Too arrogant for their own good? Why and when narcissists dismiss advice

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ABSTRACT

Advice taking is central to making better decisions, but some individuals seem unwilling to use advice. The present research examined the relationship between narcissism and advice taking. In particular, we studied the mechanisms that explain why narcissists are dismissive of advice. In three studies, we found that narcissism and advice taking were negatively related, but only when measuring narcissism at the state level or when controlling for extraversion at the trait level. We also tested two mechanisms and found that confidence did not mediate the relationship; disregard for others did. In Study 4, participants were placed under different accountability pressures to affect self-enhancement. Results showed that the narcissism–advice taking relationship was strongly negative under process accountability. Taken together, these results suggest that narcissists eschew advice not because of greater confidence, but because they think others are incompetent and because they fail to reduce their self-enhancement when expecting to be assessed.

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1. Introduction

Managerial decisions often involve assessing inputs from others. Executives and managers frequently receive advice from consultants before making strategic, financial, or human resource decisions (Argyris, 2000; Schein, 1998). In the U.S. alone, there are more than 130,000 companies in the consulting services industry, whose purpose is giving advice to thousands of managers (Armbrüster, 2006). Despite its ubiquity, people are often unwilling to use the advice they receive. After making an initial estimate and receiving advice, individuals tend to favor their own judgments (Bonaccio & Dalal, 2006; Gino & Moore, 2007; Harvey & Fischer, 1997; Yaniv, 2004). This is unfortunate, because using advice often leads to better judgment and choice (Larrick & Soll, 2006; Soll & Larrick, 2009).

Given that the incorporation of advice is central to making better decisions, researchers have begun examining factors that increase the likelihood of advice taking, including characteristics of the advisor, the advice, and the decision maker. For example, advice is more likely to be used when it (a) comes from experienced people (Feng & MacGeorge, 2006), (b) comes from confident individuals (Swol & Sniezek, 2005), and (c) is expensive (Gino, 2008). In addition, some characteristics of decision makers, such as their task self-efficacy or their task experience (Harvey & Fischer, 1997; Poston, Akbulut, & Looney, 2009), affect their willingness to take advice. Decision makers' personality traits, however, have been largely ignored as a potential influence on advice taking (Bonaccio & Dalal, 2006; cf. Dalal & Bonaccio, 2010).

In this paper, we focus on a personality trait that has received fairly limited attention in judgment and choice research: Narcissism (cf. Campbell, Goodie, & Foster, 2004). Narcissism reflects a belief in one's superior qualities, including intelligence, attractiveness, and competence (Carlson, Naumann, & Vazire, 2011; Gabriel, Critelli, & Ee, 1994; John & Robins, 1994). Narcissists tend to experience a sense of self-admiration and superiority (Emmons, 1987). Perhaps for this reason, some practitioners have reported that narcissists are poor listeners and disregard others' judgments, especially if they are in conflict with narcissists' own judgments (Lubit, 2002; Maccoby, 2000). Given that illusory superiority biases are important factors in explaining why people

often discount advice (Krueger, 2003; Yaniv & Kleinberger, 2000), we propose that narcissism levels will have an effect on the degree to which individuals heed advice from others when making decisions.

In our examination, we focus on the mechanisms that may explain why and under what circumstances narcissists will be dismissive of advice from others. Specifically, we examine three primary characteristics of narcissism: a positive view of the self, a lack of concern for others, and the use of self-enhancement strategies (Campbell & Foster, 2007).

The structure of the theoretical background of the study is as follows. First, we examine the construct of advice taking in the context of the Judge-Advisor System (Sniezek & Buckley, 1995; Yaniv, 2004), and we review evidence suggesting that people tend to ignore advice. Then, we discuss narcissism and its characteristics, and explain the hypothesized effect on advice taking. We then specifically examine two mechanisms, confidence in one's own judgment and perceived usefulness of advice, to explain the narcissism–advice taking relationship. Finally, we review two types of accountability—outcome and process accountability—and explicate the moderating effect that we expect them to have on the relationship between narcissism and advice taking.

2. Theory and hypotheses

2.1. Advice taking

Different individuals can provide unique insights, fostering innovation and improving accuracy (Ciampa, 2006; Mannes, 2009). Decision makers who take into account others' opinions or judgments—even if they use simple strategies to aggregate this information—can improve their judgment or choice (Clemen, 1989) and reduce error (Larrick & Soll, 2006). Indeed, the use of advice is related not only to individual performance, but also to firm performance (McDonald & Westphal, 2003), with research demonstrating that firms whose CEOs tended to solicit advice from people who offered strategic perspectives different from their own were more likely to perform better than firms whose CEOs who did not (McDonald, Khanna, & Westphal, 2008).

Studies examining whether people take others' advice into consideration have centered on the "Judge-Advisor System" (JAS; Sniezek & Buckley, 1995). In the JAS, the judge is the individual who makes the decision or judgment, and receives advice from the advisor. Studies using JAS judgment tasks usually ask judges to provide initial quantitative estimates, and judges then receive information of the advisor's estimate (this is in contrast to JAS decision tasks, in which individuals make discrete choices; e.g., Sniezek & Van Swol, 2001). The judge must then make the final estimate, determining to what degree he or she uses the advisor's estimate. The amount of advice used is then determined by the degree to which the judge adjusts his or her estimate toward the advisor's estimate. If the judge uses the averaging principle, then the judge will average his or her estimate with the estimate of the advisor. In other words, the judge adjusts his or her own estimate 50% of the distance between the initial estimate and the advisor's estimate. Findings based on this paradigm are quite robust in that people often disregard others' advice (Gino, Brooks, & Schweitzer, 2012; Harvey & Fischer, 1997). For example, judges adjust on average only 30% of the distance between their initial estimate and the advisors' advice (Lim & O'Connor, 1995; Yaniv, 2004). This is less than what is suggested by the averaging principle, which is normatively the optimal way to aggregate two judgments (Soll & Mannes, 2011).

Several accounts have been provided for this rule violation. First, in the tradition of the anchor and adjustment heuristic (Tversky & Kahneman, 1974), judges' initial estimates may function as anchors, which are not sufficiently adjusted even after including new information (Lim & O'Connor, 1995). Second, judges have a better assessment of their own knowledge than that of other people, as well as more accessibility to their internal justifications for a particular decision than they do for those providing advice (Yaniv & Kleinberger, 2000). Third, superiority biases suggest that people tend to believe they are more accurate and important than others (Hoorens, 1993; Krueger & Mueller, 2002), which would explain why they ignore others' advice (Harvey & Harries, 2004; Soll & Mannes, 2011). This third account suggests that people with greater superiority bias should take limited advice, if any, when making decisions. As we review in the next section, individuals high on narcissism have greater superiority bias and tend to be poor listeners who discount others' input. These characteristics and tendencies should lead narcissists to engage in less advice taking than non-narcissists.[1]

2.2. Narcissism, judgment, and choice

2.2.1. Three characteristics of narcissism

Narcissism has been conceptualized as a set of attributes, activities, behaviors, or experiences that are mutually reinforcing and serve to maintain or enhance a grandiose self view (Bergman, Westerman, & Daly, 2010; Morf & Rhodewalt, 2001). According to Campbell and Foster (2007) there are three main characteristics of narcissism: a positive view of the self, a lack of concern for others, and the use of self-enhancement strategies. First, narcissists' positive view of the self implies that narcissists (a) think they are better than others (John & Robins, 1994), (b) have inflated beliefs about their skills compared to objective measures or others' ratings (Farwell & Wohlwend-Lloyd, 1998; Judge, Lepine, & Rich, 2006), (c) believe they are special and unique (Emmons, 1984; Kubarych, Deary, & Austin, 2004), and (d) have high levels of entitlement and selfishness (Campbell, Bush, Brunell, & Shelton, 2005; Miller, Price, & Campbell, 2011b). Second, narcissists tend to disregard others and are concerned with possessing agentic (e.g., competence) rather than communal (e.g., friendliness, empathy) characteristics (Jordan, Giacomin, & Kopp, 2014). Third, narcissists utilize self-enhancement strategies to regulate their self (Campbell, Hoffman, Campbell, & Marchisio, 2011). Self-enhancement involves "motives and self-directed effort to increase the positivity of one's self-concept or public image" (Wallace, 2011, p. 309). In other words, narcissists expend a lot of effort engaging in behaviors that make them appear and feel grand (Campbell & Foster, 2007). According to Morf and Rhodewalt (2001), the narcissistic perspective involves a permanent quest aiming at trying to achieve self-affirmation. This results in behaviors including showing off and dominating conversations (Holtzman, Vazire, & Mehl, 2010), as well as affiliating with high-status individuals and competing to emerge as winners (Buss & Chiodo, 1991; Wallace & Baumeister, 2002).

2.2.2. Related constructs

The above suggests that narcissism is a broad construct, which encompasses not only static behaviors but also dynamic cognitive and affective processes (Horvath & Morf, 2010). As such, the aforementioned characteristics of narcissism overlap with other constructs, most notably, overconfidence, egocentrism, and core

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[1] Throughout the paper, we use the terms *narcissists* and *non-narcissists* to refer to people high and low on our measure of narcissism. Although the measures we use (described in the Method sections for each study) treat narcissism as a trait (i.e., on a continuum), it is customary to use these categorical terms for ease of presentation (e.g., Campbell et al., 2004). We do not intend to suggest that the measures we use classify people into types (see Foster & Campbell, 2007).

self-evaluations (see Chatterjee & Hambrick, 2007; Hiller & Hambrick, 2005). However, it is the unique conglomeration of characteristics comprising narcissism that distinguishes narcissism from these other constructs. For example, overconfidence refers to an excessive conviction in the accuracy of one's beliefs (Moore & Healy, 2008), which is similar to narcissists' inflated beliefs about their abilities and knowledge. However, overconfidence lacks some key features of narcissism, such as the absence of concern about others, a sense of entitlement, and selfishness (Campbell, 1999; Grijalva & Harms, 2014). Similarly, egocentrism is an inability to differentiate between aspects of self and others (Liotti, 1992; Piaget, 1926) and is characterized by a lack of perspective taking (Epley, Keysar, Van Boven, & Gilovich, 2004). In other words, egocentric individuals only see the world from their own view.[2] Narcissism differs from egocentrism in at least one important issue. In egocentrism, people have difficulties in seeing others' views; in narcissism, people do not care about these views or may even become infuriated when others fail to have their same perspective (Whitbourne, 2012).

Finally, core self-evaluations (CSE) is a broad, composite construct encompassing four interrelated traits: generalized self-efficacy, self-esteem, internal locus of control, and emotional stability (Judge & Bono, 2001). The main aspect captured by these traits is self-worth; given this, its proponents have labeled CSE as *positive self-concept* (Judge, Locke, Durham, & Kluger, 1998). As such, CSE shares with narcissism the positive self-regard of it, which explains the positive correlation between these traits (Rode, Judge, & Sun, 2012). However, like overconfidence but in contrast to narcissism, CSE does not include spite toward other people (Hiller & Hambrick, 2005), the need for being special and unique (Cisek et al., 2014), attention seeking behavior (Miller, Lynam, & Campbell, 2014), or the tendency to over-claim knowledge and achievements (Paulhus, Harms, Nadine, & Lysy, 2003).

2.2.3. Consequences for advice taking

We argue that the three characteristics of narcissism may lead to three explanations of why we expect narcissists to be less inclined to heed advice (see Fig. 1). We explain two of these mechanisms, their positive self and lack of concern for others, in this section, and we discuss the third mechanism, self-enhancement strategies, in the following section.

First, narcissists' positive view of their self should lead to overconfidence. Campbell et al. (2004) found that individuals high on narcissism exhibited more overconfidence than their less narcissistic counterparts; that is, they showed greater confidence in their judgments but did not exhibit greater accuracy. The authors also found that narcissistic decision makers took greater risks, which led to an underperformance on a betting task. Consistent with this, Chatterjee and Hambrick (2007) investigated the effect of CEOs' narcissism on their firms' strategy and performance, and found that companies with more narcissistic CEOs had more extreme and unstable performance. The authors concluded that this was because the CEOs were overconfident and took bold actions.

This line of reasoning is also congruent with See, Morrison, Rothman, and Soll's (2011) as well as Tost, Gino, and Larrick's (2012) results. These researchers studied how interpersonal
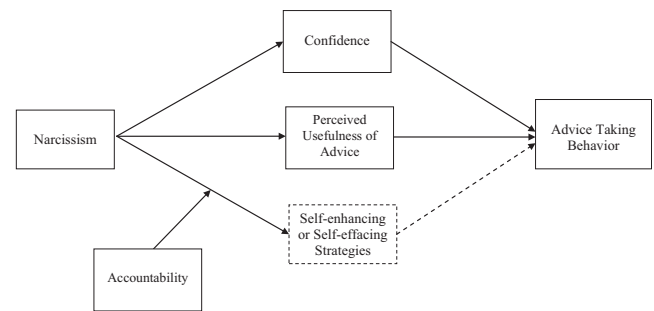

Fig. 1. Conceptual model. *Note.* In Studies 1, 2, and 3, we tested the indirect effect of narcissism on advice taking through confidence and perceived usefulness of advice. In Study 4 we tested the conditional effect of narcissism on advice taking under different accountability pressures; we did not explicitly test (or measure) the mediating role of self- enhancing or self-effacing strategies.

power—the perception that one has the discretion to asymmetrically enforce one's will over the outcomes of others (Sturm & Antonakis, 2015)—could affect advice taking. Power enhances individuals' self-serving behavior (Bendahan, Zehnder, Pralong, & Antonakis, 2015), as well as confidence in their beliefs and their willingness to take risks (Fast, Sivanathan, Mayer, & Galinsky, 2012), and thus it overlaps in this respect with narcissism (e.g., Anderson, John, & Keltner, 2012). As a consequence, when See et al. (2011) and Tost et al. (2012) manipulated power, they found that it was positively related to confidence, which in turn was negatively related to advice taking. In light of these results, we expected that narcissism would be negatively related to advice taking through the indirect effect of confidence.

We also argue that the second characteristic of narcissism, lack of concern for others, may explain why narcissism is negatively related to advice taking. Maccoby (2000; see also DuBrin, 2012) theorized that narcissistic executives are poor listeners because they are distrustful of others' intentions. When individuals high on narcissism encounter others who have beliefs that are different from their own, they tend to think that those views are inferior and ignorant; they may even attempt to correct those views (Saucier & Webster, 2010). This is consistent with Smalley and Stake (1996; see also Morf & Rhodewalt, 1993) who found that when narcissists encounter feedback that conflicts with their grandiose sense of self, they tend to discredit the person who provided the feedback and disregard the feedback as being inaccurate. This discrediting of others' opinions and failure to see the relevance of others' views has been referred to as *narcissistic myopia* (Baumeister & Vohs, 2001). In sum, narcissistic individuals are likely to view others' advice as useless and inaccurate; which, in turn, would lead them to avoid using advice when making decisions.

Taken together, we hypothesized,

Hypothesis 1. Narcissism is associated with less advice taking.

Hypothesis 2a. Confidence in own judgment mediates the relationship between narcissism and advice taking.

Hypothesis 2b. Perceived usefulness of the advice mediates the relationship between narcissism and advice taking.

In the following section, we argue that the third characteristic of narcissism—self-enhancement strategies to regulate the self—also has an effect on advice taking. However, we tested this mechanism indirectly. Rather than measuring it and including it as a mediator, we manipulated accountability to affect self-enhancement, and we argue that this has different consequences for narcissists and non-narcissists.

2.3. Self-enhancement and the role of accountability

Accountability has been proposed as a solution to almost everything (Schlenker & Weigold, 1989). Frequent headlines criticize insufficient accountability of professionals who the public opinion perceives as shirking on the job, such as teachers who should be accountable for their schoolchildren's learning (Burke, 2012). In organizations, accountability is pervasive (Staw, 2010; Tetlock, 1985). A *New York Times* search for articles containing the words *accountability* and *organization* resulted in over 2300 hits. Accountability in firms is reflected in performance evaluations, reward systems, personnel manuals, and procedure monitoring, among others (Frink & Klimoski, 2004; Klimoski & Frink, 1998).

Lerner and Tetlock (1999) defined accountability as the implicit or explicit expectation that an individual may be called on to justify his or her actions or outcomes to others. The anticipation of having to justify actions to others often changes both the way people reach decisions (i.e., the process of making decisions) and the outcome of the decisions themselves (Lerner & Tetlock, 1999; Tetlock, 1985). A major distinction in the judgment and choice literature is between two types of accountability: outcome accountability and process accountability (Beach & Mitchell, 1978; Tetlock, 1983). This distinction is important because each type of accountability has been conceptualized and operationalized differently, and because they have unique effects on decisions. Outcome accountability has been defined as "a condition in which evaluation is based on the quality of the outcome of the response" (Slaughter, Bagger, & Li, 2006, p. 48). How the decision was made is irrelevant to this evaluation. Tetlock, Vieider, Patil, and Grant (2013) argued that the tacit message sent under these conditions is "I don't care how you get it done" because the focus is on delivering outcomes. In the laboratory, this is operationalized by rewarding participants' performance (e.g., rewarding their accuracy; Siegel-Jacobs & Yates, 1996).

In contrast, process accountability has been defined as "a condition in which evaluation is based on the quality of the decision making process used to produce the response" (Slaughter et al., 2006, p. 49). The outcome of the decision is (ostensibly) irrelevant to the evaluation of the process (Brtek & Motowidlo, 2002). In the laboratory, process accountability is typically operationalized by informing participants—before they make their decision—that after the decision they will have to provide reasons and write their procedures that motivated their action, that these written protocols will be scrutinized, and that they will have justify them in front of others (Langhe, Van Osselaer, & Wierenga, 2011; Peng, Dunn, & Conlon, 2015; see Patil, Vieider, & Tetlock, 2014, for a discussion of how process accountability in the laboratory may differ from process accountability in organizations).

We expected process accountability to influence advice taking by affecting people's self-enhancement. Under process accountability, individuals tend to choose the most broadly defensible decision strategies possible (Patil et al., 2014). According to Schlenker and Weigold (1989), process accountability triggers a motive for social approval, which can be achieved by presenting oneself in a balanced, non-self-enhancing way (Robinson, Johnson, & Shields, 1995). This is because societal or organizational norms of social appropriateness often punish people for presenting themselves in excessively positive ways (Baumeister, 1982). Thus, process accountability works as a deterrent to self-enhancement (Sedikides, Herbst, Hardin, & Dardis, 2002) because, in order to avoid rejection, the perceived presence of others generally makes people behave in a more conforming, less self-serving way than they would do in private (Baumeister, 1982; but see Gino, Ayal, & Ariely, 2013). This increases self-criticism, which should lead individuals to heed others' advice. In other words, social norms

require some modesty in self-presentation (Sedikides, Gregg, & Hart, 2008). Given that others describe people who exhibit unwarranted self-enhancement in negative terms, process accountability leads to more humble (less self-enhancing) self-presentation strategies (Baumeister & Jones, 1978).

Sedikides et al. (2002) conducted four experiments examining specific mediators that could explain how process accountability deters self-enhancement, which in their experiments was operationalized as self-evaluations on an essay. They consistently found that participants who were held accountable provided lower ratings for themselves than participants who were not held accountable. The authors also found that evaluation expectancy concerns caused people to focus on their weaknesses, which was the mechanism that kept self-enhancement in check (see also Sedikides & Herbst, 2002). These results suggest that process accountability prompts individuals to keep positive illusions under control. As noted, superiority bias is one of the reasons people discount advice; people give more weight to their own judgment than others' because they think others are less accurate (Harvey & Harries, 2004). Process accountability, therefore, should lead people to take more advice from others.

However, process accountability may not work the same for all decision makers. We expect that accountability will deter self-enhancement and increase advice-taking behavior only among those who are less narcissistic. For those high on narcissism, the effect of process accountability would be different. As Sedikides et al. (2002) argued in the discussion of their findings, "we would expect resistance and even a measure of immunity to the impact of accountability on the self-enhancement inclinations of individuals... high on narcissism" (p. 602). After all, narcissists tend to believe that their opinions are superior to others, and as a result, they exhibit resistance to persuasion (Saucier & Webster, 2010). Consistent with this, Collins and Stukas (2008) found that narcissism interacted with process accountability to predict self-presentational behavior. Among non-narcissists, Collins and Stukas replicated the modesty effect that Sedikides et al. (2002) found. In contrast, those high on narcissism did not reduce their self-enhancing tendencies when they were held accountable.

Previous research suggests that narcissists may indeed exhibit *increased* self-enhancement under process accountability. Narcissism is related to displays of exhibitionism and a strong need for individuality, dominance, and uniqueness (Emmons, 1987; Grijalva & Harms, 2014; Sedikides & Gregg, 2001). Moreover, narcissists usually engage in self-presentational strategies that magnify these characteristics (Ames & Kammrath, 2004). They are willing to sacrifice being likable to others in order to show their grandiosity (Miller et al., 2011a,b; Raskin, Novacek, & Hogan, 1991). In other words, people high on narcissism do not seek the social approval that the non-narcissist may pursue to avoid being criticized under process accountability; narcissists' need for individuality may lead them to seek admiration by exhibiting their dominance and individualism. Narcissists even seek self-enhancement opportunities (Wallace & Baumeister, 2002) in the presence of others to perform in a dominant, individualistic way, which may help them give the impression of being from a higher status.

In summary, there are two reasons of why we expect that process accountability (i.e., the expectation to justify a decision in front of others) will not deter self-enhancement among narcissists, and may actually increase it: (a) narcissists' beliefs that they do not need to conform to others' expectations, which make their opinions resistant to persuasion and (b) the presence of others make narcissists act in a more dominant, individualistic, and unique way. Based on the preceding discussion, we expected a strong negative relationship between narcissism and advice taking under process accountability.

Unlike process accountability, we expected that outcome accountability would not affect self-enhancing behavior and advice taking. The key issue here is that outcome accountability focuses on results. As noted earlier, the tacit message sent under outcome accountability is that "I don't care how you get it done" (Tetlock et al., 2013). Thus, the only way for individuals to avoid criticism under outcome accountability is by being accurate. It does not matter if the individual considers others' opinions (unless that individual really thinks that others' opinions are accurate). This is in contrast to process accountability, which implies the expectation of having to give reasons and justify a decision in front of others. A socially defensible way to avoid criticism under this circumstance, at least for non-narcissists, is to explain that they incorporated others' opinions into their own decisions. In this way, individuals can avoid the potential criticism of being arrogant by omitting others' opinions. This need to avoid criticism of not using others' advice does not exist under conditions of outcome accountability given the focus is solely on the end result.

Furthermore, given that most people tend to underestimate the importance of using advice (Yaniv, 2004), rewarding decision makers' accuracy would not have an effect on advice taking. For outcomes (or incentives) to have an effect on decision making, individuals must know the strategies that could work in the first place (e.g., advice taking); in other words, decision makers must possess the "cognitive capital" to recognize when to apply the right decision strategy (Camerer & Hogarth, 1999). Several authors have found that, in contrast to process accountability, outcome accountability fails to improve decisions and their consequences (e.g., Brtek & Motowidlo, 2002; Simonson & Staw, 1992; cf. Langhe et al., 2011). In addition, our literature review reveals that there is no evidence that outcomes have a different effect on the decision-making strategies of narcissists and non-narcissists. Therefore, we expected that outcome accountability would not have an influence on the narcissism–advice taking relationship.

Based on the above arguments, we propose the following hypothesis.

Hypothesis 3. Accountability moderates the negative relationship between narcissism and advice taking. This relationship is stronger when process accountability is present than when there is no accountability or outcome accountability.

2.4. Overview of the studies

We conducted four laboratory studies using the Judge-Advisor System (JAS) paradigm. The first three studies focused on the influence of narcissism on advice taking (Hypothesis 1) and the intervening variables in this relationship (Hypotheses 2a and 2b), both at trait (Study 1) and state (Study 2 and Study 3) levels. In the fourth study, participants were placed under different accountability pressures: process, outcome, and no accountability. We investigated here the moderating effect of accountability to explore self-enhancement as an explanatory mechanism in the narcissism–advice taking relationship (Hypothesis 3).

3. Study 1

3.1. Method

3.1.1. Participants

We recruited 278 undergraduate psychology students (125 male, 153 female) from a participation pool at a large Midwestern university in the United States. Their ages ranged from 18 to 40 ($M = 19.01$, $SD = 2.22$). The majority of the sample was Caucasian (81%). Participants received course credit for participation.

3.1.2. Design, procedure, and materials

The experiment consisted of two task sessions in which participants answered general knowledge questions.

Prior to completing the in-person portion of the study, participants completed a narcissism measure online along with other individual difference measures. They completed a short version of Raskin and Terry's (1988) 40-item Narcissistic Personality Inventory (NPI), which is the most widely used narcissism scale among scholars (Twenge, Konrath, Foster, Campbell, & Bushman, 2008). The shorter version, the NPI-16 (Ames, Rose, & Anderson, 2006), consists of 16 forced-choice dichotomous items in which participants must indicate which of two statements they believe is closer to their own feelings about themselves. Sample pairings include, "I like to be the center of attention" versus "I prefer to blend in with the crowd" and "I am more capable than other people" versus "There is a lot that I can learn from other people." We utilized an overall measure of narcissism by averaging responses across the 16 items. Ames et al. (2006) showed that their scale has notable face, discriminant, and predictive validity. Coefficient alpha for this measure within this study was .74.

After completing the online survey, participants were able to sign up for the in-person study, which consisted of two tasks. Participants were unaware that the online study and the in-person study were related, as consent was given separately for each part in order to prevent participants from being primed during the second part of the study (the advice-taking task) by the questions asked in the first (e.g., the NPI). Participants' data from the online study and the in-person portion were linked via their names, which were later removed to ensure confidentiality.

Task 1. Participants answered a series of 12 questions, with numeric answers (see Appendix A). Two sample questions are, "In what year did the first *Star Wars* movie come out?" and "How old was Elvis Presley when he died?" Participants also reported a 90% confidence interval for each response. For example, the confidence interval for the Elvis question was asked as follows: "I am 90% confident Elvis Presley was between ____ and ___ years old when he died."

We adopted some of the questions from previous studies (Gino, 2008), while others were created for this study. All questions were pilot-tested to ensure there would be sufficient variability in advice taking, as measured through the weight of advice estimate (described in detail in the dependent measure section below).

Task 2. After completing the first task, participants were asked to answer the same 12 questions. In this second task, however, we provided each participant with a sheet purportedly answered previously by a different participant. This "advice sheet" included the same answers for all participants (i.e., the advice values were the same across participants). Values were derived by the researchers *a priori* by using scores from a random individual in a pilot study, after we had removed outliers (i.e., individuals from the pilot study who were highly accurate or inaccurate).

Perceived usefulness of the advice. After the second task, we asked participants to provide separate ratings of the accuracy and usefulness of the previous participant's answers on scales of 1 (*not accurate/useful at all*) to 7 (*very accurate/useful*). The correlation between these two items was high ($r = .72$, $p < .001$), so we averaged the scores ($\alpha = .83$). Higher scores indicate that participants perceived the advice useful when making their estimates.

Confidence in own judgment. To estimate the degree to which participants were confident about their own judgment, for each of the 12 questions from Task 1, we first subtracted the lower confidence endpoint from the upper endpoint to compute the range. Then, we standardized each of the confidence interval ranges and then averaged them. Scores were inversed by multiplying these values by negative one, such that higher values indicated participants' greater confidence in their initial estimates.

Control variables. Because this was a "one-cell design" study (a correlational study with no manipulations) we controlled for a number of variables. First, we controlled for accuracy in Task 1, in order to take into account the participants' knowledge about the specific questions asked (See et al., 2011). We computed the absolute value of the difference between the participant's initial estimate and the correct answer. We standardized these 12 scores (for each question) and averaged them. We reversed these scores; thus, higher scores indicate greater accuracy (and therefore more knowledge). Second, because older students may not feel comfortable taking advice from younger counterparts (Yaniv, Choshen-Hillel, & Milyavsky, 2011), we controlled for age in all analyses.

Finally, we also controlled for extraversion. Given that positive emotions are linked to advice taking (Gino & Schweitzer, 2008), and that extraversion is strongly associated with warmth (McCrae & Costa, 2003) and positive affect (Lucas & Fujita, 2000), extraverted individuals could be more willing to take advice. Also, the NPI measure is broad (Ruiz, Smith, & Rhodewalt, 2001) and encompasses some characteristics measured by extraversion measures. This convergence between narcissism (as measured with the NPI) and extraversion is reflected in a meta-analysis (Miller & Maples, 2011), in which the uncorrected correlation between these two traits was $r = .39$. As a result, two recent meta-analyses show that important changes in the regression weights occur when narcissism and extraversion are included simultaneously as predictors of different outcomes (see Grijalva, Harms, Newman, Gaddis, & Fraley, 2015; Grijalva & Newman, 2015).

In the online phase of the study, participants completed Saucier's (1994) measure. This includes eight items and uses a 9-point scale (1 = *strongly disagree*, 9 = *strongly agree*) to indicate how accurately each statement described them. Coefficient alpha was .84.

Dependent measure. Following several researchers (e.g., Gino & Schweitzer, 2008; Yaniv & Foster, 1997), we used weight of advice (WOA) to measure the degree to which participants used the advice. The WOA is the absolute value of the difference between the *final estimate* and the *initial estimate* divided by the absolute value of the difference between the *advice* and the *initial estimate*. A value of zero indicates that the advice had no influence on the final estimate; a value of 1 reveals that the final estimate was identical to the advice (Gino et al., 2012).

For example, one participant's initial estimate was 1970 when asked about the year the first *Star Wars* movie came out (correct answer: 1977). After receiving the advice of 1982, he updated his answer to 1976. Therefore, the WOA for this question was 0.5; that is, the participant weighed the advice and his initial estimate equally to make his final estimate. Each participant had 12 of these scores, which were averaged. We followed the common practice of removing those answers in which the initial estimate was equal to the advice, as well as the answers in which the WOA was higher than 1 (i.e., the final estimate moves away from the advice; e.g., Gino, Shang, & Croson, 2009).

3.2. Results and discussion

Table 1 shows scale descriptives and intercorrelations. To test our first hypothesis, we conducted a multiple regression analysis. We first note that age ($\beta = -.14$, $p = .01$), accuracy in Task 1 ($\beta = -.37$, $p < .001$) and extraversion ($\beta = .13$, $p = .03$) significantly predicted advice taking behavior (justifying their inclusion as covariates).

As shown in Table 2, consistent with Hypothesis 1, the regression model including all the controls and narcissism (but excluding the mediators) shows that narcissism significantly predicted advice taking ($\beta = -.12$, $p < .05$). The partial correlation between

narcissism and advice taking (controlling for age, accuracy and extraversion) was $r = -.11$, $p < .05$. Compared to non-narcissists, narcissists weighed the estimate of others less than they weighed their own previous estimates when making final estimates.

Given that extraversion and narcissism were significant in this regression model, we decided to compute relative weight indices (Johnson, 2000) for the predictors of WOA in the regression model. Relative weights are calculated by creating a set of variables that are maximally related to predictor variables but that are orthogonal to each other, avoiding the problems caused by correlated predictors (Tonidandel & LeBreton, 2011). This analysis revealed that narcissism accounted for 3.7% of the explained variance, while extraversion, age, and accuracy in Task 1 accounted for 8.7%, 12.5%, and 75.1%, respectively. We return to these results in the General Discussion section.

To test Hypotheses 2a and 2b, we utilized Hayes' (2012) procedure to test multiple mediators. Specifically, we utilized his Model 4 to estimate the indirect effect of narcissism on advice taking through usefulness of advice and confidence as mediators. As shown in Table 3, we controlled for age, accuracy in Task 1, and extraversion. After controlling for these variables, narcissism significantly predicted perceived usefulness of advice ($\beta = -.22$, $p < .001$). However, narcissism did not predict confidence in own judgment ($\beta = -.06$, $p > .05$). Additionally, while perceived usefulness of advice predicted advice taking ($\beta = .30$, $p < .001$), confidence in own judgment did not ($\beta = .01$, $p > .05$). As a result, narcissism had a significant indirect effect on advice taking through perceived usefulness of the advice (*effect* = $-.07$; 95% CI [$-.12$, $-.03$]), but not through confidence in one's own judgment (*effect* = .00, 95% CI [$-.01$, .01]). Thus, Hypothesis 2b was supported but Hypothesis 2a was not. (It should be noted that we also tested a serial mediation using the following sequential model: narcissism → confidence → usefulness of advice → WOA. We found that the indirect effect of narcissism on WOA through the two mediators was not significant.)

Table 1
Means, standard deviations, and intercorrelations among Study 1 variables.

Variable	M	SD	1	2	3	4	5	6
1. Age	19.01	2.22						
2. Accuracy in Task 1[a]	0.00	0.43	.12					
3. Extraversion	5.74	1.28	−.05	−.12				
4. Narcissism	0.34	0.21	−.12	.00	.36			
5. Advice taking	0.52	0.22	−.18	−.40	.14	−.05		
6. Confidence own judgment[b]	0.00	0.61	.03	.20	−.01	−.05	−.10	
7. Perceived usefulness of advice	4.05	1.23	−.05	−.24	.04	−.18	.39	−.13

[a] Accuracy in Task 1 represents the average of participants' standardized accuracy estimates, where higher values represent greater accuracy.

[b] Confidence in own judgment represents the average confidence interval range (inversed) for participants' estimates, where higher values represent greater confidence. Correlations > |.12| are significant at $p < .05$.

Table 2
Multiple regression, Study 1 (Dependent Variable: Advice Taking).

Predictor	b	SE	β
Intercept	0.70	0.12	
Age	−0.01	0.01	−0.14
Accuracy in Task 1	−0.21	0.03	−0.37
Extraversion	0.02	0.01	0.13
Narcissism	−0.12	0.06	−0.12
R^2	.20		

Note. All predictors are significant at $p < .05$.

Table 3
Multiple mediation with mediators operating in parallel, Study 1.

Predictor	Confidence in own judgment			Perceived usefulness			Advice taking		
	b	SE	β	b	SE	β	b	SE	β
Intercept	−0.02	0.36		4.49	0.71		0.47	0.13	
Age	−0.01	0.02	−0.02	−0.02	0.03	−0.04	**−0.01**	**0.01**	**−0.13**
Accuracy in Task 1	**0.31**	**0.09**	**0.20**	**−0.70**	**0.18**	**−0.22**	**−0.17**	**0.03**	**−0.31**
Extraversion	0.02	0.03	0.03	0.08	0.06	0.09	0.02	0.01	0.11
Confidence in Own Judgment							0.00	0.02	0.01
Perceived Usefulness of Advice							**0.05**	**0.01**	**0.29**
Narcissism	−0.17	0.19	−0.06	**−1.29**	**0.37**	**−0.22**	−0.06	0.06	−0.05
R^2	.04			.10			.27		

Direct effect of narcissism on advice taking			Bootstrap results for indirect effects of narcissism on advice taking through mediators			
Effect	SE	t	Mediator	Effect	Lower CI	Upper CI
−0.06	0.06	−0.90	Confidence	0.00	−0.01	0.01
			Usefulness	**−0.07**	**−0.12**	**−0.03**

Note. Bolded values are significant at $p < .05$. When the dependent variable is Advice Taking, the model includes Confidence in own Judgment and Perceived Usefulness of Advice. *CI*: Confidence Interval.

In sum, in Study 1 we found that narcissism was negatively related to advice taking. We tested two mechanisms, confidence in one's own judgment and perceived usefulness of the advice, to explain this relationship. As hypothesized, we found that narcissists perceived that others' estimates were less accurate and useful than non-narcissists perceived them to be. This perception, in turn, led narcissistic participants to pay less heed to the advice they received when making their final estimates.

Whereas we found that perceived usefulness explained the relationship between narcissism and advice taking, we did not find support for confidence in own judgment as a mediator of the narcissism–advice taking relationship. Specifically, we were unable to replicate previous findings that showed that narcissists are more confident in their estimates than non-narcissists (e.g., Campbell et al., 2004). These findings may be explained to some extent by the nature of the task. As a reviewer noted, given that knowledge is quite important in this task, it is possible that accuracy is driving advice taking in this study. In this manner, the importance of accuracy may have overpowered the role of confidence in advice taking.

4. Study 2

Study 1 supported the notion that narcissists are less likely to take advice than non-narcissists, with one reason being that narcissists perceive the advice as being less useful and accurate than non-narcissists perceive it to be. However, the effect was somewhat weak. In Study 2, we manipulated narcissism to assess its effect on advice taking. We expected this manipulation would have a stronger influence than what we found in Study 1. This is because cognitive, affective, and attitudinal states have in general larger effects on behavior than their corresponding traits (e.g., Judge, Scott, & Ilies, 2006). Study 2 is also inspired by recent research suggesting that narcissism can function as a state that fluctuates across contexts and can be manipulated (Giacomin & Jordan, 2014; Jordan et al., 2014), which is based on context-dependent models of personality (Fleeson & Jayawickreme, 2015; Mischel & Shoda, 1995). As with Study 1, in Study 2 we tested Hypotheses 1 and 2.

4.1. Method

4.1.1. Participants and procedure

Participants were recruited from Amazon's Mechanical Turk (MTurk). MTurk is an online research platform that originated as a marketing research tool. MTurk has since evolved to allow researchers across a variety of disciplines to post requests for people to complete a Human Intelligence Task (HIT) for a specified monetary payment. Previous research has shown that workers are more similar to the United States population than college students (Paolacci, Chandler, & Ipeirotis, 2010). Furthermore, researchers have shown that data collected using MTurk is reliable and of similar quality to data collected by other means (Buhrmester, Kwang, & Gosling, 2011).

We obtained usable data from 271 participants who reported being born in the United States and whose native language was English. The average age of participants was approximately 38 years (*SD* = 11.90). Approximately 58% of participants were female, and 79% were White, non-Hispanic.

The MTurk HIT we posted stated, "For this study, you will be asked to complete one 30-min survey involving a brief personality assessment and answer a series of trivia questions." Participants were randomly assigned to either the high or low narcissism priming task followed by a narcissism measure. Then participants completed the advice-taking task and demographic questions. At the completion of the survey, participants then received a randomly generated completion code that they would enter on the MTurk website to confirm completion of the study and receive $1.50 for their participation.

4.2. Materials

4.2.1. State narcissism

State narcissism was measured using the narcissism subscale of the Dirty Dozen measure (NSDD; Jonason & Webster, 2010), a short measure of the Dark Triad. The NSDD consists of 4 statements to which participants rate how much they agree (1 = *strongly disagree*; 9 = *strongly agree*). Example items are "I tend to want others to admire me" and "I tend to seek prestige or status." We adapted the instructions of this scale to reflect state narcissism; participants indicated their agreement to the statements "right now," at the current moment. The measurement occurred immediately following narcissism priming task (see below). The internal consistency of the NSDD was α = .85.

4.2.2. Narcissism priming task

There were three conditions in this experiment: high narcissism, low narcissism, and a control condition. In order to prime individuals to behave in high-narcissistic or low-narcissistic manners, we adapted a priming task described by Grant, Gino, and Hofmann (2011) used to manipulate extraversion. In the experimental conditions, we presented participants with information

describing how high or low narcissists typically behave. However, because narcissism may have a negative connotation, we did not label the trait.

In the high-narcissism condition, participants read a brief description that provided some characteristics of narcissists, such as having high confidence, being bold, and that others typically pay attention to what they have to say, among others. After reading the description, we asked participants to describe a decision participants made in which others were involved and in which the decision was made in a dominant, authoritative, bold, and persuasive manner (see Appendix B).

In the low-narcissism condition, participants read a similar description as the high-narcissism condition. However, the description provided some characteristics of non-narcissistic (or humble) individuals, such as being cautious, learning from criticism, and recognizing the contributions of others, among others. After this, we asked participants to think about a decision they made in which others were involved and in which they made the decision in a humble, democratic, prudent, modest, and cooperative manner (see Appendix C).

In the control condition, participants did not read any description about narcissism. Instead, they were asked to think about a decision in which others were involved, and their decision was made in a manner consistent with the way they typically behave.

4.2.3. Estimation tasks

As in Study 1, participants first answered 12 questions (the same ones answered in Study 1) with numeric answers, and reported a 90% confidence interval for each response. Participants were then presented with an "advice table" that included the answers ostensibly from other participants. After viewing the "advice table," participants were asked to answer the same 12 questions.

4.2.4. Mediators, controls and dependent variable

We measured perceived usefulness of the advice, confidence in one's own judgment, accuracy at Time 1, and weight of advice (WOA) in the same way we did in Study 1.

Given that we manipulated narcissism and that we used a narrower measure (the NSDD, which correlates weakly with extraversion; Jonason & McCain, 2012), we did not measure or control for extraversion. This also helped us keep a shorter lapse between the priming task and the main tasks.

4.3. Results and discussion

Table 4 shows scale descriptives and intercorrelations. We started by examining whether the narcissism priming task was effective. Using a one-way between-subjects analysis of variance

Table 4
Means, standard deviations, and intercorrelations among Study 2 variables.

Variable	M	SD	1	2	3	4	5
1. Age	37.11	11.87					
2. Accuracy in Task 1[a]	0.00	0.37	.13				
3. State narcissism	3.68	2.00	−.09	.06			
4. Advice taking	0.38	0.16	−.06	−.30	−.20		
5. Confidence own judgment[b]	0.00	0.54	.07	.28	.04	−.17	
6. Perceived usefulness of advice	3.40	1.24	−.02	−.07	−.21	.40	−.08

[a] Accuracy in Task 1 represents the average of participants' standardized accuracy estimates, where higher values represent greater accuracy.
[b] Confidence in own judgment represents the average of the standardized confidence interval range (inversed) for participants' estimates, where higher values represent greater confidence. Correlations > |.12| are significant at $p < .05$.

(ANOVA), we tested whether state narcissism differed significantly between the experimental groups. This was significant, $F (2, 268) = 9.50$, $p < .001$, $\eta^2 = .07$. We then conducted pairwise comparisons using Fisher's least significant difference (LSD) tests—an appropriate test for three group analysis that does not increase family-wise error rates (Levin, Serlin, & Seaman, 1994). We found that levels of state narcissism were higher for individuals in the high-narcissism condition ($M = 4.31$; $SD = 1.95$) than in the control condition ($M = 3.68$; $SD = 2.02$), $M_{diff} = .63$, $p < .05$, $d = .32$. Participants in the control condition, in turn, had higher state narcissism than those in the low-narcissism condition ($M = 3.04$; $SD = 1.79$), $M_{diff} = .62$, $p < .05$, $d = .34$. Thus, both manipulations worked as expected.

Next, we tested Hypothesis 1, which stated that narcissism would be negatively related to advice taking. We compared advice-taking levels across the three different experimental conditions. We conducted an omnibus ANOVA using WOA as the dependent variable, which was significant, $F (2, 268) = 12.50$, $p < .001$, $\eta^2 = .08$. Using Fisher LSD tests, we found that individuals in the high-narcissism condition used less advice ($M = .33$; $SD = .14$) than those in the control condition ($M = .37$; $SD = .16$), $M_{diff} = −.04$, $p < .05$, $d = −.27$. In addition, participants in the control condition used less advice than those in the low-narcissism condition ($M = .44$; $SD = .14$), $M_{diff} = −.07$, $p < .01$, $d = −.47$.

In addition, we conducted a multiple regression analysis using WOA as the outcome, state narcissism (NSDD) as the predictor, and accuracy at Time 1 and age as covariates. This regression model showed that narcissism significantly predicted advice taking ($\beta = −.19$, $p < .001$). Narcissists took less advice than non-narcissists. The model as a whole explained 13% of the variance in WOA, and a relative weight analysis revealed that narcissism accounted for 33% of the explained variance.

Taken together, these two analyses, using either the narcissism manipulation or measured state narcissism as the predictor, gave support to Hypothesis 1. Narcissism was negatively related to advice taking.

We then tested Hypotheses 2a and 2b. As in Study 1, we used Hayes' (2012) model 4 to estimate the indirect effect of the narcissism manipulation on advice taking through usefulness of advice and confidence as parallel mediators. For ease of analysis and presentation of the indirect effect model, we used only the high- and low-narcissism conditions as part of the narcissism factor (for a similar procedure, see Tost et al., 2012, Experiment 4; Gino & Schweitzer, 2008, Experiment 2). We also controlled for age and accuracy in Task 1, as in Study 1. The results are shown in Table 5. The narcissism manipulation predicted usefulness of advice ($\beta = −.30$, $p < .001$) but did not predict confidence ($\beta = −.01$, $p > .05$). In addition, perceived usefulness of advice predicted advice taking ($\beta = .36$, $p < .001$), but confidence did not ($\beta = −.07$, $p > .05$). Consequently, the bootstrap results (5000 iterations) showed an indirect effect of the narcissism manipulation on advice taking through perceived usefulness of the advice ($effect = −.01$, 95% CI [−.02, .00]), but not through confidence in own judgment, $effect = .00$, $SE = .00$, 95% CI [−.01, .01]. The proportion of variance of advice taking explained by the model including all the variables was 24.1%.

Because the manipulation of narcissism may have entailed demand characteristics, we also conducted the same analysis described in the above paragraph but using state narcissism (NSDD) as the predictor *within* the control condition (i.e., excluding the high- and low-narcissism conditions). Results, in terms of significance, were almost identical to those reported above. There was an indirect effect of NSDD on advice taking through usefulness ($effect = −.01$; CI: −.02, −.01), but not through confidence ($effect = .00$, CI: −.01, .01). The variables explained 23.7% of the outcome's variance.

Table 5
Multiple mediation with mediators operating in parallel, Study 2.

Predictor	Confidence in own judgment			Perceived usefulness			Advice taking		
	b	SE	β	b	SE	β	b	SE	β
Intercept	3.46	0.13		4.00	0.30		0.34	0.07	
Age	0.00	0.01	0.03	−0.01	0.01	−0.00	0.00	0.00	−0.02
Accuracy in Task 1	**0.41**	**0.09**	**0.27**	−0.22	0.26	−0.06	**−0.11**	**0.02**	**−0.25**
Confidence in own judgment							−0.02	0.02	−0.07
Perceived usefulness of advice							**0.05**	**0.01**	**0.37**
Narcissism manipulation	−0.01	0.02	0.25	**0.75**	**0.18**	**−0.30**	−0.01	0.01	−0.06
R^2	.08			.10			.25		

Direct effect of narcissism on advice taking			Bootstrap results for indirect effects of narcissism on advice taking through mediators		
Effect	SE	t	Mediator	Effect	Lower CI	Upper CI
−0.01	0.01	−2.01	Confidence	0.00	−0.01	0.00
			Usefulness	**−0.01**	**−0.01**	**0.00**

Note. Bolded values are significant at *p* < .05. Narcissism manipulation was coded 1 = low narcissism, 2 = high narcissism. We used only the high and low narcissism conditions. *CI*: Confidence Interval. Bootstrapped method was conducted using 5000 iterations.

We conclude that, as in Study 1, Hypothesis 2b was supported but Hypothesis 2a was not.

In sum, the results of Study 2 show that narcissism is negatively related to advice taking. By manipulating participants' state level of narcissism, we showed that narcissists used significantly less advice than non-narcissists, essentially replicating our results from Study 1. In order to fully understand this relationship, we tested the same two explanatory mechanisms examined in Study 1, perceived usefulness of advice and confidence in one's judgment. As we predicted, perceived usefulness of advice mediated the relationship between narcissism and advice taking. In other words, narcissists did not use the advice because they did not perceive the advice was useful. On the other hand, non-narcissists not only perceived the advice to be useful, they used it. These results mirror the results found in Study 1. However, because we manipulated narcissism directly, the effects in Study 2 are larger than the effects in Study 1.

While our predictions that narcissism is negatively related to advice taking and that this relationship is mediated by the perceived usefulness of the advice were supported, we again failed to find support for the assertion that confidence in one's own judgment mediated the relationship between narcissism and advice taking. Contrary to previous research (e.g., Campbell et al., 2004), narcissism was not related to confidence in one's judgment. Further, one's confidence in his or her judgments played no role in determining whether one would actually use the advice.

Despite these results, there are two issues with Study 2. First, usefulness of advice was measured after the advice-taking task (i.e., after the second estimation task). We originally chose to ask about the usefulness of advice after participants made their second estimates in order to minimize demand characteristics related to the advice itself. That is, if participants were asked about the usefulness of the previous participants' estimates prior to making their second estimates, it may prime them to use the advice more than they might have otherwise. Nevertheless, as one reviewer noted, this is problematic because participants may be reporting their judgments of usefulness based on how much they already decided to weight the advice. Thus, in Study 3, we address this by asking participants to report their perceived usefulness of advice *before* the advice taking task (i.e., prior to the second estimation task).

Second, the exact mechanism of how usefulness of advice and narcissism are linked is unclear. We argued that narcissists disregard others' advice due to their lack of concern for others. That is, narcissists believe others are less competent and reflective (Kernis & Sun, 1994; Wood, Harms, & Vazire, 2010). It remains unclear based on Study 2's findings whether this is the reason for the lower perceived usefulness of advice. Thus, in Study 3, we also include a measure of perceptions of others' competence. The aim is to test a serial mediation using the following sequential model: narcissism → other's competence → usefulness of advice → WOA. In other words, we argue that because narcissists tend to think others' competence is low, they will think their advice is not useful, which in turn will affect the weight they put on the advice they receive.

5. Study 3

5.1. Method

5.1.1. Participants and procedure

Participants were recruited from MTurk, with the same HIT posting and payment structure as in Study 2. We obtained usable data from 150 participants who reported being born in the United States and whose native language was English. The average age of participants was approximately 37 years (*SD* = 11.82). Approximately 61% of participants were female, and 87% were White, non-Hispanic.

5.1.2. Materials

All materials (estimation tasks, controls, and dependent variable) were identical to Study 2. There were four differences in Study 3, compared with Study 2. First, we did not include a control condition in this study. Rather, only the high narcissism and low narcissism priming conditions were included. Second, unlike Study 2, usefulness of advice was assessed prior to the second task in which participants actually use the advice. Third, we did not test Hypothesis 2a, related to confidence as a mechanism, because in the previous studies this did not receive support. Accordingly, in Study 3 our goal was to focus on the usefulness of advice mechanism.

Fourth, we included a scale measuring perceived competence of another person, which was also included before the second estimation task. Specifically, we used the performance factor of Heatherton and Polivy's (1991) self-esteem measure. We modified this measure to target other people. Participants were told: "The person whose estimates you were able to see previously participated in this study. Although you have limited information about this participant, we would like you to assess this person, making an inference on the basis of their answers. We ask you to answer a number of questions about this person." Participants rated other's competence using five items on scales of 1 (*not likely at all*) to 7 (*very likely*). Examples are "The previous participant is

smarter than other people" and "The previous participant has trouble understanding things that s/he reads." Higher scores indicate that participants perceived the previous participant as more competent. The internal consistency of the measure was α = .85.

5.2. Results and discussion

Table 6 shows scale descriptives and intercorrelations. As a manipulation check, we compared the levels of state narcissism of participants in each condition. Those in the high-narcissism condition reported higher levels ($M = 4.98$; $SD = 1.78$) than those in the low-narcissism condition ($M = 3.89$; $SD = 1.68$), $M_{diff} = 1.09$, $p < .05$, $d = .32$.

We then tested the following sequential mediation model: narcissism → other's competence → usefulness of advice → WOA. To test this serial mediation, we used Hayes' (2012) Model 6 with bootstrap methods (5000 samples). As Table 7 shows, the narcissism manipulation predicted other's competence ($\beta = -.56$, $p < .001$), usefulness of advice ($\beta = -.74$, $p < .001$), and advice taking ($\beta = -.12$, $p < .01$). Other's competence predicted both usefulness of advice ($\beta = .73$, $p < .01$), and advice taking ($\beta = .10$, $p < .001$). Usefulness of advice predicted advice taking ($\beta = .09$, $p < .001$). Including other's competence in the previous models reduced the influence of narcissism on usefulness of advice

($\beta = -.37$, $p < .05$) and on advice taking ($\beta = -.07$, $p > .05$). In turn, usefulness of advice reduced the effect of other's competence on usefulness of advice ($\beta = .05$, $p < .05$). As a result, there was a significant indirect path (effect = $-.02$, 95% CI [-0.05, -0.01]) from the narcissism manipulation to advice taking through other's competence and usefulness of advice.

Results of Study 3 strengthen the findings from Studies 1 and 2. In contrast to Study 2, we measured usefulness of advice before the second estimation task. As in Study 2, we found that usefulness of advice mediated the relationship between narcissism and advice taking. Thus, we are better able to provide empirical support for the role of perceived usefulness of advice as a mechanism to explain whether narcissists choose to use advice or not. In addition, we found that perceptions of others' competence drive the effect. The results suggested a serial mediation: narcissism → other's competence → usefulness of advice → WOA. This suggests that because narcissists think other are people are inferior (Kernis & Sun, 1994), narcissists perceive others as less competent. This lack of perceived competence makes narcissists then judge advice as less useful, which, in turn, makes them less likely to use the advice they receive.

The results of studies 1, 2, and 3 are consistent. Narcissism tends to have an influence on advice taking; however, this effect is stronger at the state level than at the trait level. In addition, the mechanism of this relationship is narcissists' lack of concern (i.e., dislike) for others; their excessive confidence in their judgments does not seem to be driving the relationship. In Study 4, we extend these findings by examining the boundary conditions of the relationship between narcissism and advice taking by including accountability as a moderating variable.

6. Study 4

In Study 4, we tested Hypothesis 3, which concerns the interactive effects between narcissism and accountability on advice taking, thus indirectly examining self-enhancement. As in the previous studies, we utilized the JAS procedure but with a different task. We also included an accountability manipulation.

6.1. Method

6.1.1. Participants

Participants were 124 undergraduates (55 male; 69 female) recruited from a psychology participation pool at a large Midwestern university in the United States. Participants received course credit for participation

Table 6
Means, standard deviations, and intercorrelations among Study 3 variables.

Variable	M	SD	1	2	3	4	5	6
1. Age	37.25	11.82						
2. Accuracy in Task 1[a]	0.00	0.39	.22					
3. State narcissism	4.44	1.81	−.05	−.07				
4. Advice taking	0.42	0.27	−.32	−.17	−.26			
5. Confidence own judgment[b]	0.00	0.32	.02	.27	.01	−.23		
6. Perceived usefulness of advice	3.54	1.27	−.32	−.15	−.24	.48	−.10	
7. Perceptions of other's competence	4.09	0.99	−.17	−.16	−.34	.42	−.13	.61

[a] Accuracy in Task 1 represents the average of participants' standardized accuracy estimates, where higher values represent greater accuracy.
[b] Confidence in own judgment represents the average of the standardized confidence interval range (inversed) for participants' estimates, where higher values represent greater confidence. Correlations > |.16| are significant at $p < .05$.

Table 7
Serial mediation using the sequential model: narcissism → perceptions of other's competence → usefulness of advice → advice taking, Study 3.

Predictor	Perceptions of other's competence			Perceived usefulness			Advice taking		
	b	SE	β	b	SE	β	b	SE	β
Intercept	5.35	0.34		2.22	0.44		0.25	.31	
Age	−0.01	0.01	−.13	**−0.02**	**0.01**	**−.22**	**−0.01**	**0.00**	**−0.18**
Accuracy in Task 1	−0.34	0.20	−.14	−0.08	0.21	−0.03	−0.05	0.05	−0.07
Perceived Usefulness of Advice							**0.06**	**0.02**	**0.27**
Perceptions of Other's Competence				**0.67**	**0.09**	**0.52**	**0.05**	**0.02**	**0.18**
Narcissism manipulation	**−0.56**	**0.15**	**−.28**	**−0.37**	**.17**	**−0.15**	−0.05	0.04	−0.10
R^2	.13			.43			.30		

Bootstrap results for indirect effects of narcissism on advice taking in the sequential model		
Effect	Lower CI	Upper CI
−.02	**−.05**	**−0.01**

Bootstrap results for indirect effects of narcissism on advice taking through mediators (non-sequential)			
Mediator	Effect	Lower CI	Upper CI
Competence	**−0.03**	**−0.08**	**−0.01**
Usefulness	**−0.02**	**−0.06**	**−0.01**

Note. Bolded values are significant at $p < .05$. Narcissism manipulation was coded 1 = low narcissism, 2 = high narcissism. CI: Confidence Interval. Bootstrapped method was conducted using 5000 iterations.

6.1.2. Design, procedure, and materials

This experiment used a one-factor between-subjects design with three accountability conditions. Participants completed measures of narcissism and other individual differences online prior to the experimental session. As in Study 1, participants were unaware that the online study and the in-person study were related. Also, like Study 1, the in-person portion consisted of two estimation tasks. However, for Study 4, we used a weight estimation task.

Narcissism. Narcissism was assessed using Raskin and Terry's (1988) NPI-40, including 40 forced-choice dichotomous items. Coefficient alpha for the scale was .79.

Extraversion. As in Study 1, we controlled for extraversion in these analyses. We used Saucier's (1994) inventory, which includes eight items and uses a 9-point scale (1 = *strongly disagree*, 9 = *strongly agree*). Coefficient alpha was .76. Age information was not available, and therefore was not controlled for in this study. In addition, unlike Study 1, we did not control for accuracy at Time 1. There were two reasons for this. First, we did not know the true weight of individuals in the images. Had we asked the individuals who agreed to pose for the photographs what their weight was, they may not have agreed to participate or may have lied about their weights. Given that the actual accuracy of estimates was not the driving force of the study, we opted not to ask this of them. In addition, there was greater subjectivity inherent in the task and decisions of this study compared to the former. Whereas participants in the first three studies would sometimes know if they were correct on a question (i.e., they were certain of when a historical event took place), there would be no way for participants in the current study to know without uncertainty the weight of a person in the images. As such, initial accuracy should not necessarily impact advice taking and failure to control for it should not be problematic.

Task 1. Participants engaged in a weight estimation task in which they were shown pictures of ten individuals and asked to provide weight estimations for each person as well as a 90% confidence interval for each estimate. Each picture was displayed separately on a computer screen for seven seconds, after which participants were asked to make their estimates before the next picture was displayed. Participants individually viewed the pictures and the order of presentation was counterbalanced to minimize ordering effects. None of the participants knew any of the individuals in the pictures. This task is similar to weight estimation tasks used in prior advice-taking research (e.g., Gino & Schweitzer, 2008). As in Study 1, we pilot-tested the questions to ensure sufficient variability in the dependent variable (WOA).

Task 2. After completing the first task, participants again estimated weights of the same ten individuals, in the same order they originally viewed and rated them. For this task, however, each participant was given an already-completed estimation sheet ostensibly from prior participants. In actuality, advice sheets were identical for all participants and values were derived *a priori*. As in Study 1, we used scores from a random pilot study participant, after we had removed outliers.

Prior to providing estimates for the second estimation task, participants were randomly assigned to one of three conditions: process accountability (n = 41), outcome accountability (n = 40), or no accountability (n = 43). In the *process accountability* condition, participants were told they would be writing a short essay explaining their judgment strategies after the second task and that they would be interviewed regarding their decision strategies. In order to make this condition more believable, participants signed a mock consent form to allow the researchers permission to audiotape the interview and a tape recorder was present in the room. In the *outcome accountability* condition, participants were told that a $10 cash prize would be given to the most accurate participant. Finally, in the *no accountability* condition, participants were told that one individual would be randomly chosen to receive a $10 cash prize.

Manipulation check. We asked participants to answer "yes" or "no" to three questions at the end of the experiment in order to check the effectiveness of our accountability manipulations. Similar to Siegel-Jacobs and Yates (1996), we asked, "While you were making your judgments, did you expect to be interviewed after the experiment about how and why you made some responses you did?" to check process accountability and asked the question, "While you were making your judgments, did you expect that you could earn a $10 cash prize by being the most accurate participant?" to check outcome accountability. Also, to check no accountability, we asked, "While you were making your judgments, did you expect that you could earn a $10 cash prize because it would be randomly assigned among all participants?"

Dependent measure. As in Study 1, we used weight of advice (WOA) to measure the degree to which participants took advice when making their final estimate.

6.2. Results and discussion

6.2.1. Manipulation check

As expected, planned comparisons revealed that the proportion of participants who expected to be interviewed was higher among those in the process accountability condition (M_{PA} = .68) than in the other two conditions (M_{NA} = .23; M_{OA} = .30), t (121) = 4.80, $p < .001$, η^2 = .16. Also, the proportion of those who expected to earn a cash prize because of their accuracy was significantly higher among the outcome accountability condition participants (M_{OA} = .62) than in the other two conditions (M_{PA} = .15; M_{NA} = .14), t (121) = 6.23, $p < .001$, η^2 = .24. Furthermore, the proportion of participants who expected that the cash prize would be assigned randomly was lower in the outcome accountability condition (M_{OA} = .18) than in the other two conditions (M_{PA} = .46; M_{NA} = .54), t (121) = −3.54, $p < .001$, η^2 = .10. The accountability manipulation thus appears to have been successful.

6.2.2. Test of Hypothesis 3

Table 8 shows scale descriptive statistics and intercorrelations. First, we created two dummy-coded variables (D_O and D_N) using the process accountability condition as the comparison group (Exact coding: For process accountability, D_O = 0, D_N = 0; for outcome accountability, D_O = 1, D_N = 0; for no accountability, D_O = 0, D_N = 1). We also created cross product interaction terms between narcissism scores and these dummy variables ($D_O \times$ narcissism and $D_N \times$ narcissism).

To test Hypothesis 4, we used a hierarchical multiple regression analysis. Prior to conducting the analysis, we centered the narcissism term and the two interaction terms. We also tested for the significance of the simple slopes of the regression lines (WOA on narcissism) at the different accountability conditions. In addition, we graphed the interaction following Aiken and West's (1991)

Table 8
Means, standard deviations and intercorrelations among Study 4 variables.

Variable	M	SD	1	2	3	4	5
1. Extraversion	5.20	1.00					
2. Narcissism	.40	.15	.47				
3. D_O	.32	.47	−.04	−.12			
4. D_N	.35	.48	−.08	−.07	−.50		
5. Advice taking	.54	.26	−.15	−.16	.01	−.14	
6. Confidence own judgment	.00	.44	.06	−.01	.01	.07	.09

Note. Correlations > |.17| are significant at $p < .05$. D_O = first dummy variable, contrasting Process Accountability with Outcome Accountability; D_N = second dummy variable, contrasting Process Accountability with No Accountability.

Table 9
Hierarchical regression analysis predicting weight of advice from narcissism, accountability manipulations, and their interactions, Study 4.

variable entered	B	Std. error	β	p	R^2	ΔR^2 of Step	Relative weight as % of R^2
Step 1							
Extraversion	−0.02	0.02	−0.10	0.31			
Narcissism	−0.20	0.16	−0.12	0.21	.031	.031	
Step 2							
Extraversion	−0.02	0.02	−0.11	0.27			
Narcissism	−0.25	0.16	−0.15	0.13			
D_O	−0.07	0.06	−0.13	0.22			
D_N	−0.12	0.06	−0.22	0.04	.067	.036	
Step 3							
Extraversion	−0.02	0.02	−0.10	0.29			16.6%
Narcissism	−0.67	0.30	−0.39	0.03			28.6%
D_O	−0.07	0.06	−0.13	0.22			4.4%
D_N	−0.13	0.06	−0.24	0.02			30.0%
$D_O \times$ Narcissism	0.84	0.41	0.26	0.04			14.3%
$D_N \times$ Narcissism	0.41	0.37	0.16	0.27	.098	.031	6.1%

Note. The three accountability conditions were dummy coded using Process Accountability as the reference group. D_O = first dummy variable, contrasting Process Accountability with Outcome Accountability; D_N = second dummy variable, contrasting Process Accountability with No Accountability.

procedure, plotting the regression lines at -1 SD and $+1$ SD for the low and high narcissism groups for each of the accountability conditions.

Results are shown in Table 9. We entered narcissism and extraversion in the first step. In the second step, we entered the two dummy variables. The D_O term—comparing process and outcome accountability—was not significant, $\beta = -.13$, $p > .05$; the D_N term—comparing process and no accountability—was significant, $\beta = -.24$, $p < .05$. Thus, there was no difference between process and outcome accountability ($M_{PA} = .60$ vs. $M_{OA} = .53$). However, there was a difference between process and no accountability ($M_{PA} = .60$ vs. $M_{NA} = .49$). This indicates that people weighted advice more strongly under conditions of process accountability than under no accountability.

In the third step, the interaction terms between narcissism and each of the dummy variables were entered. Hypothesis 3 predicted that the relationship between narcissism and advice taking would be more negative when process accountability is present than when there is no accountability or outcome accountability. Table 9 reveals that the $D_N \times$ narcissism interaction term was not significant, $\beta = .16$, $p > .05$. That is, the slope of the regression line predicting advice taking on narcissism is not different across the process and no accountability conditions. However, the $D_O \times$ narcissism interaction term was significant ($\beta = .26$, $p < .05$), which indicates that the relationship between narcissism and advice taking is different across the process and outcome accountability conditions (and qualifies the main effects reported above). This gives partial support to Hypothesis 3. Fig. 2 shows that this interaction is disordinal: while the narcissism slope is negative in the process accountability condition, it is slightly positive in the outcome accountability condition.

As Table 9 shows, the narcissism regression coefficient in Step 3 was significant, $\beta = -.39$, $p < .05$. Given that our dummy variables were coded using process accountability as the comparison group, this indicates that the simple slope of narcissism in the process accountability condition was negative (Cohen, Cohen, West, & Aiken, 2002). To test the significance of the simple slopes of NPI in the outcome and no accountability conditions, we conducted two additional hierarchical regressions, using the same variables. In each case, however, we dummy coded the accountability conditions using outcome accountability and no accountability as the
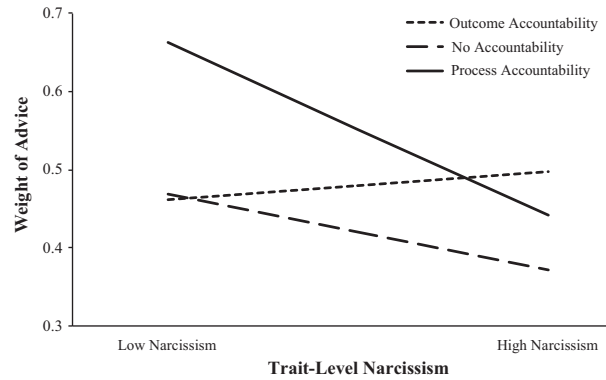

Fig. 2. The moderating effects of accountability on the relationship between narcissism and weight of advice, Study 4.

reference group, respectively. For no accountability, the narcissism regression coefficient was not significant, $\beta = -.15$, $p > .05$. Likewise, for outcome accountability, the simple slope was not significant, $\beta = .10$, $p > .05$. This indicates that under outcome accountability the relationship between narcissism and advice taking was not significant. Examining Fig. 2 reveals that the negative slope of the narcissism–advice taking relationship under process accountability, when compared to the slopes of no accountability and outcome accountability, is due to non-narcissists increasing their advice taking, not due to narcissists decreasing their advice taking.

As in Studies 1 and 2, we conducted relative a weight analysis, including all the predictors in the model (step 3). The relative weights as percentage of R^2 are shown in the last column of Table 5. Narcissism accounted for 28.6% of the explained variance in advice taking, whereas the $D_O \times$ narcissism interaction accounted for 14.3%. When summing the relative weights of all predictors involving narcissism (i.e., narcissism, $D_N \times$ narcissism, and $D_O \times$ narcissism), they accounted for 49% of the explained variance.

In sum, the present study tested predictions regarding the moderating effects of accountability on the narcissism–advice taking relationship. Our results revealed that, while this relation was significantly negative under process accountability, it was not significant under outcome or no accountability. In other words, these findings suggest that non-narcissistic individuals tend to increase their use of advice under process accountability. This is consistent with the modesty effect found by Collins and Stukas (2008). Narcissistic individuals, however, were unaffected by this pressure.

7. General discussion

The current research makes several key contributions to the literature. First, our results underscore the importance of superiority bias and self-enhancement strategies in decision making, by emphasizing the importance of narcissism, the belief that other people and their opinions are unimportant, and process accountability in advice taking. Second, there has been virtually no attention to the influence of personality traits on advice taking (Bonaccio & Dalal, 2006; Dalal & Bonaccio, 2010). This is unfortunate, as advice taking is related to better decisions and job performance (Sparrowe, Liden, Wayne, and Kraimer (2001), and the use of personality is one of the ways job performance can be predicted in personnel selection (Barros, Kausel, Cuadra, & Díaz, 2014; Gatewood, Feild, & Barrick, 2010). Third, while previous organizational scholars had theorized accountability × personality interactions (Slaughter & Kausel, 2009), to our knowledge, this is the first study that has actually tested them. Thus, this study contributes to

extant literatures by highlighting one of the ways in which a personality trait can influence advice taking: whereas procedural scrutiny makes non-narcissistic individuals more willing to consider others' advice, it has no effect on narcissistic individuals. This implies that process accountability tends to amplify the narcissism–advice taking relationship.

Results of this research suggest that narcissism tends to be negatively related to advice taking. This is consistent with what a number of practitioners had conjectured, in that narcissistic managers are biased toward their own judgment, and that they are poor listeners and they distrust others (Bergman et al., 2010; Maccoby, 2000). However, the mediation analyses conducted in Studies 1 and 2 did not support the hypothesis that confidence mediated the negative narcissism–advice taking relationship; rather, what was driving this relationship was narcissists' assessment of others' advice as useless and inaccurate.[3]

Results also revealed that the negative relationship between narcissism and advice taking was stronger at the state-level than at the trait-level of narcissism. In Study 1, trait narcissism accounted for only 3.7% of the explained variance in advice taking ($R^2 = .20$), that is, around 1% of the dependent variable variance. Indeed, trait narcissism became a significant predictor of advice taking only when controlling for extraversion. In Study 2, state narcissism accounted 33% of the explained variance in advice taking ($R^2 = .13$); around 4% of the dependent variable variance.[4] It is interesting to note that in Study 4 the predictors involving trait narcissism and its interactions accounted for around 50% of the explained variance ($R^2 = .10$); around 5% of the dependent variable variance. This reinforces the idea noted above, in that it is important to study how personality traits interact with situational factors to predict decision-related outcomes.

We also found that process accountability, but not outcome accountability, has an influence on the narcissism–advice taking relationship. This is in line with previous research showing that different forms of accountability have different effects on decision-related variables. For example, prior studies have shown that process accountability can increase decision accuracy, such as job interview validity (e.g., Brtek & Motowidlo, 2002). Outcome accountability, conversely, can often decrease accuracy (Siegel-Jacobs & Yates, 1996). Thus, our study shows that only process accountability has beneficial effects on judgment and choice by increasing advice taking; however, these effects appear to be limited to those who are relatively less narcissistic.

7.1. Practical and theoretical contributions

Our findings suggest that requesting employees to justify their decisions to an audience or to other individuals who oversee their

actions may make them more willing to consider their advisors' perspective; however, this strategy is likely to fail with narcissistic individuals. Our results may also help explain findings from a meta-analysis on the relationship between narcissism and job performance (O'Boyle, Forsyth, Banks, & McDaniel, 2012). O'Boyle and colleagues found that this relation depended on the individual's position in the organization's hierarchy: it was more strongly negative for individuals in positions of authority than for individuals in low-position jobs. This means that narcissists fare poorly when in positions of authority. This is also in congruence with a recent meta-analysis showing that those individuals who are high on narcissism tend to have poorer leadership effectiveness than those at midrange levels of narcissism (Grijalva et al., 2015). This can be explained by the fact that effective decision making is one of the most important managerial tasks (Drucker, 2003), and, as noted, using others' advice is an important strategy to making better decisions (Ciampa, 2006; Soll & Larrick, 2009). Our results suggest that narcissistic managers may perform poorly, among other reasons, because they are particularly ineffective in taking into consideration advice from others when making decisions. This is consistent with Lubit's (2002) idea that narcissistic managers avoid "the real interchanges of ideas needed for optimal decision-making" (p. 135).

Our findings are also theoretically important for three reasons. First, we found that confidence was not significantly related to narcissism (cf. Campbell et al., 2004), and just weakly related to perceived usefulness of advice. Interestingly, this finding suggests that narcissists' spite for others can occur regardless of their confidence in their own skills (Wink, 1991). Wink indeed argues that some narcissists are vulnerable and lack self-confidence, but they still disregard others and are perceived as intolerant. Second, our paper underscores the importance of state and trait personality, which has been increasingly investigated in recent years (e.g., Debusscher, Hofmans, & De Fruyt, 2014; Judge, Simon, Hurst, & Kelley, 2014). Fleeson and Jayawickreme (2015), in their Whole Trait Theory, explain that people experience between- and within-individual variation in personality. Individuals are constantly changing as a consequence of environmental or internal events, although trait personality provides boundaries to these changes. Accordingly, recent research has suggested that narcissism can fluctuate in relatively short periods of time (Giacomin & Jordan, 2014). This, in turn, supports models of narcissism that operationalize it as a dynamic system of characteristics, behaviors, strategies, and emotions (Morf & Rhodewalt, 2001). While previous research had shown that narcissism manipulations could have an effect on self-reported narcissistic tendencies (Jordan et al., 2014), our paper shows that these changes can be consequential.

A third important theoretical implication is that these results underscore the superiority bias as an important explanation of why people often discount advice. Among the three reasons typically provided to explain this predisposition in the context of Judge-Advisor System, two are the most popular, perhaps because they are based on two classic heuristics from the *heuristics and biases* literature (Kahneman, Slovic, & Tversky, 1982). The first explanation is based on the anchoring and adjustment heuristic (Tversky & Kahneman, 1974) and states that decision makers fail to sufficiently adjust their initial estimate, which works as an anchor. The second explanation is based on the accessibility heuristic (Kahneman & Tversky, 1973) and argues that decision makers have more access to reasons justifying their own initial estimate (and they do not have access to the advisor's reasons), thus discounting the advice. The third explanation is based on the superiority bias, which posits that people have biased beliefs about their ability (Yaniv, 2004). This explanation has received much less attention from researchers (Soll & Mannes, 2011). Given that one of the most prominent characteristics of narcissists

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[3] In Studies 1, 2, and 3, this may have been explained by the importance of accuracy in this specific task, as we explain at the end of Study 1. However, we found the same result in Study 4, with a completely different task (see the correlation between trait narcissism and confidence in Table 8). Thus, we conclude that this result is not due to the role of accuracy in the tasks included. A different explanation is that narcissists tend to show their positive self in agentic behavior and tasks (e.g., where they can show their leadership skills). It could be that none of the tasks we employed (trivia knowledge, guessing other people's weights) are worthy of narcissists for them to exhibit their confidence.

[4] A complementary explanation of why we found a stronger effect in Studies 2 and 3 vis-à-vis Study 1, at least when using measured state narcissism as the predictor, is that the NSDD is a narrower measure of narcissism than the NPI is. The NPI overlaps to a great degree with other constructs such as extraversion, as noted before. As a result, when predicting a specific criterion such as advice taking, extraneous facets may suppress the effect of trait narcissism in Study 1. The NDSS may have helped avoiding this issue in Study 2. This idea is consistent with the benefits of using narrow measures of personality in the prediction of specific outcomes, as previous researchers have suggested (Kausel & Slaughter, 2011; Tett & Christiansen, 2007; for a similar discussion involving the construct and measurement of *maximizing tendencies*, see Diab, Gillespie, & Highhouse, 2008).

is their grandiose sense of the self (Campbell, Reeder, Sedikides, & Elliot, 2000) and their intolerance to others' opinions (Smalley & Stake, 1996), our research gives indirect support to the superiority bias perspective (see also Harvey & Harries, 2004). More broadly, our studies highlight the importance of motivation in advice taking, as opposed to mere cognitive factors such as insufficient adjusting or availability. Narcissists take less advice than non-narcissists because they are motivated by their despise for others. Likewise, non-narcissists under process accountability take more advice than non-narcissists under no accountability or outcome accountability, because they are motivated by self-effacing strategies: trying to present themselves in modest ways and assessing their judgments and decisions critically.

7.2. Limitations and future research

One limitation of the present research is that the results of Studies 2 and 3 could be driven by demand characteristics. The manipulation of narcissism could have caused participants to both report being less (or more) narcissistic and take less (or more) advice, because they might have perceived this was expected of them. We argue that this is unlikely to explain all of our results. First, a demand characteristic interpretation of these findings would imply that the narcissism manipulation should lead to, given its focus on risk and confidence (see Appendices B and C), more confidence (or less confidence, depending on the condition). However, results from Study 2 revealed that confidence levels among participants were unaffected. Second, we examined the indirect effect of state narcissism (as measured with the NSDD scale) on advice taking through perceived usefulness *within* the control condition; that is, without including the manipulations that could create demand characteristics. We found that this effect was significant. These results are not consistent with a demand characteristic explanation.

A second limitation is our operationalization of process accountability. Although we used a manipulation that has been used a number of times in laboratory studies (Connolly, Reb, & Kausel, 2013; Slaughter et al., 2006), it could be argued that slightly different manipulations (or different accountability procedures) may have different effects. In our experiment, participants were ignorant of the audience's views, and researchers have argued that this leads to preemptive self-criticism (Tetlock, 1983). However, in some situations, the audience is known, as well as their preferences. Because process accountability elicits decision makers to *give people what they want* (Larrick, 2004), being procedurally accountable to some types of known audiences may not increase advice taking; it may even decrease it. For example, individuals may know (or assume) that the audience value decision makers who seem confident and determined, and perhaps unwilling to take advice. Under these circumstances, decision makers may take less advice. Future research should examine how different audiences may enhance or reduce advice taking. It would be interesting to study what preferences decision makers attribute to powerful or high status audiences. If individuals assume that powerful audiences prefer assertive decision makers, these individuals might take less advice from others to signal self-confidence (for a recent study on how overconfidence signals competence and high status, see Anderson, Brion, Moore, & Kennedy, 2012).

Along these lines, future researchers may find it useful to explore other ways beyond accountability to influence self-enhancement. While previous research has demonstrated that process accountability deters self-enhancement because it causes people to focus on their weaknesses and keeps self-enhancement in check (Sedikides & Herbst, 2002; Sedikides et al., 2002, 2008), there may be other, more direct ways to test whether

self-enhancement is a mechanism that explains the narcissism–advice taking relationship.

Another avenue for future research is how the effects of accountability can be moderated by cultural values. The findings from Study 3 were conducted with U.S. participants. It is possible that in cultures that value humility (or punish self-enhancement) to a strong degree (Schwartz, 1999; Taras, Kirkman, & Steel, 2010), the interactions between narcissism and accountability on advice taking would have been different. For example, in countries with collectivistic cultures, such as Indonesia or Colombia (Hofstede, 2001; Triandis, 1995), the effect of procedural accountability could have been stronger, perhaps overriding the effect of narcissism (see Grijalva & Newman, 2015). Thus, the way accountability affects expressions of self-enhancement in different cultures is an issue that merits future research attention.

A final direction for future research involves the JAS paradigm itself. Although methodologically clean and rigorous, the JAS paradigm fails to fully capture the psychological experience of advice taking with all of its complexities and uncertainties. Future researchers would do well to explore other means of examining whether people take others' advice into consideration.

8. Conclusion

We found evidence that narcissism was negatively related to the use of others' advice. However, this finding emerged only when (a) controlling for extraversion, (b) state narcissism was manipulated or measured, or (c) under process accountability pressures. In addition, what drove the effect was a disregard for others and failure to reduce self-enhancement strategies when expecting to be assessed. In contrast, confidence did not receive support as a mechanism. More broadly, the present research demonstrates the importance of considering motivational factors in advice taking, opening up a number of promising directions for future research.

Appendix A

Questions included in Studies 1, 2, and 3

1. What is the average lifespan for an African elephant in the wild? Years: _____
2. In what year did the first *Star Wars* movie come out? Year: _____
3. How old was Elvis Presley when he died? Age in years: _____
4. How many times did Lance Armstrong win the Tour de France in a row? Number of wins: _____
5. How many stories is the Empire State Building? Stories: _____
6. How many hot dogs did Joey Chestnut eat to win the 2011 Nathan's Hot Dog Eating Contest? Hot Dogs:_____
7. How many keys are there on a standard modern piano? Keys: _____
8. What is the top speed (in mph) that a cheetah can obtain? Speed: _____ mph

9. In what year did Disney's Magic Kingdom open? Year: _____

10. How many World Series have the New York Yankees won? Wins: _____

11. Not including the cue ball, how many balls are in a standard pool (pocket billiards) game? Ball: _____

12. How many U.S. presidents have there been? Presidents: _____

Appendix B

B.1. High narcissism prime

Scientific research shows that there is a personality trait that has been shown to be important when making decisions. A number of CEOs who make important decisions in organizations demonstrate this trait, such as Michael Eisner (Walt Disney), Jack Welch (General Electric), and Bob Nardelli (Home Depot, Chrysler), as well as other historical leaders like Napoleon and Alexander the Great.

Individuals high on this personality characteristic have extraordinary confidence and believe in the superiority of their statements. They are admired for their confident views on important issues. This trait also causes CEOs to be bold and take more risks. In meetings, everyone pays attention to what these people have to say. People with this trait tend to show more creativity because they are not afraid of what others say. Also, people with this trait tend to progress higher in their careers.

Now, to get ready for the task, think of a time in which you had to make a decision in which others were involved, and did so by acting dominant, authoritative, bold, splendid, and persuasive. Write a paragraph about what you did, and why these behaviors contributed to the decision you made.

Appendix C

C.1. Low narcissism prime

Scientific research shows that there is a personality trait that has been shown to be important when making decisions. A number of CEOs who make important decisions in organizations demonstrate this trait, such as Warren Buffet, Andy Grove (Intel), and David Packard (Hewlett–Packard), as well as other historical leaders like Buddha and Benjamin Franklin.

Individuals high on this particular personality characteristic learn from criticism and admitting their mistakes. They avoid showing their knowledge unless they are asked to, and they feel that the grandiose praise from others is unnecessary. This trait also causes CEOs to be cautious and avoid preventable risks. In meetings, they have empathy, shifting the focus away from themselves and continually recognizing the contributions of others. Also, companies led by people with this trait tend to perform better.

Now, to get ready for the task, think of a time in which you had to make a decision in which others were involved, and did so by acting humble, democratic, prudent, modest, and cooperative. Write a paragraph about what you did, and why these behaviors contributed to the decision you made.

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