Kent Academic Repository

accepted version before copy-editing

Nothing Compares to Me:

How Narcissism Shapes Comparative Thinking

Katharina Ohmann

Individual Differences and Psychological Diagnostics, University of Cologne, Germany

Pascal Burgmer

Social Cognition Center Cologne, University of Cologne, Germany

Corresponding author:

Katharina Ohmann

University of Cologne

Pohligstraße 1

50969 Cologne, Germany

Phone: +49 (0) 221 470 5032

Fax: +49 (0) 221 470 5034

E-mail: katharina.ohmann@uni-koeln.de

Abstract

Feeling special feels good. This may be particularly true for individuals with narcissistic tendencies who put great emphasis on distinctiveness and uniqueness in relation to others. But how do people arrive at the conclusion that they are special? Psychological research has identified social comparisons as a powerful means to inform such judgments about the self. The present research investigates whether narcissism may be related to a particular strategy of comparative thinking. Specifically, we expected that narcissistic individuals—presumably to meet an elevated need for uniqueness—would predominantly focus on differences (as opposed to similarities) when engaging in comparisons. To test this prediction, four studies investigated how narcissism shapes comparative thinking in social and nonsocial judgment domains. The first two studies revealed that narcissistic personality tendencies were positively related to an informational focus on differences during habitual comparisons in both social and nonsocial contexts (Studies 1a and 1b). Two additional studies extended this relation between narcissism and difference focus to the domain of spontaneous social and nonsocial comparisons (Studies 2a and 2b). Such a content-free processing style during comparative thinking may assist narcissists to increase their feelings of distinctiveness, and may ultimately contribute to the rise and maintenance of narcissistic tendencies.

Keywords: narcissism; comparison; comparative thinking; similarity focus; difference focus

"Always remember that you are absolutely unique. Just like everyone else." — Anonymous

1. Introduction

The abovementioned statement illustrates with a wink that we are all both different from as well as similar to other people. Indeed, research has shown that competing needs for belongingness and distinctiveness motivate individuals to strive for optimal distinctiveness (Brewer, 1991, 1993; Leonardelli, Pickett, & Brewer, 2010), while extreme similarity and extreme dissimilarity to others are typically experienced as being unpleasant (Snyder & Fromkin, 1980). However, being notably different from others appears to be of particular importance to narcissistic individuals[1]. In the social-psychological and personality literature, the narcissistic personality is characterized by inflated views of the self, feelings of grandiosity and entitlement, immoderate self-focus, egocentrism, vanity and self-importance (Campbell, Reeder, Sedikides, & Elliot, 2000; Twenge, Konrath, Foster, Campbell, & Bushman, 2008). Moreover, increasing evidence suggests that narcissism is on the rise in many Western cultures (Stewart & Bernhardt, 2010; Twenge & Foster, 2008; Twenge et al., 2008), that it is perceived to be particularly pronounced in the American culture (Miller et al., 2015), and that narcissism seems to entail important intra- and interpersonal consequences. For instance, research indicates that narcissists are high in need for achievement and low in need for affiliation (Elliot & Thrash, 2001; Luchner, Houston, Walker, & Houston, 2011; Morf & Rhodewalt, 1993, 2001). This combination may lead them to frequently distinguish themselves from others in a competitive manner and to seek the company of other people primarily to use them as a source of feedback and not because they value relational others in and of themselves (Elliot & Thrash, 2001; Morf & Rhodewalt, 2001). Such an instrumental behavior that is characterized by demarcation and exploitation may

---

[1] For brevity, we sometimes use the word narcissist as short form for "an individual scoring relatively higher in narcissism." We do not imply any categorical or clinical meaning.

ultimately contribute to the fact that others judge narcissists more unfavorably than narcissists judge themselves (e.g., Park & Colvin, 2014). The narcissists' glaring motivation to constantly distinguish themselves from others was already captured by Ernest Jones (1913/1951) who wrote that: "[…] nothing offends such a man as the suggestion that he resembles someone else […]" (p. 252). In fact, research suggests that uniqueness has several beneficial effects, ranging from the attraction of attention (Taylor, Fiske, Etcoff, & Ruderman, 1978), to the enhancement of an individual's self-esteem (Ditto & Griffin, 1993) and social status (Bellezza, Gino, & Keinan, 2013)—all aspects that are of particular importance to narcissists (e.g., Brunell, Gentry, Campbell, Hoffman, Kuhnert, & DeMarree, 2008). Early research on narcissism by Emmons (1984) has established a correlational relationship between narcissism and an individual's need for uniqueness. Consistently, elevated levels of narcissism have recently been linked to the inclination to buy exclusive, personalizable, and scarce products to promote such a sense of uniqueness (Lee, Gregg, & Park, 2013; Lee & Seidle, 2012), presumably as a mechanism to preserve feelings of self-importance, entitlement, and grandiosity. Moreover, investigating the origins of narcissism, a recent study by Brummelman and colleagues (2015) suggests that narcissistic feelings and behaviors may emerge—at least partly—from parental overvaluation, that is, parents impart feelings of specialness and superiority to their children. Here we argue that the perpetuation of such beliefs of specialness, superiority, and uniqueness should manifest in particular ways of cognitive processing in the narcissistic individual. But what are the cognitive processes that potentially promote such a sense of uniqueness and distinctiveness among narcissists?

1.1. Narcissism and Social Comparison

To determine their standing relative to others, people engage in social comparisons (Festinger, 1954). Research in this domain has suggested that an informational focus on

similarities (vs. differences) shapes the outcome of such comparisons, that is, whether people assimilate their judgments about themselves toward the comparison standard, or whether they contrast away from it (Mussweiler, 2003; Mussweiler, Rüter, & Epstude, 2004). Thus, how we perceive ourselves in relation to others depends to a significant extent on whether we focus on similarities or on differences in a given comparison situation. An informational focus on differences during comparisons may allow people to feel distinct from others, thus contributing to feelings of uniqueness. Accordingly, we reasoned that such a relative focus on differences may be particularly appealing for narcissists.

Past findings in comparison research indicate that narcissistic individuals tend to make *more* social comparisons, particularly downward ones (Bogart, Benotsch, & Pavlovic, 2004). For instance, narcissists are more likely to view themselves as superior when comparing their athletic or academic performance to that of another person. Krizan and Bushman (2011)—who found that narcissists show the tendency to engage in downward comparisons even with regard to close others—have argued that such comparisons allow narcissists to preserve their elevated feelings of superiority and inflated self-views. Furthermore, Bogart and colleagues (2004) have revealed that the direction of comparison shapes narcissists' affective reactions: Narcissistic individuals seem to experience more positive affect in downward and more hostility in upward comparison situations. As a consequence, they appear to distance themselves from someone who outperforms them in an ego-relevant task by rating that person more negatively (Morf & Rhodewalt, 1993; Nicholls & Stukas, 2011). In a similar vein, narcissism predicts envious reactions towards superior others (Krizan & Johar, 2012) such that narcissists tend to pull superior others down (malicious envy) instead of trying to level themselves up (benign envy; Lange, Crusius, & Hagemeyer, 2015). Altogether, by examining the *direction* of comparison, these studies suggest that social comparisons play an important role in narcissistic self-enhancement (e.g., Campbell et

al., 2000; John & Robins, 1994; Raskin, Novacek, & Hogan, 1991), with self-enhancement being

a "trademark" of narcissism (Morf, Horvarth, & Torchetti, 2011). However, as these studies have

focused on the frequency, direction, and outcome of comparisons, we do not know yet whether

narcissism also shapes *how* individuals process information when they engage in comparative

thinking. Specifically, it remains unclear whether and how narcissism impacts the cognitive

processes underlying such comparisons and whether these processes occur solely in situations

that allow for self-enhancement.

1.2. The Present Research

Thus far, research on how basic social information processing such as comparative

thinking may be shaped by narcissistic tendencies is scarce (for an exception, see Konrath,

Bushman, & Grove, 2009). In the present research, we employed social-cognitive methods to

illuminate how narcissists process comparative information. We hypothesized that individuals

with higher levels of narcissism focus more strongly on differences than individuals with lower

levels of narcissism when engaging in comparisons. We presumed that a pronounced focus on

differences may allow these individuals to arrive at judgments that distinguish themselves from

others, hence satisfying their need for uniqueness and distinctiveness. Moreover, we suspected

that a predominant focus on differences would constitute a more generalized thinking style in

narcissism that shapes the lens through which narcissists view the world. Such a mindset can

likely serve self-enhancement purposes, but it may also carry over to comparison contexts that do

not afford self-enhancement. Therefore, we predicted that narcissistic individuals would adopt a

focus on differences in various kinds of situations ranging from comparing themselves to other

people to comparing everyday objects. In addition, we explored whether a potential relation

between narcissism and difference focus can be observed in both habitual as well as spontaneous

comparison situations. Four studies investigated these predictions. Studies 1a and 1b were

designed to examine whether narcissism would be positively related to a pronounced focus on differences in habitual social and nonsocial comparison situations while Studies 2a and 2b extended this question to spontaneous social and nonsocial comparisons.

2. Studies 1a and 1b: Narcissism and Habitual Comparisons

In the first two studies, we set out to explore whether habitual comparisons may be shaped by narcissism. Specifically, in Study 1a, we tested whether narcissists generally focus predominantly on differences during comparisons in the social domain. Study 1b was dedicated to the question whether such a focus on differences among narcissists would also be evident in the nonsocial domain.

2.1. Study 1a: Narcissism and Habitual Social Comparisons

2.1.1. Method

2.1.1.1. Participants and design. Via Amazon's Mechanical Turk (MTurk; Buhrmester, Kwang, & Gosling, 2011), we recruited 250 participants[2] (108 females, 142 males; M_{age} = 35.32, SD = 11.18). As in all of the following studies, participants were recruited for modest monetary compensation (i.e., approximately $ 0.50 per study). No participants were excluded from data analysis.

In a correlational design, all participants initially answered the 40-item *Narcissistic Personality Inventory* (NPI-40; Raskin & Terry, 1988), the most widely used trait measure of narcissism in personality and social psychology research (e.g., Cain, Pincus, & Ansell, 2008; Rhodewalt & Morf, 1995). We decided to use the NPI-40 in all of the current studies as it constitutes a well-established non-clinical measure that captures a general narcissism construct

---

[2] We aimed for sample sizes of at least 150 participants per study (see Schönbrodt & Perugini, 2013). However, as we performed data collection over a longer period of time, Study 2a—the first data set collected for this project—has a considerably smaller sample size reflecting outdated standards of psychological research. All other studies were run following the recommendations of Schönbrodt & Perugini (2013), confirming the pattern obtained in the first study with more reliable estimates.

(e.g., Kubarych, Deary, & Austin, 2004; Miller & Campbell, 2008). Furthermore, the NPI was previously linked to an individual's need for uniqueness (Emmons, 1984; Lee et al., 2013; Lee & Seidle, 2012) which we believe motivates narcissists to employ a focus on differences in comparison situations (for further discussion of the NPI and its usage in the current studies, see section 4.2.). After completing the NPI-40, participants indicated their (dis-)agreement with eight questions intended to measure their habitual informational focus (on similarities vs. differences) during comparisons with others. We expected narcissistic tendencies to be positively related to a focus on differences during habitual social comparative thinking.

       2.1.1.2. Materials and procedure. Ostensibly taking part in a study on "perception styles and attitudes", participants first answered the NPI-40 (Raskin & Terry, 1988). This scale comprises 40 pairs of antithetic statements such as "I really like to be the center of attention" versus "I prefer to blend in with the crowd". Participants were asked to indicate which of the respective two statements describes best their feelings and beliefs about themselves. Choices (not) reflecting narcissism were coded with ("0") "1" and summed to form a narcissism-score with higher values indicating elevated narcissism. The average score of narcissism in the present sample was $M = 12.42$ ($SD = 8.61$; Cronbach's $\alpha = .91$). Afterwards, participants were presented with eight statements, introduced with the phrase "When I compare myself to other people…". Four of these statements were designed to measure participants' habitual tendency to focus on similarities (e.g., "… I tend to focus on things that we have in common.") and four to measure their habitual tendency to focus on differences (e.g., "… I often notice the features that distinguish us."). Participants indicated their agreement with these statements on a scale from 1 (= *strongly disagree*) to 7 (= *strongly agree*).

2.1.2. Results and Discussion

For analysis, we averaged those items that assessed a focus on similarities (M = 4.61, SD = 1.18) and those that assessed a focus on differences (M = 4.53, SD = 1.09), to obtain a similarity-score (α = .90) and a difference-score (α = .83). Consistent with expectations, a linear regression analysis revealed that narcissism positively predicted a focus on differences, b = .20, $t(249)$ = 3.18, p = .002, 95% CI = [.18, .21][3], while narcissism was unrelated to a comparison focus on similarities, b = -.07, $t(249)$ = -1.15, p = .253, 95% CI = [-.09, -.05]. To rule out that this finding is caused by a general response bias among narcissists, we ran a partial correlation analysis, revealing that the positive relationship between narcissism and perceived differences remains reliable when controlling for perceived similarities, $r(247)$ = .19, p = .003, 95% CI = [.06, .31]. For additional analyses of the the NPI subscales, see Tables B-1 – B-4 in the Appendix.

These initial results indicate that narcissists habitually focus predominantly on differences when comparing to other people. To investigate whether such a focus on differences would also extend to the nonsocial realm, we designed Study 1b that examined narcissists' habitual comparison focus in the nonsocial domain. Such a carry-over effect from social to nonsocial comparison processes can be expected based on previous research suggesting that an informational focus triggered in an unrelated context with nonsocial stimuli affects comparative outcomes in social contexts (Mussweiler, 2001). Furthermore, motivational consequences of comparisons can also be evoked by comparing nonsocial stimuli (Mussweiler & Mayer, 2011). Therefore, we expected that narcissists would also focus on differences when comparing nonsocial entities.

---

[3] Table 1 provides an overview of the results obtained in all four studies. For scatter plots, see Appendix A.

2.2. Study 1b: Narcissism and Habitual Nonsocial Comparison

2.2.1. Method

2.2.1.1. Participants and design. We recruited 201 MTurkers (88 females, 113 males; M_{age} = 33.94, *SD* = 10.68) for a study on "perception and attitudes". No participants were excluded from data analysis.

Employing a correlational design, all participants answered a questionnaire assessing habitual comparisons between mundane objects, followed by the NPI-40 (Raskin & Terry, 1988). As in Study 1a, we expected narcissistic tendencies to be positively related to a focus on differences during habitual object comparisons.

2.2.1.2. Materials and procedure. First, participants worked on a revised and extended version of a similarity-perception task (see Mussweiler & Damisch, 2008; Study 6). On a rating scale from 1 (= *absolutely disagree*) to 9 (= *absolutely agree*), ten items assessed perceived similarities, and ten items assessed perceived differences between nonsocial entitites. These nonsocial entities constituted everyday objects from various domains including plants, vehicles, tools, fruits, and colors (e.g., "To me, tree and bush are very similar.", "To me, bus and truck are very different."). Following this task, participants answered the NPI-40 (Raskin & Terry, 1988), as described in Study 1a. The average score of narcissism in the present sample was *M* = 11.30 (*SD* = 8.20; α = .91).

2.2.2. Results and Discussion

We averaged all items that assessed perceived similarities (*M* = 5.43, *SD* = 1.16) and those that assessed perceived differences (*M* = 5.17, *SD* = 1.22), thus arriving at a similarity-score (α = .76) and a difference-score (α = .70) for each participant. Consistent with expectations, a linear regression analysis revealed that narcissism positively predicted a focus on differences, *b* = .14, *t*(200) = 2.03, *p* = .043, 95% CI = [.12, .16], while narcissism was unrelated to a

comparison focus on similarities, $b = .07$, $t(200) = 1.00$, $p = .318$, 95% CI = [.05, .09]. A partial

correlation analysis again revealed that the positive relationship between narcissism and

difference-focus remains reliable when controlling for similarity-focus, $r(198) = .23$, $p = .001$,

95% CI = [.11, .35].

Collectively, Studies 1a and 1b suggest that narcissistic individuals seem to routinely

focus on differences during social as well as nonsocial comparisons, specifically, when

comparing themselves to people and when comparing objects in their environment. In the

following two studies, we aimed to explore whether the observed pattern also applies to

spontaneous comparisons.

3. Studies 2a and 2b: Narcissism and Spontaneous Comparisons

Studies 2a and 2b were designed to investigate whether narcissism would have an impact

on spontaneous comparisons in the social (Study 2a) and nonsocial realm (Study 2b).

3.1. Study 2a: Narcissism and Spontaneous Social Comparisons

3.1.1. Method

3.1.1.1 *Participants and design.* We recruited 102 participants via MTurk. Two

participants were excluded for not completing the tasks, leading to a final sample of 100

participants (37 females, 63 males; $M_{age} = 38.63$, $SD = 13.69$).

In a correlational design, all participants initially worked on a social comparison task

intended to measure the informational focus (on similarities vs. differences) during spontaneous

comparison between self and others. Subsequently, they answered the NPI-40 (Raskin & Terry,

1988), as described above. We hypothesized that narcissistic tendencies would be positively

related to a focus on differences during spontaneous social comparative thinking.

3.1.1.2. Materials and procedure. In a study on "perception of MTurk and personality",

participants were first asked to explain MTurk to someone who is unfamiliar with the platform.

Next, participants wrote down three characteristics of an average MTurk worker ("Try to think of

an MTurk worker who neither has particular negative nor particular positive characteristics.").

Participants were then instructed to compare themselves to that average MTurker, and to indicate

their agreement with six statements on a rating scale from 1 (= *not at all*) to 7 (= *very much*).

Three items assessed perceived similarities (e.g.," I think that I am quite similar to the average

MTurk worker."), and three items assessed perceived differences (e.g., "I think that I am quite

different from the average MTurker."). Finally, participants answered the NPI-40 (Raskin &

Terry, 1988). The average score of narcissism in the current sample was $M = 11.10$ ($SD = 7.92$; α

= .90).

3.1.2. Results and Discussion

As in the first two studies, we averaged those items that assessed perceived similarities (M

= 4.76, $SD = 1.23$) and those that assessed perceived differences ($M = 4.02$, $SD = 1.10$), to obtain

a similarity-score (α = .88) and a difference-score (α = .56)[4]. Confirming expectations, a linear

regression analysis revealed that narcissism positively predicted a focus on differences $b = .33,$

$t(99) = 3.43$, $p = .001$, 95% CI = [.30, .35], while narcissism was not related to a comparison

focus on similarities, $b = .12,$ $t(99) = 1.15$, $p = .252$, 95% CI = [.08, .15]. A partial correlation

analysis again revealed that the positive relationship between narcissism and perceived

differences remains reliable when controlling for perceived similarities, $r(97) = .44$, $p < .001$,

95% CI = [.24, .55].

These results provide intial evidence that narcissists focus mainly on differences when

engaging in spontaneous social comparisons. Specifically, our data suggest that more narcissistic

---

[4] Further analysis revealed that one item (i.e., "I believe that I have many other qualities than the average MTurker")
was responsible for the poor reliability of the difference-score. Deleting this item increased reliability to α = .81.
Rerunning the linear regression analysis without this item replicates the previously obtained pattern, $b = .22$, $t(95) =$
2.13, $p = .036$, 95% CI = [-.14, .57], and $r(93) = .37$, $p < .001$, 95% CI = [.18, .53], for the partial correlation
controlling for perceived similarities.

individuals perceive themselves to be significantly more different when comparing themselves to an average MTurker.

3.2. Study 2b: Narcissism and Spontaneous Nonsocial Comparisons

3.2.1. Method

3.2.1.1. Participants and design. We recruited 255 adults via MTurk. Eight participants were excluded for not completing the tasks, leading to a final sample of 247 participants (95 females, 152 males; $M_{age} = 35.88$, $SD = 11.78$).

In a correlational design, participants worked on a figure comparison task intended to measure informational focus (on similarities vs. differences) during spontaneous nonsocial comparisons. Subsequently, narcissistic tendencies were measured employing the NPI-40 (Raskin & Terry, 1988). We expected that narcissistic tendencies would be positively related to a focus on differences during comparative thinking.

3.2.1.2.. Materials and procedure. Allegedly taking part in a study on "visual perception styles and attitudes", participants were initially presented with a sequence of six images. Each of these images consists of two figures positioned next to each other. Both figures, in turn, are configured of the same geometric shapes, but colors and specific arrangement of the respective shapes differ slightly, therby leaving room for personal interpretations regarding the dominance of similarities over differences and vice versa (see Figure 1, for two examples). Participants were instructed to indicate on a rating scale how similar (1 = *very similar*) or different (7 = *very different*) they perceived each pair of figures to be. Subsequently, they answered the NPI-40, as described above (Raskin & Terry, 1988). The average score of narcissism in the current sample was $M = 11.55$ ($SD = 9.08$; $\alpha = .93$).

3.2.2. Results and Discussion

For analysis, we collapsed participants' responses to the six rating items to form an index of perceived differences ($M = 4.47$, $SD = 0.92$), with higher values reflecting a greater focus on differences. A linear regression analysis revealed that narcissistic tendencies positively predicted a focus on differences during figure comparisons, $b = 1.30$, $t(246) = 2.00$, $p = .046$, 95% CI = [.12, .14].

Results from this study are consistent with the notion that narcissistic individuals also prevailingly employ a focus on differences when engaging in spontaneous comparisons in the nonsocial domain. Specifically, individuals higher in narciss

ism perceived the very same visual stimuli to be more different from each other than individuals scoring lower in narcissism.

4. General Discussion

In four studies, we explored the idea that narcissism shapes the informational focus that individuals adopt during comparative thinking. Specifically, we hypothesized that narcissism not only influences the frequency, direction, and outcome of comparisons, but that it also determines *how* comparative thinking unfolds. Our results suggest that narcissists focus predominantly on differences when routinely and spontaneously engaging in social and nonsocial comparisons. In fact, Study 1a revealed a positive relation between narcissism and an informational focus on differences while narcissism was unrelated to a focus on similarities during comparisons with other people. Study 1b extended this finding by suggesting that narcissists habitually employ a focus on differences also in nonsocial comparison situations that do not involve a self-enhancement dimension. Examining spontaneous comparisons, Studies 2a and 2b revealed that narcissistic individuals focus primarily on differences but not on similarities when comparing themselves with a self-relevant person (fictitious average MTurker; Study 2a) or when comparing

random objects (figure comparison task; Study 2b). Collectively, these findings are consistent with the idea that an informational focus on differences may be firmly rooted in narcissistic thinking and that this focus is observable in social, nonsocial, spontaneous, and habitual comparison contexts. Narcissists' comparison focus on differences in turn may assist them with positively distinguishing themselves from others, hence providing an opportunity for elevated feelings of uniqueness. Concurrently, our findings also suggest that narcissists do not only use a focus on differences in situations that allow for self-enhancement but also in situations that do not have any direct implications for the individual's social status. Having investigated the *how* of comparative thinking—that is, on which information people focus during comparison regardless of the domain concerned—provides a novel perspective on social-cognitive information processing among narcisstsic individuals.

4.1. Theoretical Implications

4.1.1. Empathy and Perspective Taking

The present findings offer a potential new theoretical perspective on previous evidence in narcissism research—particularly with regard to the negative relation between narcissism and empathy. Various studies have suggested that narcissists display less affective empathy than non-narcissists (Watson, Grisham, Trotter, & Biderman, 1984; Watson & Morris, 1991), and that this effect seems to be driven by narcissistic personality components such as entitlement, exploitativeness and exhibitionism (Hepper, Hart, & Sedikides, 2014). Additionally, previous research indicates that putting oneself into someone else's shoes is initially motivated by perceiving similarities between that person and oneself (Adams et al., 2010; Stotland, 1969). Hence, a predominant focus on differences among narcissistic individuals may be a cognitive mechanism explaining why narcissists seem less likely to show affective empathy. However, findings on narcissists' ability to engage in cognitive empathy are heterogenous. While some

studies have found restraints in perspective taking (PT) among narcissists (Ehrenberg, Hunter & Elterman, 1996; Hepper, Hart, Meek, Cisek, & Sedikides, 2014), others have found comparable performances to that of non-narcissistic individuals on some theory-of-mind tasks (Ritter et al., 2011). This empirical inconsistency may be resolved by the different operationalizations of PT in these studies: Those finding a negative relation between narcissism and PT measured motivational inclinations to engage in PT (e.g., using self-report questionnaires), wheras those finding no restraints in PT among narcissists measured PT using specific performance-related tasks (e.g., the Multifacetted Empathy Test; Ritter et al., 2011). This suggests that narcissists are able to take another person's perspective when explicitly motivated to do so during performance-related tasks (e.g., in the lab), which is in line with recent findings by Hepper and colleagues (2014), who found that narcissts show comparable PT performance when properly motivated. Moreover, Todd, Hanko, Galinsky, and Mussweiler (2011) have found that an informational focus on differences facilitates self-other differentiation which in turn improves PT perfomance––particularly, in circumstances when one's own perspective differs from that of another person. In sum, a comparison focus on differences among narcissists may contribute to their initial lack of motivation to experience empathy or engage in perspective taking. However, when properly motivated, an elevated focus on differences may assist them in tasks that require self-other differentiation to successfully appreciate the perspectives of others. Addressing the relationship between a comparison focus on differences, empathy, and perspective taking in narcissism empirically would constitute an interesting route for future research.

4.1.2. Self-Serving Biases

With specific regard to social comparisons, results from Studies 1a and 2a suggest that individuals with elevated narcissistic tendencies routinely and spontaneously concentrate more on differences when comparing to other people. Such a habitual focus on differences may contribute

to narcissists' elevated tendency to exhibit self-serving biases (SSBs) in competitive situations,

that is, taking credit for success but blaming another person or partner for failure (Campbell et al.,

2000; John & Robins, 1994; Stucke, 2003; Tamborski, Brown, & Chowning, 2012).

Additionally, research by Sedikides, Campbell, Reeder, and Elliot (2002) on dyadic interactions

has shown that SSBs are typically present in distant but not in close dyads. For example, it is

easier for people to blame a distant team member for the failure of a project than the team

member that they have lunch with every day. In reference to the current findings, narcissists'

focus on differences may fuel their proneness to engage in SSBs—inclinations that profit from a

more distant relationship towards those who are blaimed. Moreover, recent evidence qualifies

previous findings that narcissists engage in SSBs and other-derogation in competitive situations

only. In three studies, Park and Colvin (2015) found that narcissists engage in other-derogation

even in the absence of ego threat. Integrating these findings, routinely focusing on differences

may constitute the underlying cognitive strategy that allows narcissists to exhibit SSBs and to

derogate others regardless of the domain concerned. This, in turn, may allow them to put

themselves on a pedestal and to maintain their feelings of superiority and uniqueness. This gets

further corroborated by the fact that an additional analysis of the NPI-subscales (Raskin & Terry,

1988) in the present research revealed that an informational focus on differences is positively

correlated with the narcissism components "superiority" and "exhibitionism" in three of the four

studies (all rs > .15, ps < .01; for details, see Tables B-1, B-2, and B-3 in the Appendix).

4.1.3. Analytic Processing Style

Finally, our findings may extend work by Konrath and colleagues (2009) who have

investigated whether high self-focus in combination with low other-focus—as present in

narcissism—is related to an analytic cognitive-perceptual style. Individuals who adopt an

analytical style prefer to solve problems by breaking them into manageable parts (Kozhenikov,

2007) and by disembeding objects from their surroundings (Konrath, 2009). Konrath et al. (2009) observed that narcissists exhibit this particular cognitive-perceptual style and, as a consequence, are less susceptible to visual illusions and perform better when they have to find a picture that is embedded within a larger one. The current studies are in line with this finding and further suggest that a primary focus on differences in social and nonsocial comparison contexts may constitute a helpful cognitive tool that facilitates such an analytical information-processing style among narcissists.

4.2. Limitations and Future Research

Although the current findings offer new insight into the relation between narcissistic personality tendencies and comparative thinking, like all studies they suffer from general and specific limitations. Among the general limitations is our exclusive reliance on participants from MTurk as an online participant pool. This could limit the generalizability of our findings to other populations. However, recent findings indicate that MTurk samples are comparable to samples from laboratories (Buhrmester et al., 2011; Peer, Vosgerau, & Acquisti, 2013), and may even exceed these on some dimensions such as demographical variability (Buhrmester et al., 2011) and attentiveness (Hauser & Schwarz, 2015). Nonetheless, we relied on WEIRD samples and thus acknowledge the limitations that come along with these (Ceci, Kahan, & Braman, 2010; Heinrich, Heine, & Norenzayan, 2010). A second more general limitation pertains to the issue of exclusive reliance on self-report measures in the current set of studies (for an overview, see Paulhus & Vazire, 2007). Granting that research participants generally are motivated to make a good impression when responding to self-report measures, the specific measures employed in the current studies (i.e., NPI and difference-focus measures) do not seem to afford such a tendency in particular. Moreover, we relied exclusively on the NPI for measuring narcissism in the present studies, a measure that captures primarily grandiose narcissism and does not, for instance, assess

vulnerable narcissism (Miller et al., 2011). While the NPI constitutes an established and

frequently used measure in narcissism research (Cain et al., 2008), recent studies have critizised

the NPI's internal consistency, factor structure, and construct validity (e.g., Ackerman,

Donnellan, Roberts, & Fraley, 2015; Ackerman et al., 2011; Brown, Budzek, & Tamborski, 2009;

del Rosario & White, 2005; Pincus & Lukowitsky, 2010). Keeping in mind that Miller, Price, and

Campbell (2012) advised against discarding such a well-known and validated measure of

narcissism like the NPI too quickly, we suggest that future research may use recently developed

measures (e.g., by Back et al., 2013; Pincus et al., 2009) to take a closer look at additional

parameters that may determine the relation between narcissism and informational comparison

focus.

    In this context, it should also be mentioned that future research may investigate more in

depth whether certain sub-facets of narcissism contribute in particular to an enhanced focus on

differences in comparison situations. In the current studies, our analyses of the NPI subscales (see

Tables B-1 – B-4 in the Appendix) revealed a relationship between a comparison focus on

differences and Authority and Exploitativeness in social situations. Interestingly, this relationship

did not emerge in non-social situations. However, as there is some disagreement in the literature

about the exact factor structure of the NPI (Ackerman et al., 2011), we do not intend to

overinterpret this finding. Instead, future research may investigate this question further by using

different measures of non-clinical narcissism (e.g., the *Narcissistic Admiration and Rivalry*

Questionnaire; NARQ, Back et al., 2013) and by including analyses of other NPI factor structure

solutions, such as the three-factor solution proposed by Ackerman et al. (2011).

    A first more specific limitation concerns the generalizability of our findings to *any*

comparison situation. Specifically, the current studies were designed to investigate the

comparative thinking style employed by narcissists—presumably as a means to preserve and

elevate perceived uniqueness and distinctiveness in relation to others. However, a constant focus

on differences among narcissists may also have paradoxical downstream consequences under

certain circumstances: As one of the central characteristics of narcissism is self-enhancement

(Campbell, Reeder, Sedikides, & Elliot, 2000; Sedikides, 1993), conflicts may arise when

narcissists focus on differences while comparing to a high comparison standard, that is, a person

who is superior on a relevant comparison dimension. Focusing on differences during such

comparisons should result in a contrast effect, which can entail less positive self-judgments on

desirable comparison dimensions (Mussweiler, Rüter & Epstude, 2004). Thus, future research

may explore whether narcissists are willing to temporarily suspend their self-enhancement goal

for the sake of being different compared to somebody else, and whether elevated uniqueness

could compensate for the missed self-enhancement opportunity following comparative contrast in

such contexts. Another avenue for future studies could be the possibility that narcissists employ a

flexible processing strategy during comparison that satisfies the overarching need for self-serving

outcomes. Such an account would predict an informational focus on similarities under

circumstances where assimilation to a comparison standard would result in self elevation, thus

qualifying the current findings that are mute about the role of self-serving outcomes of

comparisons.

Furthermore, our studies leave open whether a dominant focus on differences but not on

similarities is specific to narcissism or whether this pattern can also be observed in individuals

with high self-esteem, as the two concepts—narcissism and high self-esteem—are partially

overlapping (Campbell, 2001). While it is conceivable that a focus on differences also occurs in

individuals with high self-esteem who strive to view themselves as better than others in *social*

situations (Campbell, Rudich, & Sedikides, 2002), it is not obvious why these individuals should

focus more on differences in *nonsocial* comparison situations (cf., Studies 1b and 2b). Rather, we

assume that our findings reflect a more generalized mindset of narcissists—such as observed by Konrath et al. (2011)—that is characterized by an informational processing focus on differences and not necessarily limited to *social* self-enhancement. Furthermore, previous studies suggest that the strong need for uniqueness and differentiation is specific to narcissists and does not apply to individuals with high self-esteem. For instance, Lee and colleagues (2013) found that the inclination to distinguish themselves from others by purchasing exclusive and scarce products was related only to narcissism and not to high self-esteem. However, as we did not measure self-esteem in the current set of studies, future research should disentangle the relative predictive strength of both of these overlapping constructs with regard to comparative thinking.

5. Conclusion

Taken together, the current research suggests that a focus on differences when processing social as well as nonsocial comparative information may contribute to the rise and maintenance of narcissistic tendencies. Routinely focusing on differences may constitute one of the cognitive tools that allows narcissists to preserve feelings of uniqueness, specialness, and superiority in the social arena. Such an account is consistent with self-regulatory processing models of narcissism that emphasize the wide range of cognitive, motivational, and affective processes that serve the narcissist to obtain continuous self-affirmation (e.g., Campbell & Foster, 2007; Morf & Rhodewalt, 2001). At the same time, our data suggest that employing an informational focus on differences may be so deeply engrained in narcissistic cognition that it spills over to all kinds of comparison situations, even nonsocial ones. As discussed above, routinely focusing on differences may explain why narcissistic individuals often do not bother to feel empathy towards others. Motivating narcissists to put themselves into another person's shoes in a given situation can, however, help to reduce such detrimental behavior associated with narcissistic tendencies. Consequently, it seems that narcissists should be particularly reminded of the second part of the

abovementioned statement: "Always remember that you are absolutely unique. *Just like everyone else.*"

Figure Captions

Figure 1. Examples of two pairs of figures used in the figure comparison task. For example, participants saw figure pair A and indicated how similar (1 = *very similar*) or different (7 = *very different*) they perceived that pair of figures to be.

Declaration of Conflict of Interest

The author(s) declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

References

Adams, R. B., Franklin, R. G., Rule, N. O., Freeman, J. B., Kveraga, K., Hadjikhani, N., …

Ambady, N. (2010). Culture, gaze and the neural processing of fear expressions. *Social*

Cognitive and Affective Neuroscience, *5*(2-3), 340–348.

Ackerman, R. A., Donnellan, M. B., Roberts, B. W., & Fraley, R. C. (in press). The effect of

response format on the psychometric properties of the Narcissistic Personality Inventory:

Consequences for item meaning and factor structure. *Assessment*.

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy,

D. A. (2011). What does the narcissistic personality inventory really measure? *Assessment,*

18(1), 67–87.

Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A.

(2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of

narcissism. *Journal of Personality and Social Psychology*, *105*(6), 1013–1037.

Bellezza, S., Gino, F., & Keinan, A. (2014). The red sneakers effect: Inferring status and

competence from signals of nonconformity. *Journal of Consumer Research*, *41*(1), 35 – 54.

Bogart, L. M., Benotsch, E. G., & Pavlovic, J. D. P. (2004). Feeling superior but threatened: The

relation of narcissism to social comparison. *Basic and Applied Social Psychology*, *26*(1),

35–44.

Brewer, M. B. (1991). The social self: On being the same and different at the same time.

Personality and Social Psychology Bulletin, *17*(5), 475–482.

Brewer, M. B. (1993). Social identity, distinctiveness, and in-group homogeneity. *Social*

Cognition, *11*(1), 150–164.

Brown, R. P., Budzek, K., & Tamborski, M. (2009). On the meaning and measure of narcissism.

Personality & Social Psychology Bulletin, *35*(7), 951–964.

Brummelman, E., Thomaes, S., Nelemans, S. A., Castro, B. O. de, Overbeek, G., & Bushman, B. J. (2015). Origins of narcissism in children. *Proceedings of the National Academy of Sciences*, *112*(12), 3659–3662.

Brunell, A. B., Gentry, W. A., Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., & DeMarree, K. G. (2008). Leader emergence: The case of the narcissistic leader. *Personality and Social Psychology Bulletin*, *34*(12), 1663–1676.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*(1), 3–5.

Campbell, K. W., & Foster, J. D. (2007). The narcissistic self: Background, an extended agency model, and ongoing controversies. In C. Sedikides & S. J. Spencer (Eds.), *The self* (pp. 115–138). New York, NY, US: Psychology Press.

Campbell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality*, *34*(3), 329–347.

Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28*(3), 358–368.

Cain, N. M., Pincus, A. L., & Ansell, E. B. (2008). Narcissism at the crossroads: phenotypic description of pathological narcissism across clinical theory, social/personality psychology, and psychiatric diagnosis. *Clinical Psychology Review, 28*(4), 638–656.

Ceci, S. J., Kahan, D. M., & Braman, D. (2010). The WEIRD are even weirder than you think: Diversifying contexts is as important as diversifying samples. *Behavioral and Brain Sciences, 33*(2-3), 87–88.

Codol, J. P. (1984). Social differentiation and non-differentiation. In Tajfel, H. (Ed.) *The social dimension: European Developments in Social Psychology*, Vol. 1 (pp. 314-337), Cambridge, England: Cambridge University Press.

del Rosario, P. M., White, R. M. (2005). The Narcissistic Personality Inventory: Test–retest stability and internal consistency. *Personality and Individual Differences*, *39*(6), 1075–1081.

Ditto, P. H., & Griffin, J. (1993). The value of uniqueness: Self-evaluation and the perceived prevalence of valenced characteristics. *Journal of Social Behavior & Personality*, *8*(2), 221–240.

Ehrenberg, M. F., Hunter, M. A., & Elterman, M. F. (1996). Shared parenting agreements after marital separation: The roles of empathy and narcissism. *Journal of Consulting and Clinical Psychology*, *64*(4), 808–818.

Emmons, R. A. (1984). Factor analysis and construct validity of the Narcissistic Personality Inventory. *Journal of Personality Assessment*, *48*(3), 291–300.

Hauser, D. J., & Schwarz, N. (2015). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior Research Methods*. Advance online publication. doi: 10.3758/s13428-015-0578-z

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences, 33*(2-3), 61–83.

Hepper, E. G., Hart, C. M., Meek, R., Cisek, S., & Sedikides, C. (2014). Narcissism and empathy in young offenders and non-offenders. *European Journal of Personality*, *28*(2), 201–210.

Hepper, E. G., Hart, C. M., & Sedikides, C. (2014). Moving narcissus: Can narcissists be empathic? *Personality and Social Psychology Bulletin*, *40*(9), 1079–1091.

John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perception: Individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology*, *66*(1), 206–219.

Jones, E. (1913/1951). *Essays in applied psychoanalysis*, Vol II: Essays in folklore, anthropology, and religion. London: Hogarth Press Ltd.

Konrath, S., Bushman, B. J., & Grove, T. (2009). Seeing my world in a million little pieces: Narcissism, self-construal, and cognitive–perceptual style. *Journal of Personality*, *77*(4), 1197–1228.

Kozhevnikov, M. (2007). Cognitive styles in the context of modern psychology: Toward an integrated framework of cognitive style. *Psychological Bulletin, 133*(3), 464–481.

Krizan, Z., & Bushman, B. J. (2011). Better than my loved ones: Social comparison tendencies among narcissists. *Personality and Individual Differences*, *50*(2), 212–216.

Krizan, Z., & Johar, O. (2012). Envy divides the two faces of narcissism. *Journal of Personality*, *80*(5), 1415–1451.

Kubarych, T. S., Deary, I. J., & Austin, E. J. (2004). The Narcissistic Personality Inventory: factor structure in a non-clinical sample. *Personality and Individual Differences*, *36*(4), 857–872.

Lamkin, J., Clifton, A., Keith, W., & Miller, J. D. (2014). An examination of the perceptions of social network characteristics associated with grandiose and vulnerable narcissism. *Personality Disorders: Theory, Research, and Treatment, 5*(2), 137–145.

Lange, J., Crusius, J., & Hagemeyer, B. (in press). The Evil Queen's dilemma: Linking narcissistic admiration and rivalry to benign and malicious envy. *European Journal of Personality.*

Lee, K., Ashton, M. C., Pozzebon, J. A., Visser, B. A., Bourdage, J. S., & Ogunfowora, B. (2009). Similarity and assumed similarity in personality reports of well-acquainted persons. *Journal of Personality and Social Psychology*, *96*(2), 460–472.

Lee, S. Y., Gregg, A. P., & Park, S. H. (2013). The person in the purchase: Narcissistic consumers prefer products that positively distinguish them. *Journal of Personality and Social Psychology*, *105*(2), 335–352.

Lee, S. Y., & Seidle, R. (2012). Narcissists as consumers: The effects of perceived scarcity on processing of product information. *Social Behavior and Personality*, *40*(9), 1485–1500.

Leonardelli, G. J., Pickett, C. L., & Brewer, M. B. (2010). Optimal distinctiveness theory: A framework for social identity, social cognition, and intergroup relations. *Advances in Experimental Social Psychology*, 63–113.

Morf, C.C., Horvath, S., Torchetti, L. (2011). Narcissistic self-enhancement: Tales of (successful?) self-portrayal. In Alicke, M.D., Sedikides, C (Eds.). *Handbook of self-enhancement and self-protection* (pp. 399–424). New York, NY: Guilford Press.

Morf, C. C., & Rhodewalt, F. (1993). Narcissism and self-evaluation maintenance: Explorations in object relations. *Personality and Social Psychology Bulletin*, *19*(6), 668–676.

Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, *12*(4), 177–196.

Miller, J. D., & Campbell, W. K. (2008). Comparing clinical and social-personality conceptualizations of narcissism. *Journal of Personality*, *76*(3), 449–476.

Miller, J. D., Hoffman, B. J., Gaughan, E. T., Gentile, B., Maples, J., & Keith Campbell, W. (2011). Grandiose and vulnerable narcissism: A nomological network analysis. *Journal of Personality*, *79*(5), 1013–1042.

Miller, J. D., Maples, J. L., Buffardi, L., Cai, H., Gentile, B., Kisbu-Sakarya, Y., … Keith, W. (2015). Narcissism and United States' culture: The view from home and around the world. *Journal of Personality and Social Psychology*, *109*(6), 1068–1089.

Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review*, 472–489.

 Mussweiler, T., & Damisch, L. (2008). Going back to Donald: How comparisons shape judgmental priming effects. *Journal of Personality and Social Psychology*, *95*(6), 1295–1315.

Mussweiler, T., & Mayer, J. (2011). Comparing upward and speeding up. Motivational consequences of nonsocial comparison for speed-accuracy trade-offs. *Psychological Science*, *22*(6), 718–723.

Mussweiler, T., Rüter, K., & Epstude, K. (2004). The ups and downs of social comparison: Mechanisms of assimilation and contrast. *Journal of Personality and Social Psychology*, *87*(6), 832–844.

Nicholls, E., & Stukas, A. A. (2011). Narcissism and the self-evaluation maintenance model: Effects of social comparison threats on relationship closeness. *The Journal of Social Psychology*, *151*(2), 201–212.

Park, S. W., & Colvin, C. R. (2014). Narcissism and discrepancy between self and friends' perceptions of personality. *Journal of Personality, 82*(4), 278–286.

Park, S. W., & Colvin, C. R. (2015). Narcissism and other-derogation in the absence of ego threat. *Journal of Personality*, *83*(3), 334–345.

Pashler, H., & Harris, C. R. (2001). Spontaneous allocation of visual attention: Dominant role of uniqueness. *Psychonomic Bulletin & Review*, *8*(4), 747–752.

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R.W. Robins, R.C. Fraley, & R.F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). New York: Guilford.

Peer, E., Vosgerau, J., & Acquisti, A. (2013). Reputation as a sufficient condition for data quality on Amazon Mechanical Turk. *Behavior Research Methods, 46*(4), 1023–1031.

Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., C, G., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment*, *21*(3), 365–379.

Raskin, R., Novacek, J., & Hogan, R. (1991). Narcissism, self-esteem, and defensive self-enhancement. *Journal of Personality, 59*(1), 19–38.

Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54*(5), 890–902.

Rauthmann, J. F. (2012). The Dark Triad and interpersonal perception: Similarities and differences in the social consequences of narcissism, machiavellianism, and psychopathy. *Social Psychological and Personality Science, 3*(4), 487–496.

Rhodewalt, F., & Morf, C. C. (1995). Self and interpersonal correlates of the Narcissistic Personality Inventory: A review and new findings. *Journal of Research in Personality*, *29*(1), 1–23.

Ritter, K., Dziobek, I., Preissler, S., Rüter, A., Vater, A., Fydrich, T., … Roepke, S. (2011). Lack of empathy in patients with narcissistic personality disorder. *Psychiatry Research*, *187*(1-2), 241–247.

Schönbrodt, F. D., & Perugini, M. (2013). At what sample size do correlations stabilize? *Journal of Research in Personality, 47*(5), 609–612.

Sedikides, C. (1993). Assessment, enhancement, and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology*, *65*(2), 317–338.

Sedikides, C., Campbell, W. K., Reeder, G. D., & Elliot, A. J. (2002). The self in relationships: Whether, how, and when close others put the self "in its place". *European Review of Social Psychology*, *12*(1), 237–265.

Snyder, C. R., & Fromkin, H. L. (2012). *Uniqueness: The human pursuit of difference*. New York: Plenum Press.

Stotland, E. (1969). Exploratory investigations of empathy. *Advances in Experimental Social Psychology*, *4*, 271–314.

Stucke, T. S. (2003). Who's to blame? Narcissism and self-serving attributions following feedback. *European Journal of Personality*, *17*(6), 465–478.

Tamborski, M., Brown, R. P., & Chowning, K. (2012). Self-serving bias or simply serving the self? Evidence for a dimensional approach to narcissism. *Personality and Individual Differences*, *52*(8), 942–946.

Taylor, S. E., Fiske, S. T., Etcoff, N. L., & Ruderman, A. J. (1978). Categorical and contextual bases of person memory and stereotyping. *Journal of Personality and Social Psychology*, *36*(7), 778–793.

Todd, A. R., Hanko, K., Galinsky, A. D., & Mussweiler, T. (2011). When focusing on differences leads to similar perspectives. *Psychological Science*, *22*(1), 134–141.

Twenge, J. M., & Foster, J. D. (2008). Mapping the scale of the narcissism epidemic: Increases in narcissism 2002–2007 within ethnic groups. *Journal of Research in Personality*, *42*(6), 1619–1622.

Twenge, J. M., Konrath, S., Foster, J. D., Campbell, W. K., & Bushman, B. J. (2008). Egos

    inflating over time: A cross-temporal meta-analysis of the Narcissistic Personality

    Inventory. *Journal of Personality*, *76*(4), 875–902; discussion 903–928.

Watson, P. J., Grisham, S. O., Trotter, M. V., & Biderman, M. D. (1984). Narcissism and

    empathy: Validity evidence for the Narcissistic Personality Inventory. *Journal of*

    Personality Assessment, *48*(3), 301–305.

Watson, P. J., & Morris, R. J. (1991). Narcissism, empathy and social desirability. *Personality*

    and Individual Differences, *12*(6), 575–579.