2021; Leckelt et al., 2015; Wurst et al., 2017), whereas agentic narcissism is focused on using social interactions to attain admiration and neurotic narcissism at avoiding social interactions in the first place. Therefore, to obtain a deeper understanding of how narcissistic individuals approach antisocial and prosocial information, we specifically focused on the antagonistic facet.

2. Antagonistic narcissism and social information selection

Being faced with an inundation of information every day, especially in the modern digital age, people selectively attend to certain types of social information and avoid others (Hart et al., 2009). Individuals' selection of certain social information depends on various factors, such as dimensions of social information (e.g., valence, arousal, and emotional cues; Berger & Milkman, 2012; Schimmack & Derryberry, 2005), and people's own beliefs or situations (Chasiotis et al., 2021; Stroud, 2008). The current research investigates narcissistic individuals' selection of antisocial and prosocial information through the lens of person-environment (PE) fit theory (Caplan, 1987).

According to PE fit theory, the way individuals select themselves into certain situations is determined, at least partly, by the degree to which they feel that certain situations "fit" or fail to "fit" with corresponding aspects of their own traits, attitudes, motives, and self-concepts (Byrne et al., 1986; Caspi et al., 1989; Ickes et al., 1997). Individuals' pursuit to fit with their environment is driven by multiple needs, such as need for consistency, certainty and predictability, belonging, and self-expression (Tett & Burnett, 2003; Yu, 2013). Specifically, by selecting themselves into a situation that fits with their characteristics, people can obtain validation of their opinions and maximize consistency in attitudes and beliefs (Lecky, 1968). Moreover, individuals' need for certainty and predictability can be achieved by witnessing converging beliefs and attitudes of others (Hogg, 2000) and their general need for belonging can be met by perceiving shared characteristics with others (Hoggy & Terry, 2000). Finally, as per trait activation theory, seeking out situational cues matched with one's own traits enables individuals to better express these traits (Tett & Burnett, 2003). Indeed, in line with PE fit theory,

empirical findings support the idea that people seek out situations or information that matches with their characteristics. For instance, individuals with high trait extraversion were found to seek out social situations involving assertiveness and competition in comparison to introverted individuals (Emmons et al., 1986; Furnham, 1981).

While PE fit theory is typically used to interpret individuals' behavior tendencies in situation selections, such as choosing organizations during job search that fit with their characteristics (Ostroff & Zhan, 2012; Van Vianen, 2018), the broader PE fit literature suggests that individuals also exhibit similar fit-seeking tendencies when selecting information. Specifically, people favor social information that aligns with their traits, attitudes, and self-concept (Hart et al., 2009; Sude & Knobloch-Westerwick, 2022). A systematic review found that individuals prefer congenial information that matched with their existing attitudes, beliefs and behaviors, rather than uncongenial information that contradicted these (Hart et al., 2009). Similar patterns have been observed in social media use. Individuals tend to prefer attitude-consistent over attitude-inconsistent content in social media (Winter et al., 2016), and political beliefs often predict greater exposure to ideologically compatible media (Stroud, 2008). As an additional example of how fit affects selection of information, research found that highly agreeable people prefer more positive media and have more difficulty disengaging from prosocial cues, while less agreeable individuals are drawn to negative media stimuli and find it harder to disengage from antisocial cues (Bresin & Robinson, 2015; Wilkowski et al., 2006). Thus, in line with PE fit theory, individuals' attraction to and selection of antisocial versus prosocial cues or information may be influenced by the alignment of such information with their personal characteristics.

3. Potential underlying mechanisms

We propose that three inherent characteristics of narcissistic individuals may account for a better fit with antisocial and a poorer fit with prosocial information, namely social motives, empathy, and sensation seeking. First, narcissistic individuals' self-centered tendencies and lack of concern for others' well-being reflect their social motives (Campbell et al., 2005; Sheldon et al., 2020). Social motives are preferences for certain outcome distributions between the self and others (McClintock, 1972). Individuals' social motives are defined as *proself* if they value good outcomes for themselves while ignoring those of others or if they seek to maximize the difference between their own and others' outcomes, and they are defined as *prosocial* if they value good outcomes for both themselves and others (Van Lange et al., 1998). Given that individuals with proself motives aim to optimize their own outcomes, potentially even at a cost to others, it is unsurprising that proself motives are more commonly found to underlie antisocial behaviors (e.g., deceiving others; Sakalaki & Sotiriou, 2012), whereas prosocial motives are more prevalent in prosocial behaviors (e.g., making a donation; Van Lange et al., 2007). Based on PE fit theory, individuals with proself (vs. prosocial) motives may be attracted more to antisocial information in which the actor's antisocial behaviors reflect proself motives, whereas they are less attracted to prosocial information in which the actor's prosocial behaviors reflect more prosocial motives. Therefore, one can expect that narcissistic individuals (vs. those lower on narcissism), who are higher on proself motives and lower on prosocial motives (Sheldon et al., 2020), would be relatively more attracted to antisocial information and less to prosocial information, leading to more selection of antisocial information and less selection of prosocial information.

Second, narcissistic individuals generally show lower empathy towards others (Burgmer et al., 2021; Simard et al., 2023). Empathy reflects individuals' ability to understand, feel, and possibly share and respond to others' experiences (Cuff et al., 2016). People with higher empathy usually demonstrate more concern for others' situations and are less likely to harm others (Eisenberg & Fabes, 1990; P. A. Miller &

Eisenberg, 1988). These tendencies seem to fit less with antisocial situations or information wherein actors' antisocial behaviors harm others. In contrast, highly empathetic people may be more attracted to prosocial information because this type of information speaks to behaviors that benefit others. Moreover, highly (compared to less) empathetic people, given their capacity to deeply feel and understand others' situations, may incur a larger emotional and cognitive burden when witnessing others' suffering or pain caused by someone else's antisocial behavior (Cameron et al., 2019; Chikovani et al., 2015; Hodges & Klein, 2001). To avoid experiencing such undesirable costs, people with higher levels of empathy are motivated to avoid situations or information involving others' suffering or need for help (Zaki, 2014). Conversely, highly empathetic individuals may perceive prosocial situations or information regarding others' happiness and positive emotions as attractive and rewarding (Zaki, 2014) and thus may be motivated to approach such rewarding situations or information (Mayshak et al., 2017; Telle & Pfister, 2016), compared to their less empathetic counterparts (Sonnyby-Borgström et al., 2003). Given narcissistic individuals' lower empathy (Burgmer et al., 2021), we expected that they (vs. those low on narcissism) would select relatively more antisocial and less prosocial information. In the current research we specifically focused on the affective dimension of empathy—compassionate emotional responses to others' distress (Simard et al., 2023)—rather than the cognitive dimension, which refers to the ability to recognize and understand others' thoughts, emotions, and intentions (Davis, 1983). This focus was guided by prior research showing that narcissism is more consistently and robustly associated with deficits in affective (as opposed to cognitive) empathy in social interactions, with deficits in cognitive empathy appearing to be more motivational rather than capacity-based as in the case of affective empathy (Baskin-Sommers et al., 2014; Di Pierro et al., 2018; Urbonaviute & Hepper, 2020). Focusing on affective empathy, thus, provides a theoretically relevant perspective in line with the PE fit framework. For simplicity and readability, we refer to this subconstruct as “empathy” in the remainder of the manuscript.

Third, narcissistic individuals have been shown to exhibit heightened sensation seeking—“a desire for novelty and intensity of experience” (Arnett, 1994, p. 294)—as evidenced by their increased engagement in activities such as heavy social drinking, pursuit of diverse sexual partners, participation in risk-taking and impulsive behaviors, and aversion to repetitive experiences (Emmons, 1981; J. D. Miller et al., 2009). People with higher sensation seeking are more inclined to pursue heightened levels of stimulation to attain their optimal arousal state, such as through various antisocial behaviors, including aggressive driving, theft, and assault with a weapon (Burt & Simons, 2013; Dahlen et al., 2005; Portnoy et al., 2014). They may also be less likely to exhibit prosocial behaviors, as these actions are typically positive in nature and thus may not provide the same level of excitement or thrill that individuals with high sensation seeking look for (Alves et al., 2017; Baumeister et al., 2001). Therefore, individuals higher on sensation seeking may perceive greater affinity with antisocial figures and less with prosocial ones, resulting in a better fit with antisocial information and a poorer fit with prosocial information. Moreover, antisocial information, typically characterized by themes of violence, aggression, and defiance of norms, offers more outlets for expressing ones' own sensation seeking tendencies (Tett & Burnett, 2003), compared to prosocial information, which is often centered around acts of kindness, others' welfare, and interpersonal harmony. Therefore, people higher on sensation seeking may be more likely to approach antisocial information that presents more self-expression opportunities and avoid prosocial information that offers fewer such opportunities (Zaleski, 1984; Zuckerman & Litle, 1986). Given their high sensation seeking tendencies (Emmons, 1981; Miller et al., 2009), narcissistic individuals (vs. those low on narcissism) may be relatively more attracted to antisocial information and less to prosocial information.

Taken together, the aforementioned arguments building on social motives, empathy, and sensation seeking suggest that individuals with

high (vs. low) antagonistic narcissism may exhibit a better fit with antisocial information and a poorer fit with prosocial information. Drawing on PE fit theory, we thus hypothesize that such individuals are more likely to prefer and select antisocial information and less likely to prefer and select prosocial information.

4. Overview of studies

We first conducted pilot studies to develop a set of news headlines as means of operationalizing selection of antisocial and prosocial information. Next, Study 1 examined the relationship between individuals' antagonistic narcissism and the number of antisocial and prosocial news headlines they picked. Study 2 was a preregistered replication of Study 1, which we extended by examining the role of participants' social motives, empathy and sensation seeking, as possible explanatory mechanisms, with the former one as an exploratory and the latter two as confirmatory mediators. The preregistration document can be found at <https://aspredicted.org/blind.php?x=7d8j6r>. Please note that there are some discrepancies between the preregistration document and the main text (i.e., with regard to narcissism measures, sampling and data analyses), the descriptions of which can be found in the Method Section of Study 2, with additional explanations provided in Section B of [Supplementary Materials](#). Finally, we reported an internal meta-analysis to generate more reliable estimates of the relationship of interest. All studies were conducted in accordance with APA ethical standards and were approved by the local Ethics Review Board (Pilot Studies: 2020-SP-12787, FMG-2311_2023; Study 1: 2020-SP-12883; Study 2: 2021-SP-13272). Materials (including the verbatim wording of all instructions and measures) and data (including datasets and syntax) can be found here: https://osf.io/m4bqu/?view_only=8ef8e6e620d4420c9105e7c909c2657a.

5. Pilot studies

The purpose of the two pilot studies was to develop news headlines to operationalize antisocial and prosocial information in the main studies. We took two steps to achieve this. First, we developed three types of headlines (i.e., antisocial vs. prosocial vs. neutral) based on differences in perceived prosociality, such that prosocial headlines were expected to be perceived as more prosocial (and less antisocial) regarding the consequences of the actor's behavior on others than neutral headlines, followed by antisocial headlines. We also wanted to ensure that the interest level (operationalized as intention to read the news) of all three types of headlines was comparable. Second, we replicated the results of the first pilot study with a larger sample and further confirmed the comparability of the developed news headlines in terms of interest (directly operationalized as perceived interest of the headlines) and excitement.

Step 1: Operationalizing Antisocial and Prosocial Information

In step one, we developed 90 news headlines (30 each for antisocial, prosocial, and neutral) that were taken from several major news sources (e.g., USA today, CNN international, etc.). The headlines were slightly modified to ensure similar length and a comparable sentence structure for each type of headline (i.e., actors do something antisocial/prosocial/neutral). We recruited 59 participants from the USA (55.93 % female; $M_{age} = 32.97$, $SD_{age} = 10.98$) via Prolific (reward = US\$ 2.60). After giving informed consent, participants rated perceived prosociality of each headline using a 15-point scale (“Please indicate the degree to which you think the behavior described in each headline has harmful, neutral, or beneficial consequences for others” [−7 = “very harmful”, 0 = “neither harmful nor beneficial”, 7 = “very beneficial”]) as well as the interest of each headline, operationalized as intention to read the news article related to the headline, using a 7-point scale (“Please indicate the degree to which you want to read this piece of news” [1 = “not at all”, 7 = “very much”]). We chose the final 30 headlines based on their perceived prosociality scores to ensure maximum differentiation

across the three types of headlines (i.e., choosing those headlines that were closest to -7 [very harmful], or 0 [neither harmful nor beneficial], or 7 [very beneficial]) while considering their interest level, inferred from intention to read the article, ensuring that interest was constant across the three types of headlines. Examples of headlines are: “Supervisor sexually harasses multiple interns” (antisocial), “Inhabitants of ‘hottest place on Earth’ show how they live” (neutral), “Steep increase in blood donors” (prosocial). Finally, we compared perceived prosociality and interest levels of the three types of chosen headlines in the final set using repeated-measures ANOVAs.¹

The results showed that perceived prosociality differed significantly between headline types, $F(2, 116) = 292.67, p < .001, \eta_p^2 = .84$. Contrast analyses revealed that the prosocial headlines ($M = 3.90, SD = 1.61$) were rated as more beneficial (less harmful) than the neutral headlines ($M = 0.99, SD = 1.05$), $SE = 0.22, p < .001, 95\%CI[2.365, 3.462]$, and the antisocial headlines ($M = -3.99, SD = 2.08$), $SE = 0.42, p < .001, 95\%CI[6.847, 8.936]$. Antisocial headlines were rated as more harmful (less beneficial) than neutral headlines, $SE = 0.31, p < .001, 95\%CI[4.209, 5.747]$. There were no significant differences found in the level of interest across headline types (prosocial, $M = 3.68, SD = 1.37$; neutral, $M = 3.45, SD = 1.09$; antisocial, $M = 3.48, SD = 1.41$), $F(2, 116) = 1.17, p = .315, \eta_p^2 = .02$. We therefore used these 30 selected headlines in the main studies to operationalize prosocial, antisocial, and neutral social information (see chosen headlines in Section A of the [Supplementary Materials](#)).

Step 2: Replication and Confirming Equivalence of Perceived Interest and Excitement

In step two, we aimed to replicate that antisocial and prosocial news headlines differed in perceived prosociality using a larger sample, without including neutral news headlines. Additionally, we conducted a robustness check with a more direct measure of perceived interest in the headlines to ascertain that this remained constant across the prosocial and antisocial condition. Finally, we measured how exciting the headlines were perceived to be to rule out potential differences in excitement.

We employed a convenience sampling method and invited 290 working participants from several European countries to participate in the study. Out of these, 196 participants (46.94% female; $M_{age} = 37.95, SD_{age} = 12.53$) completed the study survey. After giving informed consent, participants were presented with the 10 antisocial and 10 prosocial news headlines in a random order and asked to rate each headline on perceived prosociality, interest, and excitement using a 7-point scale. To measure perceived prosociality, we used the same item as in the first pilot, this time with a 7-point scale ranging from -3 (“very harmful”) to 3 (“very beneficial”) rather than a 15-point scale. This adjustment was made to ensure consistency with the other measures (i.e., interest and excitement) for the purpose of comparability. To measure perceived interest, participants indicated the extent to which they thought the news was interesting, by choosing from -3 (“uninteresting”) to 3 (“interesting”). To measure perceived excitement, participants indicated the extent to which they thought the news was exciting, by choosing from -3 (“boring”) to 3 (“exciting”). We conducted a paired samples t -test to check that antisocial and prosocial news were significantly different in perceived prosociality and did not significantly differ on perceived interest and excitement.

The results showed that prosocial news headlines ($M = 1.64, SD = 0.73$) were, indeed, perceived to be more prosocial (i.e., beneficial to others) than antisocial ones ($M = -1.54, SD = 1.14$), $t(195) = -26.99, p < .001, 95\%CI[-3.413, -2.948]$, thus replicating our prior findings. There was no difference found between antisocial and prosocial news headlines on either perceived interest, $t(195) = -0.78, p = .435, 95\%CI[-0.212, 0.092]$ (antisocial news: $M = 0.35, SD = 1.07$; prosocial news:

$M = 0.41, SD = 1.18$), nor on perceived excitement, $t(195) = -1.34, p = .181, 95\%CI[-0.256, 0.049]$ (antisocial news: $M = 0.05, SD = 0.97$; prosocial news: $M = 0.15, SD = 1.17$). These results confirmed that antisocial and prosocial news headlines only differed on perceived prosociality, not on perceived interest or excitement. Therefore, any differences between individuals higher or lower on antagonistic narcissism in the selection of these two types of news headlines in the main studies below cannot be attributed to inherent differences between the headlines in interest or excitement.

6. Study 1

We tested our hypothesis by examining how antagonistic narcissism affects the selection of antisocial and prosocial news headlines. We expected that individuals with higher antagonistic narcissism (vs. lower antagonistic narcissism) would select relatively more antisocial and less prosocial news headlines.

6.1. Method

6.1.1. Participants

We conducted a power analysis using G*Power (Faul et al., 2007) to determine the required sample size. The analysis was based on a repeated-measures ANOVA to detect an interaction effect between antagonistic narcissism and the within-subject variable information type (i.e., antisocial vs. prosocial), with a default small effect size $f = .10, \alpha = .05$, a power of $.80$, 2 groups (i.e., antisocial vs. prosocial), and 2 measurements (i.e., higher s. lower antagonistic narcissism). The analysis indicated that a minimum sample size of 200 participants was needed. To allow for potential participant dropout and enhance statistical power, we recruited 260 participants from the USA via Prolific (56.52% female; $M_{age} = 33.64, SD_{age} = 11.54$), each compensated US\$ 2.28. Seven participants were excluded because they indicated on the attention check question that we should not use their data (Meade & Craig, 2012), leading to a final sample size of 253.

6.1.2. Procedure

Participants first gave informed consent, answered demographic questions and completed the narcissism measure. Next they did a short cognitive buffer task in which they were asked to count backwards for 30 s by subtracting three, beginning with 101 (e.g., 101, 98, 95, etc.; Stavrinou et al., 2011), so that they were less likely to connect the narcissism measure and the subsequent task. Next, participants completed a newly developed News Headline Picking Task (see below). Afterwards participants completed a social desirability measure as a control variable (Reynolds, 1982),² followed by an attention check question.

6.1.3. Materials

Antagonistic Narcissism.³ We measured antagonistic narcissism, which constitutes the independent variable, with the narcissistic rivalry subscale from the validated Narcissistic Admiration and Rivalry Questionnaire Short Scale (NARQ-S; Leckelt et al., 2018). This subscale consists of three items, and participants indicated their agreement as to whether each item applied to them (e.g., “I react annoyed if another person steals the show from me”, $\alpha = .61$; 1 = “strongly disagree”, 6 = “strongly agree”). Despite having only three items per subscale, the NARQ-S has been found to have good structural validity (CFI = .98,

² All results remained similar after controlling for social desirability. Measures and more detailed results can be obtained by contacting the authors.

³ We also included the narcissistic admiration subscale of NARQ-S (i.e., measuring agentic narcissism) and the Narcissistic Personality Inventory (NPI) that measures global grandiose narcissism (Raskin & Terry, 1988). Relevant results can be found in Section C of the [Supplementary Materials](#).

¹ A Bonferroni correction was applied to the p -values to account for multiple pairwise comparisons, with the adjusted significance level set to $\alpha = .0167$ (i.e., $\alpha = .05$ divided by 3 comparisons).

RMSEA = .07) and internal consistency (e.g., rivalry subscale: $\alpha = .70$) in large-scale samples (Leckelt et al., 2018). Prior research has consistently demonstrated its psychometric adequacy (e.g., Weidmann et al., 2023; Wurst et al., 2017; Zettler et al., 2022). Additionally, recent comparative research further confirmed its reliability and validity, showing strong internal consistency (e.g., rivalry subscale: $\alpha = .74$) and high convergent validity with the original NARQ (e.g., $r = .88$ between rivalry subscales; West et al., 2024).

News Headline Picking Task. Participants were presented with the 30 headlines developed in the Pilot Studies in a random order. Participants were instructed to read each headline and choose 10 out of 30 that they would like to read in detail.

Information Type. The data were organized in a long-file format with each participant having two values with respect to the number of chosen headlines per information type (i.e., prosocial and antisocial information). Thus, information type constitutes a within-subjects dichotomous moderator variable (prosocial versus antisocial information).

Social Information Selection. The number of chosen news headlines of each type constituted the outcome variable.⁴

Attention Check. Participants first answered two questions about their effort and attention paid to the study (used to help them answer the final question) and then the attention check question: “In your honest opinion, should we use your data in our analyses in this study?” (“No” or “Yes”). Seven participants who chose “No” were excluded from data analysis (Meade & Craig, 2012).

6.1.4. Data analysis

Since information type is a within-subjects dichotomous variable (prosocial versus antisocial information), we first fitted the data in R (nlme package) using a linear mixed model including a random intercept, with information type as the predictor and social information selection as the outcome.⁵ The model was found to be singular, as indicated by a warning in the output, which means that the data were over-fitted with the inclusion of the random intercept (Matuschek et al., 2017). Given this finding, we next compared the fit between the multilevel model with a random intercept and a single-level model without the random intercept. To compare the fit of these two models we fitted the single-level and multilevel models using the gls (generalized least squares) and lme (linear mixed-effects) functions, respectively, using the nlme package in R. Both gls and lme utilize maximum likelihood estimation, which enables a direct comparison of model fit between the single-level and multilevel approaches (Snijders & Bosker, 2012). Consistent with the finding that the data of the multilevel model were overfitted, the single-level model without the random intercept (AIC = 2128.26, BIC = 2136.71, Log-likelihood = -1062.13) fitted the data slightly better than the linear mixed model (AIC = 2130.26, BIC = 2142.94, Log-likelihood = -1062.13).

Therefore, for all the analyses we employed the more parsimonious single-level model without inclusion of the random intercept, running a general linear model using the PROCESS macro Model 1 with 5000 bootstrap samples (version 4.0; Hayes, 2013) to test for moderation. Specifically, social information selection was entered as the dependent

⁴ Neutral headlines were included as fillers (and excluded from data analyses) to ensure that number of picked antisocial and prosocial headlines were not perfectly negatively correlated and thus redundant, which enabled us to examine the effects of narcissism on selecting antisocial and prosocial information separately. Previous research used a comparable approach (Landwehr & Eckmann, 2020).

⁵ The wide-file format data can also be analyzed using repeated-measures ANOVA, but that approach is not suitable for examining the conditional mediation model in Study 2. For the sake of analytical consistency and comparability across studies, we therefore used linear regression analysis in both studies. Repeated-measures ANOVA and linear regression analysis (with mixed-model) yielded similar results.

variable (Y), antagonistic narcissism as the independent variable (X), and information type (antisocial = 0, prosocial = 1) as the moderator.

6.2. Results

Descriptive statistics and correlations are presented in Table 1. The test statistics for main effects and interactions are reported in Table 2. The main effect of information type was marginally significant, with participants showing a trend of selecting more prosocial information ($M = 3.08$, $SD = 1.89$) than antisocial information ($M = 2.77$, $SD = 2.05$). The main effect of antagonistic narcissism was not significant. Critically, the interaction effect between information type and antagonistic narcissism was significant. We decomposed the interaction (Fig. 1) and report test statistics of simple slopes in Table 3. Results revealed that antagonistic narcissism positively predicted the selection of antisocial information and negatively predicted the selection of prosocial information.

7. Discussion Study 1 and Introduction to Study 2

The results of Study 1 supported our expectations in that participants with higher antagonistic narcissism sought out more antisocial information and less prosocial information than those with lower antagonistic narcissism. In Study 2, we conducted a preregistered study to replicate these findings and to provide insight in the underlying mechanisms. Specifically, we explored whether narcissists' information selection pattern can be explained by their social motives, empathy, and/or sensation seeking. Based on PE fit theory, individuals' selection of social information may be explained by the degree to which their characteristics fit with that information. As noted above, individuals with higher antagonistic narcissism (vs lower antagonistic narcissism) have relatively higher proself (or lower prosocial) motives, lower empathy, and higher sensation seeking tendencies, which may explain why they would experience a better fit with antisocial information and a poorer fit with prosocial information. Therefore, these three characteristics may serve as underlying mechanisms of narcissistic individuals' selection of antisocial and prosocial information, such that their relatively higher proself (or lower prosocial) motives, lower empathy, and higher sensation seeking account for their greater preference for, and selection of, antisocial information and lower preference for, and selection of, prosocial information.

7.1. Method

7.1.1. Participants

Given that the study design was the same as in Study 1, accordingly we conducted the same power analysis to estimate the required minimum sample size. Please note that as outlined in the preregistration, the initial sample size calculation for Study 2 was based on the interaction effect between global grandiose narcissism and information type observed in Study 1. After shifting our focus to antagonistic narcissism, based on progressive theoretical insights, we decided to retain the default (conservative) small effect size (i.e., $f = .10$), consistent with Study 1, rather than use the relatively larger effect size (i.e., $f = .22$) of the interaction involving antagonistic narcissism found in Study 1. This choice was made to ensure sufficient power to detect even modest effects when replicating our findings, resulting in the same recommended sample size of 200. To further boost statistical power, and allow for potential participant dropout, we recruited 301 participants (54.76 % female; $M_{\text{age}} = 34.68$, $SD_{\text{age}} = 13.24$) from the USA via Prolific and rewarded them US\$ 2.77. Four participants were excluded based on an attention check and another three were excluded for exceeding the maximum given time set by Prolific to complete the study. This led to a final sample size of 294.

Table 1
Means, Standard Deviations, and Correlations Between Variables (Studies 1 and 2).

	<i>M</i> _{S1}	<i>SD</i> _{S1}	1	2	3	4	5	<i>M</i> _{S2}	<i>SD</i> _{S2}
1. Antisocial information selection	2.77	2.05	—	-.63**	.24**			2.77	2.10
2. Prosocial information selection	3.08	1.89	-.64**	—	-.20**			3.31	1.88
3. Antagonistic narcissism	2.47	1.05	.04	-.16**	—			2.25	0.99
4. Social motives			-.12*	.24**	-.22**	—		29.40	12.90
5. Empathy			-.24**	.41**	-.30**	.36**	—	3.77	0.72
6. Sensation seeking			.22**	-.18**	.21**	-.09*	-.22**	2.28	0.44

Note. Study 1 (*N* = 253) correlations are presented above the diagonal and Study 2 (*N* = 294) correlations are presented below the diagonal. The means for antisocial and prosocial information selection represent the average number of news headlines chosen by participants for each information type. Social motives, empathy, and sensation seeking were only measured in Study 2.

p* < .05, *p* < .01.

Table 2
Estimated Coefficients of Main Effects and Interactions on Social Information Selection (Studies 1–2).

Predictors	<i>B</i> [95 % CI]	<i>t</i> (<i>df</i>)	<i>p</i>	<i>r</i>
Study 1				
Information type	0.31 [−0.025, 0.649]	1.82 (503)	.069	.08
Antagonistic narcissism	0.05 [−0.107, 0.214]	0.65 (503)	.514	.03
Information type × Antagonistic narcissism	−0.81 [−1.135, −0.494]	−4.99 (502)	<.001	−.22
Study 2				
Information type	0.55 [0.226, 0.869]	3.35 (585)	<.001	.14
Antagonistic narcissism	−0.11 [−0.269, 0.055]	−1.29 (585)	.196	−.05
Information type × Antagonistic narcissism	−0.38 [−0.701, −0.053]	−2.28 (584)	.023	−.09

Note. For information type, antisocial information = 0, prosocial information = 1. The effect size is represented by Pearson *r*.

7.1.2. Procedure

The procedure and materials were similar to Study 1, except that we additionally measured participants’ social motives, empathy and sensation seeking after the news headlines picking task and included self-monitoring (Lennox & Wolfe, 1984), perspective taking (Davis, 1983) and social desirability as potential control variables. Below, we report results without including the control variables.⁶

7.1.3. Materials

Antagonistic Narcissism.⁷ The same scale was used as in Study 1 (*α* = .62). Please note that while our preregistration of Study 2 focused on global grandiose narcissism, we later shifted our focus to antagonistic narcissism. This decision was based on progressive insight regarding stronger theoretical relevance of antagonistic narcissism to maladaptive interpersonal behavior and its fit with social information selection (see Section B of Supplementary Materials for more details).

Social Motives. We used social value orientation (SVO) to measure

⁶ Self-monitoring was measured as an additional potential control variable because it positively relates to narcissism (Kowalski et al., 2018) and also to people’s willingness to associate with good news, which may help to construct positive impressions (Uysal, 2004). Perspective taking, the cognitive dimension of empathy (Davis, 1983), was included as a covariate to account for its potential influence on information selection and to more clearly isolate the unique contribution of affective empathy in explaining narcissistic individuals’ information selection. The pattern of results remained similar when controlling for social desirability, self-monitoring, and perspective taking; relevant results can be obtained from the authors (see Section B of Supplementary Materials for more details).

⁷ We also measured agentic narcissism and global grandiose narcissism using the same scales as in Study 1. Relevant results can be found in Section C of the Supplementary Materials.

participants’ social motives (Murphy et al., 2011). The SVO framework posits that individuals vary in their motivations when appraising resource allocations between themselves and others, ranging from maximizing personal gain (i.e., proself motives) to optimizing joint outcomes (i.e., prosocial motives), which aligns with the definition of social motives and makes SVO a good measurement of social motives (Van Lange et al., 1998). Specifically, SVO consists of six slider items with resource allocation choices over a continuum of joint payoffs (Murphy et al., 2011). Participants indicated their allocation choice on each item depending on their preferred joint distribution. The choices were combined to generate a single score with higher scores denoting stronger prosocial motives and lower scores denoting stronger proself motives (Van Lange et al., 1998).

Empathy. We measured (affective) empathy with the widely used 7-item empathic concern subscale of the Interpersonal Reactivity Index (Davis, 1983). Participants rated the degree to which each of the items described them on a 5-point scale (e.g., “I often have tender, concerned feelings for people less fortunate than me”; 1 = “does not describe me well”, 5 = “describes me very well”; *α* = .84).

Sensation Seeking. We measured sensation seeking with the intensity seeking subscale of the Arnett Inventory of Sensation Seeking (Arnett, 1994). Participants rated the degree to which each of the 10 items applied to them on a 4-point scale (e.g., “I like the feeling of standing next to the edge on a high place and looking down”; 1 = “does not describe me at all”, 4 = “describes me very well”; *α* = .56).

7.1.4. Data analysis

As in Study 1, using maximum likelihood estimation, a single-level model fitted the data slightly better (AIC = 2492.82, BIC = 2501.57, Log-likelihood = −1244.41) than a linear mixed model (AIC = 2494.82, BIC = 2507.95, Log-likelihood = −1244.41), and the latter was likewise shown to be singular (Matuschek et al., 2017). Therefore, we deviated from the preregistered plan to analyze the data using multilevel models and instead employed the more parsimonious single-level model without inclusion of the random intercept. As in Study 1, we ran a general linear model with the PROCESS macro Model 1 (version 4.0; Hayes, 2013) to test for moderation. We tested the possible underlying mechanisms social motives, empathy, and sensation seeking by including them simultaneously in Model 15 with 5000 bootstrap samples in PROCESS (Fig. 2), following the procedure proposed by Preacher et al. (2007) to test for conditional mediation with stage two moderation. Specifically, social information selection served as the dependent variable (Y), antagonistic narcissism as the independent variable (X), information type (antisocial = 0, prosocial = 1) as the moderator, and social motives, empathy, and sensation seeking as the mediators.

7.2. Results

Descriptive statistics and correlations are presented in Table 1. The test statistics for main effects and interactions are reported in Table 2. The main effect of information type was significant, with participants selecting more prosocial information (*M* = 3.31, *SD* = 1.88) than

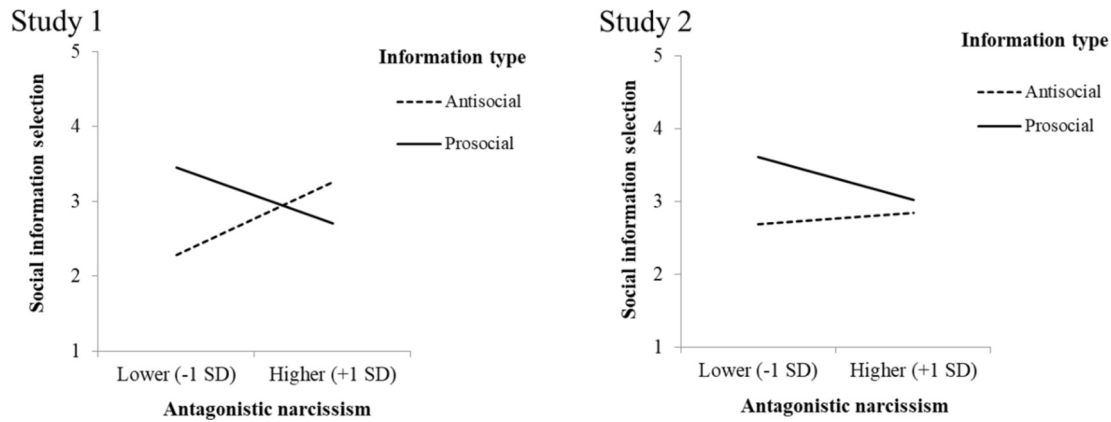


Fig. 1. Effects of Information Type and Antagonistic Narcissism on Social Information Selection (Studies 1–2).

Note. Significant interactions between information type and participants’ antagonistic narcissism on social information selection (Studies 1–2). “Higher” and “lower” refer to scores on the antagonistic narcissism subscale that were one standard deviation above and one standard deviation below the mean, respectively.

Table 3
Simple Slopes Effects of Antagonistic Narcissism on Social Information Selection in Antisocial and Prosocial Conditions (Studies 1–2).

Study	Antisocial information selection				Prosocial information selection			
	B [95 % CI]	t	p	r	B [95 % CI]	t	p	r
Study 1	0.46 [0.234, 0.687]	3.99	<.001	.24	-0.35 [-0.581, -0.127]	-3.07	.002	-.19
Study 2	0.08 [-0.148, 0.311]	0.70	.485	.04	-0.30 [-0.524, -0.066]	-2.23	.011	-.13

Note. The effect size is represented by Pearson *r*.

antisocial information ($M = 2.77, SD = 2.10$). The main effect of antagonistic narcissism was not significant. Critically, the interaction effect between antagonistic narcissism and information type was significant (Fig. 1). Simple slopes results showed that antagonistic narcissism negatively predicted the selection of prosocial information but was not related to the selection of antisocial information but (Table 3).

7.2.1. Indirect effects via social Motives, Empathy, and sensation seeking

The conditional mediation test statistics are presented in Tables 4 and 5. Results regarding the effect of antagonistic narcissism on each mediator of the conditional mediation model showed that antagonistic narcissism significantly predicted each of the characteristics as expected, exhibiting negative associations with social motives and empathy, and a positive association with sensation seeking (Table 4).

Results further revealed a significant interaction between information type and empathy, as well as between information type and sensation seeking; however, the interaction with social motives was not significant (Table 5). Decomposing the interaction effect between information type and empathy on social information selection revealed that empathy related negatively to selection of antisocial information and positively to selection of prosocial information (Fig. 3A). Probing the interaction effect between information type and sensation seeking showed that sensation seeking was positively related to the selection of

antisocial information, but not related to the selection of prosocial information (Fig. 3B).

Finally, we found support for an indirect effect of antagonistic narcissism on social information selection via empathy as a function of information type, $B = -0.33, r = -.16, 95\%CI[-0.468, -0.205]$. More specifically, the conditional indirect effect analysis showed that through lower empathy, antagonistic narcissism was positively related to the selection of antisocial information, $B = 0.13, r = .06, 95\%CI[0.053, 0.216]$, and negatively related to the selection of prosocial information, $B = -0.20, r = -.10, 95\%CI[-0.291, -0.125]$. We also found support for an indirect effect of antagonistic narcissism on social information selection via sensation seeking as a function of information type, $B =$

Table 4
Estimated Coefficients of the Effect of Antagonistic Narcissism on Mediator in the Conditional Mediation Model with All Mediators (Study 2).

Mediator	Antagonistic narcissism → Mediator			
	B [95 % CI]	t	p	r
Social motives	-2.82 [-3.847, -1.792]	-5.39	<.001	-.22
Empathy	-0.22 [-0.275, -0.162]	-7.58	<.001	-.30
Sensation seeking	0.10 [0.060, 0.131]	5.28	<.001	.21

Note. The effect size is represented by Pearson *r*.

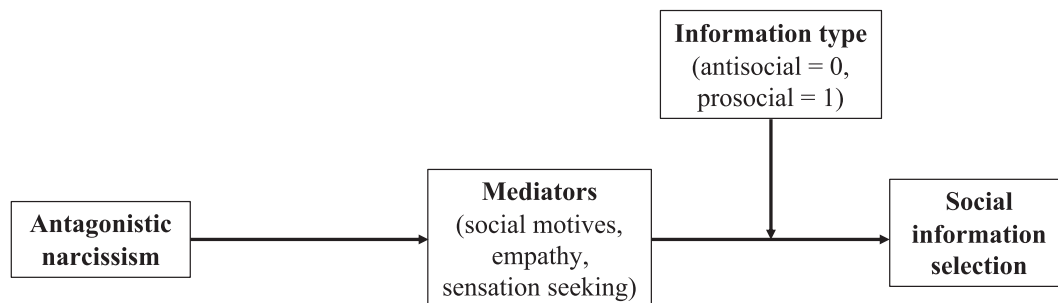


Fig. 2. Conditional Mediation Model with Stage Two Moderation (Study 2).

Table 5
Estimated Interaction Coefficients (Information type × Mediator → Social Information Selection) and Simple Slopes Effects in the Conditional Mediation Model (Study 2).

	B [95 % CI]	t	p	r
Information type × Social motives → Social information selection	0.02 [-0.003, 0.048]	1.73	.083	.07
<i>Simple slopes</i>				
Social motives → Antisocial information selection	-0.01 [-0.026, 0.010]	-0.83	.407	-.05
Social motives → Prosocial information selection	0.01 [-0.003, 0.033]	1.62	.105	.10
Information type × Empathy → Social information selection	1.52 [1.045, 1.980]	6.35	<.001	.27
<i>Simple slopes</i>				
Empathy → Antisocial information selection	-0.59 [-0.925, -0.264]	-3.53	<.001	-.21
Empathy → Prosocial information selection	0.92 [0.587, 1.249]	5.45	<.001	.33
Information type × Sensation seeking → Social information selection	-1.28 [-1.981, -0.570]	-3.55	<.001	-.14
<i>Simple slopes</i>				
Sensation seeking → Antisocial information selection	0.88 [0.378, 1.376]	3.45	.001	.19
Sensation seeking → Prosocial information selection	-0.40 [-0.897, 0.100]	-1.57	.117	-.09

Note. The effect size is represented by Pearson *r*.

-0.12, *r* = -.06, 95 %CI[-0.203, -0.054]. Specifically, conditional indirect effects analysis showed that through higher sensation seeking, antagonistic narcissism was positively related to the selection of antisocial information, *B* = 0.08, *r* = .04, 95 %CI[0.034, 0.144], and negatively related to the selection of prosocial information, *B* = -0.04, *r* = -.02, 95 %CI[-0.084, -0.0001]. However, the conditional indirect effect of antagonistic narcissism on social information selection via social motives was not significant, *B* = -0.06, *r* = -.03, 95 %CI[-0.137, 0.002]. Taken together, when three characteristics were examined as competing mediators in the same model, empathy and sensation seeking showed a significant mediating effect, while social motives did not.

8. Discussion Study 2

Study 2 demonstrated that individuals higher on antagonistic narcissism selected less prosocial information than did those lower on antagonistic narcissism, but they showed no difference in the selection of antisocial information, partly supporting our hypothesis. However,

we did find significant indirect effects of antagonistic narcissism on selecting both antisocial and prosocial information via empathy and sensation seeking. Specifically, individuals with higher antagonistic narcissism demonstrated less empathy and more sensation seeking, which in turn predicted higher selection of antisocial information and lower selection of prosocial information, compared to people with lower antagonistic narcissism.

9. Internal meta-analysis

We carried out an internal meta-analysis to synthesize the findings of the two studies to provide more reliable estimates of the interaction effects of interest. Since these two studies were almost identical in methodology, which implies that differences in effect sizes between the studies were mainly due to sampling variation, we adopted a fixed-effects approach in the meta-analysis (Goh et al., 2016). The meta-analysis was performed using the Comprehensive Meta-Analysis program (Borenstein et al., 2021).

The meta-analytic model specified information type as the categorical moderator of the effect of antagonistic narcissism on information selection. Combined simple slopes effects in each headline category (i.e., prosocial vs. antisocial) are reported in Fig. 4. The meta-analytic results showed that the moderating effect of information type was significant, *Q* (1) = 23.36, *p* < 0.001. More specifically, antagonistic narcissism significantly positively predicted the selection of antisocial information and significantly negatively predicted the selection of prosocial information.

10. General Discussion

We aimed to enhance insight in how narcissists navigate social situations by investigating their selection of information regarding others' antisocial versus prosocial behaviors. In Study 1, as predicted we found that individuals higher (vs. lower) on antagonistic narcissism sought out relatively more antisocial information and less prosocial information. In Study 2, we found that antagonistic narcissism only negatively predicted the selection of prosocial information. However, when taking the role of empathy and sensation seeking into account as underlying mechanisms, our findings suggest that antagonistic narcissism was related to a relatively higher preference for antisocial information, and a relatively lower preference for prosocial information, through lower empathy and higher sensation seeking. The results of an internal meta-analysis on both studies provide more support with regards to the overall effect of antagonistic narcissism on information selection, such that individuals higher (vs. lower) on antagonistic narcissism showed an increased preference for selecting antisocial information and a reduced preference for selecting prosocial information.

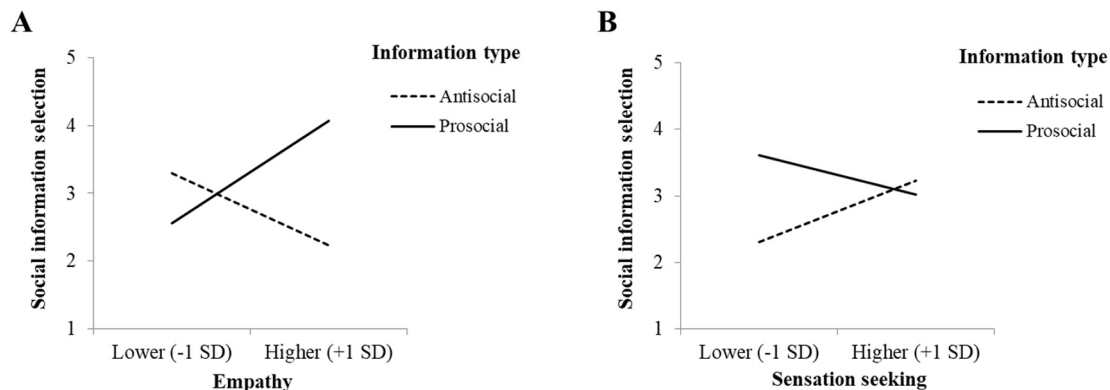


Fig. 3. Effects of Information Type and Mediators on Social Information Selection (Study 2).

Note. Interaction between information type and empathy and between information type and sensation seeking on social information selection. “Lower (-1 SD)” and “Higher (+1SD)” refer to scores on each mediator scale that were one standard deviation above the mean and one standard deviation below the mean, respectively.

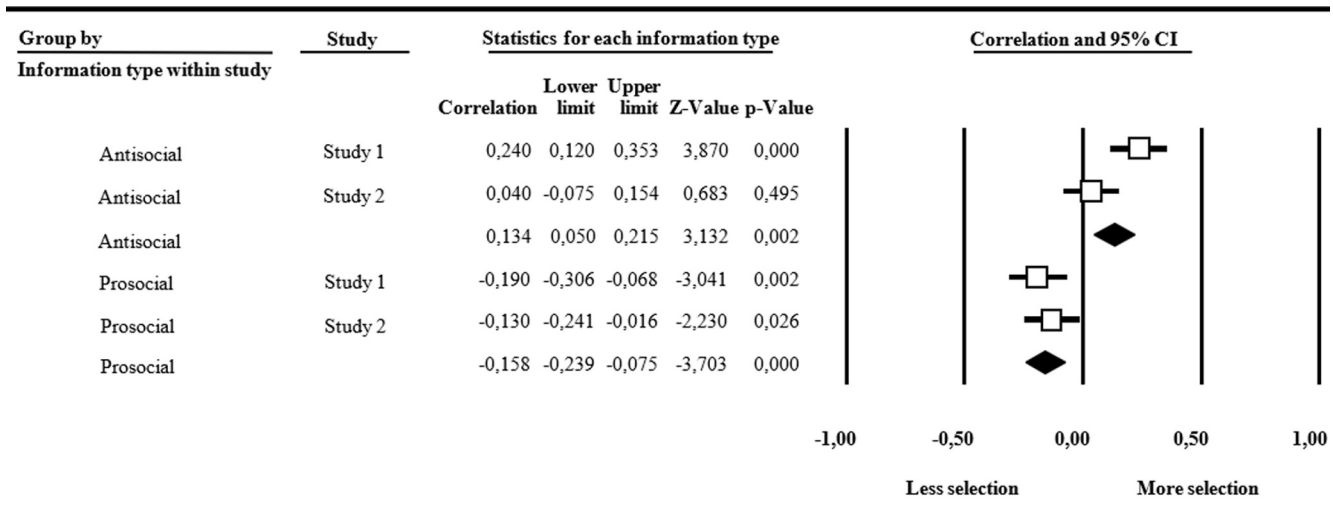


Fig. 4. Meta-analytic Effects of Antagonistic Narcissism on the Selection of Antisocial and Prosocial Information.

Note. The left part of the figure presents the individual effects (i.e., correlations) in each study and the estimated combined effects for each information type across studies. The individual effects are represented by an empty square in the right part of the figure, and the combined effects are represented by a solid diamond.

10.1. Theoretical and practical implications

Our research has several theoretical implications. First, we provide new insights into how narcissists relate to their social environments as third parties or observers, rather than as protagonists, by focusing on how they select social information. Previous research investigating narcissists as third parties predominantly looked at narcissists' perception and evaluation of and reactions to others' traits or social behaviors (Burton et al., 2017; J. Chen et al., 2022; Hart & Adams, 2014; Lamkin et al., 2018; Wallace et al., 2015) but did not examine how narcissists attend to social information in the first place, which marks the initial entry into social contexts (Pashler, 1998). Our research extends this line of research by building on the Social Information Processing theory (SIP; Crick & Dodge, 1994) and by shifting the focus away from the downstream stages of the SIP (i.e. evaluation and reaction) to the information selection stage, which complements our understanding of narcissists' comparatively more positive attitudes toward antisocial and more negative attitudes toward prosocial contexts.

Second, our findings regarding narcissistic individuals' higher preference for antisocial information and lower preference for prosocial information selection are largely in line with person-environment (PE) fit theory, which posits that people tend to choose situations and information that align with their own traits, attitudes, motives and self-concepts (Caspi et al., 1989; Ickes et al., 1997). Furthermore, we identified two inherent characteristics of narcissistic individuals that help explain how they are better aligned with antisocial information and less well aligned with prosocial information and thereby clarify their social information selection pattern. Specifically, narcissistic individuals appear to experience a better fit with antisocial as opposed to prosocial information due to their lower empathy (Burgmer et al., 2021) and heightened sensation seeking tendencies (Emmons, 1981; Miller et al., 2009). Note that the present research specifically focused on affective empathy. Prior work suggests that the negative link between cognitive empathy and narcissism is less consistent than that of affective empathy (Baskin-Sommers et al., 2014; Di Pierro et al., 2018; Urbonaviciute & Hepper, 2020), as it seems to depend on motivational rather than capacity-related defects, and, as such, cognitive empathy may play a weaker role in explaining narcissistic individuals' selection of antisocial and prosocial information. Indeed, our exploratory findings align with this idea. Because we measured cognitive empathy (i.e., perspective taking; Davis, 1983) as a covariate, we were able to explore its potential mediating role. The results showed that there was no significant indirect

effect via cognitive empathy (see [Supplementary Materials](#) for more details), which points towards the unique role of affective empathy in accounting for narcissistic individuals' selection of antisocial and prosocial information.

Social motives did not emerge as a mediating factor in the relationship between antagonistic narcissism and social information selection. We anticipated that individuals with lower scores on social motives (i.e., being prosocial) would align better with antisocial information than those with higher scores on social motives (i.e., being antisocial), while the latter would fit better with prosocial information. However, it is possible that prosocial individuals, who typically ignore others' outcomes or prioritize maximizing the disparity between their own and others' outcomes (Van Lange et al., 1998), may not inherently intend to act in an antisocial manner as reflected in antisocial information. Consequently, social motives might not serve as a sufficiently robust indicator of fit when evaluating the preference for antisocial versus prosocial information.

Our research also has potential practical implications in that being exposed to relatively more antisocial and less prosocial information could affect narcissists' own behaviors. First, it could strengthen antisocial schemas while weakening prosocial schemas stored in memory and thus might stimulate more antisocial and less prosocial future behaviors of narcissists (Anderson & Bushman, 2002). Second, people can learn social norms by observing what the majority of people do (i.e., descriptive norms; Cialdini et al., 1990). One can imagine that extensive exposure to antisocial information strengthens individuals' beliefs that antisocial behaviors are realistic and common representations of life that should not be considered as deviant but as permissible (Eron et al., 1972). Conversely, less exposure to prosocial information may reduce the construal of prosocial behaviors as common and appreciated. Therefore, narcissistic individuals would construe antisocial behaviors in a relatively more positive way and prosocial behaviors in a more negative way (J. Chen et al., 2022), which could contribute to their own relatively more antisocial and less prosocial behaviors. Given the potential behavioral consequences of narcissists' social information selection, a corresponding intervention could be to deliberately stimulate exposure to prosocial news, social media, and interaction situations. Preliminary evidence indicates that presenting narcissistic individuals with pictures of others' helping behaviors can increase their relationship commitment (Finkel et al., 2009). Such an intervention falls under the umbrella of communal activation that nudges narcissists in the direction of higher agreeableness or prosocial behaviors and has been shown to be

promising in dampening narcissism and its detrimental consequences (Finkel et al., 2009; Sedikides & Campbell, 2017).

10.2. Strengths, Limitations, and Suggestions for future research

A strength of the current research is that we employed a specially developed behavioral news headline selection task, in which we asked participants to pick a selection of social news items to read in detail after skimming through multiple news headlines adapted from mainstream news sources. Given that this task resembles how people interact with and choose among news articles on social media or online news websites in daily life, our study is relatively high on ecological validity and the findings may therefore generalize to relevant real-life settings. Another strength is that we ensured that the news headlines were balanced in terms of inherent interest levels as well as excitement in pilot studies. This allowed us to rule out alternative explanations related to potential differences in interest and excitement of prosocial and antisocial information.

Our research also has limitations. For instance, the negative relationship between antagonistic narcissism and selection of antisocial information was only found in Study 1. However, the indirect-effects analysis (via empathy and sensation seeking) in Study 2 and the internal meta-analysis based on two studies demonstrated a significant negative relationship. To gain further insight into the magnitude of this relationship and increase the generalizability of the findings, future research could use more diverse stimuli with a larger sample size. Another limitation is that we cannot ascertain the causal effect of the underlying mechanisms as these were measured rather than manipulated. Manipulating empathy and sensation seeking is a fruitful avenue for future research (Spencer et al., 2005). Finally, we measured antagonistic narcissism using the short rivalry subscale of NARQ-S, which may offer less comprehensive coverage than its longer measure NARQ. However, prior research supports its reliability and validity (Weidmann et al., 2023; West et al., 2024; Zettler et al., 2022), and its use allowed for efficient assessment within the study's constraints. Future research could employ the full NARQ or alternative measures which capture several maladaptive dimensions of narcissism, such as the Five-Factor Narcissism Inventory (FFNI; Glover et al., 2012) to replicate and extend our findings.

Finally, future work could further expand our findings in several ways. First, given the potential consequences of selective exposure to social information on entrenching individuals' attitudes and behavior (Anderson & Bushman, 2002; Anderson & Dill, 2000), it is possible that narcissistic individuals' antisocial tendencies may be reinforced through their preferential exposure to antisocial rather than prosocial information. Future research could directly test this idea by employing a time-lagged design. Second, the present research did not directly measure experienced fit. Future research could more directly examine the role of fit by testing its mediating role in the relationship between narcissism and selection of social information. For example, the degree of fit could be estimated by calculating the correlation between participants' self-reported empathy and their perceptions of the degree of empathy invited by a particular news report or social situation (Van Vianen et al., 2008; Westerman & Cyr, 2004). Alternatively, fit could be measured by asking participants directly to what extent they perceive various news reports or situations as fitting with their personalities (Burton et al., 2017).

Third, even though our findings are largely aligned with PE fit theory, and we identified empathy and sensation seeking as characteristics that capture different degrees of person-environment fit that are relevant to narcissism, additional work is needed to more fully explain exactly how different degrees of fit on these characteristics drive information selection. For instance, future research could investigate whether narcissistic individuals select more antisocial information and less prosocial information to feel greater sense of belongingness with those who exhibit similar high sensation seeking behaviors and lower

empathy as themselves (Hoggy & Terry, 2000). Furthermore, other potential mechanisms for narcissistic individuals' information selection pattern could be examined. For example, narcissistic individuals' higher levels of schadenfreude and greater satisfaction at others' misfortune (Erzi, 2020; James et al., 2014) might also explain their greater preference in reading antisocial rather than prosocial news. Answers to these questions promise to shed more light on the motivational forces that underlie narcissists' greater preferences for antisocial information and lesser preferences for prosocial information.

Fourth, given the multidimensional nature of narcissism (Jordan et al., 2021; Miller et al., 2021), future work should examine how selection of social information functions for other forms of narcissism. To that end, though not the focus of the current research, we also measured agentic and global grandiose narcissism in both studies (see Supplementary results in Section C of Supplementary Materials). We found a significant interaction effect between agentic narcissism and information type in Study 1 (which was smaller than that with antagonistic narcissism), such that people higher (vs. lower) on agentic narcissism selected significantly more antisocial information but showed no difference in selecting prosocial information. A similar pattern was found with global grandiose narcissism. Although we did not replicate the overall effects of both agentic and global grandiose narcissism in Study 2, we did observe significant indirect effects via the mediators. Specifically, individuals higher (vs. lower) on both global grandiose narcissism and agentic narcissism demonstrated higher sensation seeking, prompting greater selection of antisocial information and lower selection of prosocial information. Moreover, stronger proself motives of individuals higher (vs. lower) on global grandiose narcissism explained their lower selection of prosocial information. Thus, compared with antagonistic narcissism, agentic and global grandiose narcissism showed less consistent and robust effects on social information selection. A possible reason is that agentic narcissism is less interpersonally maladaptive and is less closely linked with antisocial tendencies than antagonistic narcissism (Back et al., 2013; S. Chen et al., 2021; Wurst et al., 2017), resulting in weaker effects on antisocial and prosocial information selection. Because global grandiose narcissism consists of both agentic and antagonistic narcissism, it is not surprising to also observe a similar but weaker effect with global grandiose narcissism than with antagonistic narcissism. Given that agentic narcissism is characterized by an underlying need to bolster the grandiose self through assertive self-enhancement (Back et al., 2013; Mota et al., 2020), future research could investigate if people higher (vs. lower) on agentic narcissism select more social information about performance, success, or prestige. Finally, future research could investigate neurotic (or vulnerable) narcissism, which is characterized by a need to protect the grandiose self through avoidance of ego threats (Jauk et al., 2022; Krizan & Herlache, 2018) and is typically expressed through social insecurity and fragile self-esteem (Houlcroft et al., 2012). Previous research found that neurotic narcissism is strongly linked to envy, more so than grandiose narcissism, and schadenfreude (Krizan & Johar, 2012). As such, people higher (vs. lower) on neurotic narcissism may be even more drawn to antisocial information, which highlights people's suffering from someone else's antisocial behaviors (eliciting schadenfreude), and less interested in prosocial information that showcases others' well-being (eliciting envy). In short, given their insecurities and their greater inclination toward envy and schadenfreude, the effects we found for antagonistic narcissism may also occur (and potentially be stronger) for neurotic narcissism.

10.3. Conclusion

We found that antagonistic narcissism predicts increased preference for antisocial information and reduced preference for prosocial information, which are explained by narcissistic individuals' lower empathy and higher sensation-seeking. Examining narcissistic individuals from the vantage point of third parties (rather than as protagonists) allowed

us to further refine our understanding of the ways in which narcissists navigate and function in social contexts, specifically with respect to how they selectively attend to social information. To the degree that selective exposure to social information shapes and consolidates people's attitudes and behaviors, people may indeed be what they read.

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CRedit authorship contribution statement

Jiafang Chen: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Barbara Nevicka:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Astrid C. Homan:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Gerben A. van Kleef:** Writing – review & editing, Writing – original draft, Methodology.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jrp.2025.104653>.

Data availability

The OSF link to the data (including datasets and syntax) can be found in the main text.

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