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# Incorporating personality into the investment model: Probing commitment processes across individual differences in narcissism

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ABSTRACT

The investment model (Rusbult, 1980) proposes that commitment is maintained by three mechanisms: Satisfaction, perceived quality of alternatives, and investment. Research suggests that the influence of these mechanisms is largely constant across a variety of individual differences and relational contexts. However, no published research has tested this with respect to personality. The present study did so using the personality trait of narcissism. The results suggest that narcissism indeed moderates the investment model (i.e., mechanisms had greater influence on commitment in highly narcissistic individuals). Discussion focuses on the implications of these results for narcissism, commitment, and the investment model. Also discussed is the importance of identifying and examining additional moderators of the investment model. Suggestions for future research are provided.

KEY WORDS: commitment • investment • investment model • narcissism • personality • quality of alternatives • satisfaction • statistical moderation

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According to the investment model (Rusbult, 1980, 1983; Rusbult, Drigotas, & Verette, 1994), commitment – defined as “the intention to continue a relationship” (Miller, Perlman, & Brehm, 2007, p. 210) – is controlled by three perceptual “maintenance mechanisms”: Relationship satisfaction, quality of alternatives, and investment. (Readers interested in the historical development of the investment model are directed to Rusbult, Olsen, Davis, & Hannon, 2001.) Commitment is maximized in romantic partners who are happy with their relationships (i.e., high satisfaction) and anticipate low gain and high loss associated with leaving their relationships (i.e., low quality of alternatives and high investment). Conversely, commitment is minimized when satisfaction and investment are low and quality of alternatives is high.

Empirical testing of the investment model has been ongoing for more than 25 years. A review of this literature by Le and Agnew (2003) reveals three indications of the model’s veracity. First, commitment is significantly and independently predicted by each maintenance mechanism. Second, a majority of the variability in commitment is accounted for by the three mechanisms. Third, the influence that these mechanisms has on commitment is consistent (and often nearly constant) across a variety of individual differences and relational contexts. For example, Le and Agnew found that target of commitment (i.e., whether commitment is targeted toward interpersonal or noninterpersonal relationships) was the only variable that moderated the strength of all three mechanisms. Specifically, the maintenance mechanisms exerted stronger influence on commitment when commitment was targeted toward interpersonal relationships compared to noninterpersonal relationships (e.g., commitment to job). A few additional examples of moderation emerged in their investigation (e.g., investment was a less powerful predictor of commitment for shorter relative to longer duration relationships), but none of these displayed the strength or consistency of commitment target.

In short, the investment model may be described as a cogent, reliable, and powerful theoretical model of relationship commitment that operates similarly across most individuals and relationships. The purpose of the present investigation was to further examine the latter component of this description using the personality trait of narcissism. Specifically, I tested whether the influence of satisfaction, quality of alternatives, and investment on commitment varied across individual differences in narcissistic personality. It deserves note that the present study, as with most investment model studies, used correlational methods. Therefore, causal language (e.g., “influence”) can be somewhat misleading. To the extent that I use causal language throughout this article it is because it reflects how the investment model posits causal relations between commitment and its mechanisms.

I should probably mention here that there were many personality traits besides narcissism that could have been used in this investigation (e.g., five-factor personality traits). As I will soon discuss, however, narcissism was a particularly good candidate for moderating the investment model. First, it is worth clarifying a few issues regarding narcissism as it is used in this study.

### **Defining and assessing narcissism**

Narcissism in the present context refers to a trait dimension of normal personality that is generally characterized by high levels of superiority, self-focus, and exhibitionism coupled with low levels of warmth, intimacy, and empathy (for review, see Campbell & Foster, 2007). In terms of the Big-5 personality traits, narcissism is associated with high levels of extraversion and openness, and low levels of agreeableness (e.g., Paulhus & Williams, 2002). In other words, narcissistic individuals tend to be lively, audacious, and malevolent. Sometimes the terms “normal-” or “sub-clinical” narcissism are used to distinguish this personality construct from Narcissistic Personality Disorder (NPD). Notably, whereas NPD appears to be a categorical syndrome (Fossati et al., 2005) that is exhibited by a very small minority – perhaps as small as 1% of the general population (American Psychiatric Association [APA], 2000) – normal narcissism is distributed continuously and exhibited to a greater or lesser degree by everyone (Foster & Campbell, 2007).

Importantly, narcissism in the present context is specific to its measure using the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which is the most widely used measure of narcissistic personality in social psychology. The NPI was constructed based upon the DSM-III diagnostic criteria for NPD. Factor analyses of the NPI usually reveal factors that map roughly onto these criteria. For example, Raskin and Terry (1988) located seven factors of the NPI: Superiority, entitlement, exhibitionism, exploitativeness, authority, vanity, and self-sufficiency. (Note that the NPI is usually analyzed in its entirety in part because its sub-factors often exhibit low reliability.) Therefore, individuals who score high on the NPI exhibit some of the features of NPD (e.g., entitlement, superiority) – although they more than likely do not have the disorder.

Finally, note that in the present study, I use the terms *high narcissist* and *low narcissist* to denote individuals with NPI scores that are higher or lower than average (i.e., above or below the sample mean). I avoid the terms narcissist and non narcissist because they imply a qualitatively distinct narcissist typology and the research does not support this with respect to the NPI (Foster & Campbell, 2007).

### **Why should narcissism moderate the investment model?**

To begin, high narcissists are self-focused in terms of their general approach to life (Bradlee & Emmons, 1992; Campbell, Rudich, & Sedikides, 2002) and relationships (Campbell, Brunell, & Finkel, 2006; Campbell & Foster, 2007). This orientation presumably extends to their motivation to continue their relationships. For high narcissists, relationships are worthwhile to the extent that they provide direct self-benefits and require little in return (e.g., intimacy). For example, high narcissists are less attracted to individuals who desire high levels of intimacy, preferring instead individuals who are

attractive or otherwise reflect well on them (Campbell, 1999). When in relationships, high narcissists adopt a dismissing-avoidant attachment style (Gjerde, Onishi, & Carlson, 2004) and view sexuality within their relationships as opportunity for self-enhancement rather than intimacy (Foster, Shrira, & Campbell, 2006). High narcissists also have little empathy and concern for others (Watson, Grisham, Trotter, & Biderman, 1984) and this appears to extend to their romantic partners. For example, high narcissists frequently view their relationships as games in which the object is to get away with as much as possible, such as having multiple romantic partners, often by telling lies and keeping secrets (Campbell, Foster, & Finkel, 2002; Le & Gaines, 2005).

In sum, high narcissists view their relationships in terms of what benefits they directly receive versus what is required of them in return. They have relatively little concern for the wellbeing of their partners. Because the investment model views commitment in terms of direct benefits/losses to individuals and focuses little on how commitment and commitment-based decisions affect romantic partners, it is particularly suited to high narcissists. For example, the items of the Investment Model Scale (Rusbult, Martz, & Agnew, 1998) are highly self-focused (e.g., satisfaction: "I feel satisfied with our relationship;" quality of alternatives: "My alternatives to our relationship are close to ideal;" investment: "I have put a great deal into our relationship that I would lose if the relationship were to end"). High narcissists, who adopt a self-centered approach to their relationships, seem especially likely to make commitment decisions (e.g., to continue or end their relationships) exactly as the investment model proposes: By assessing personal gains and losses associated with maintaining or terminating the relationship. They should be largely unaffected by matters that are extraneous to the model and the self, such as how their decisions may affect their partners. Consequently, the influence of the investment model mechanisms on commitment should be more pronounced for high, relative to low, narcissists. From a statistical standpoint, what this means is that regression slopes of commitment on its mechanisms should appear steeper for high, relative to low, narcissists. For example, for somebody who is highly narcissistic a decrease in satisfaction should predict a greater decrease in commitment relative to somebody who is less narcissistic. Similar findings would be expected in terms of quality of alternatives and investment.

What would the implications be of a finding that narcissism moderates the investment model? Le and Agnew (2003) suggest that "the strength of the [investment] model would be best demonstrated by a failure to find significant moderator variables" (p. 43). There is definitely truth in this statement. For example, if satisfaction fails to predict commitment at even moderately low levels of narcissism, this might indicate a serious limitation of the model. With this in mind, there is also much value in knowing whether narcissism moderates the investment model. First, it may increase the validity of the investment model because accounting for moderators removes their associated error variance. That is, the more we know about how the commitment process differs as a function of narcissism the better

we can take these differences into account. Second, this research is likely to be informative of narcissism itself and specifically, how individuals with varying levels of narcissism think and behave in their relationships. Third, because narcissism and relationships research are so intertwined (i.e., narcissism influences relationships and potentially vice-versa), this research is applicable to a wide variety of psychological researchers and may prove generative. Given these potential benefits, it is surprising that narcissism (and personality in general for that matter) has received little published empirical attention regarding its potential to moderate the investment model. Indeed, I was unable to locate a single published study that directly addressed this issue.

### **Overview of present research**

The present study was designed to address this shortcoming in the investment model literature by testing whether narcissistic personality moderates the theoretical links between commitment and investment model mechanisms of satisfaction, quality of alternatives, and investment. Additional goals were to clarify the nature of the moderation, if any, and to interpret what it suggests about the investment model, narcissism, and the interplay between the two. The specific hypothesis that guided this study was as follows: *Narcissism will moderate links between commitment and its mechanisms such that differences in satisfaction, quality of alternatives, and investment will predict more pronounced differences in commitment for high relative to low narcissists.* From a practical standpoint, this hypothesis suggests that high narcissists are less willing to endure periods of low satisfaction, are more opportunistic when attractive alternatives present themselves, and are particularly quick to abandon their relationships when in their minds they have little to lose by doing so. Put more succinctly, when times are tough, romantic opportunities abound, and potential loss is low, high narcissists should be less inclined to maintain their relationships. This hypothesis was tested in the present study using a sample of 144 romantically attached participants who completed measures of narcissism, commitment, satisfaction, quality of alternatives, and investment.

### **Method**

#### **Participants**

One-hundred forty-four undergraduates ( $M$  age = 19.64 years,  $SD$  = 2.57; 87% female; 83% Caucasian) participated in this study in exchange for research participation credit. All participants were involved in romantic relationships that were at least 3 months old ( $M$  length = 1.81 years,  $SD$  = 1.29). The vast majority reported their relationships as dating (94%) and exclusive (96%; i.e., neither they nor their partners were dating anyone else).

The sample for this study represents a subsample of that reported in Foster et al. (2006) limited to those participants who completed all measures relevant to the present study. The narcissism–commitment association is the only one to appear in both the present study and Foster et al. (2006). Meta-analysts are thus directed to Foster et al. for this specific correlation as it was assessed in a larger sample.

### **Materials and procedure**

Participants completed the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) and the Investment Model Scale (IMS; Rusbult et al., 1998). The NPI consisted of 40 pairs of statements. For each pair, participants were asked to select the most personally descriptive statement. They received one point for each narcissistic statement (e.g., “I am an extraordinary person”) selected. As discussed earlier, the NPI can be divided into various subscales (e.g., entitlement, superiority). However, because there is no agreed-upon factor structure to the NPI, and because NPI subscales typically exhibit low reliability, it is far more common to analyze the NPI as a single 40-item measure. That is what was done in the present study (total NPI scores could therefore range from 0 to 40).

The IMS was comprised of four subscales: Commitment (7 items; e.g., “I want our relationship to last a very long time”), satisfaction (5 items; e.g., “I feel satisfied with our relationship”), quality of alternatives (5 items; e.g., “My needs to intimacy, companionship, etc. could easily be fulfilled in an alternative relationship”), and investment (5 items; e.g., “I have put a great deal into our relationship that I would lose if the relationship were to end”). Participants rated items on 9-point scales (0 = do not agree at all, 8 = agree completely) and items were averaged for each subscale resulting in possible ranges of zero to eight. Psychometric properties of the NPI and IMS are shown in Table 1.

## **Results**

### **Descriptive statistics and correlations**

Descriptive statistics and zero-order correlations are shown in Table 1. Consistent with prior research on narcissism and commitment (e.g., Campbell & Foster, 2002), narcissism significantly predicted low commitment, satisfaction, and investment. Interestingly, narcissism was not significantly related to high quality of alternatives in the present study, although the correlation was marginally significant (i.e.,  $p = .056$ ) when a one-tailed significance test was used. Using a one-tailed test seemed appropriate given that the direction of the correlation was clearly indicated by prior research. Consistent with prior research on the investment model (see Le & Agnew, 2003, for a review), commitment was significantly related to higher satisfaction and investment, and lower quality of alternatives. Furthermore, each commitment mechanism independently predicted commitment,  $\beta_s > .25, p_s < .001$ .

**TABLE 1**  
**Descriptive statistics and correlation matrix ( $n = 144$ )**

Variable	<i>M</i>	<i>SD</i>	Range	1	2	3	4	5
(1) Narcissism	17.09	7.04	0–37	.85				
(2) Commitment	7.15	1.38	0.7–8.0	-.28**	.92			
(3) Satisfaction	6.87	1.19	2.4–8.0	-.20*	.64***	.90		
(4) Q Alternatives	3.29	1.91	0.0–8.0	.13	-.58***	-.38***	.84	
(5) Investment	5.76	1.44	0.4–8.0	-.20*	.48***	.28**	-.29***	.73

*Note.* Italicized values above diagonal are internal consistency estimates (Cronbach Alphas).  
 \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Did narcissism moderate the investment model?

The goal of the present study was to examine whether links between commitment and its theorized mechanisms vary as a function of narcissism. To test this, three narcissism  $\times$  commitment mechanism interaction terms (i.e., narcissism  $\times$  satisfaction, narcissism  $\times$  quality of alternatives, narcissism  $\times$  investment) were computed (predictors were mean centered prior to computing interaction terms) and used to predict level of commitment. Note that additional interaction terms beyond these three could have also been tested (there were 11 possible interaction terms). Theoretical justification for examining these interactions was lacking, however, which greatly increased the probability of committing Type I error (Cohen & Cohen, 1983). It was therefore decided to limit the analyses to the three interactions specifically hypothesized.

I initially conducted a single regression analysis that contained all three interaction terms and the individual predictors that comprised them (i.e., narcissism, mechanisms). None of the interaction terms in this analysis approached significance (narcissism by satisfaction,  $\beta = .10$ ,  $t = 1.43$ ,  $p = .16$ ; narcissism by quality of alternatives,  $\beta = -.05$ ,  $t = -.79$ ,  $p = .43$ ; narcissism by investment,  $\beta = .07$ ,  $t = 1.20$ ,  $p = .23$ ). There was one female participant who disproportionately influenced these results. Excluding her data resulted in two of the three interaction terms becoming statistically significant (narcissism  $\times$  satisfaction,  $\beta = .14$ ,  $t = 2.27$ ,  $p < .05$ ; narcissism  $\times$  quality of alternatives,  $\beta = -.06$ ,  $t = -1.06$ ,  $p = .29$ ; narcissism  $\times$  investment,  $\beta = .10$ ,  $t = 1.95$ ,  $p = .05$ ). In the interest of completeness, all reported analyses include her data.

Several authors have noted that detecting interactions in nonexperimental research is hampered by, among other things, interaction terms that exhibit small effect sizes (e.g., McClelland & Judd, 1993). In the present study, the narcissism by mechanism interaction terms almost certainly accounted for at least some overlapping variance in commitment. Analyzing all three interaction terms simultaneously – this tests the proportion of variance accounted for by one interaction term while controlling for the remaining two – was likely to have reduced their already small effect sizes to levels that were perhaps undetectable in the present sample. Therefore, the decision

was made to analyze each commitment mechanism separately so as to more precisely examine how they may have interacted with narcissism.

Table 2 shows the results of these three regression analyses. Consistent with predictions, narcissism significantly moderated links between commitment and each mechanism. To understand what this reveals about the investment model at different levels of narcissism, interactions were decomposed using simple slopes analyses (Aiken & West, 1991). The general pattern of results is reflected in Figure 1. In short, changes in commitment mechanisms predicted more substantial changes in commitment in high, relative to low, narcissists (i.e., NPI scores 1 *SD* above and below the sample mean respectively). Strengthening of commitment mechanisms (i.e., increases in satisfaction and investment, decreases in quality of alternatives) was associated with greater increases in commitment in high- relative to low narcissists. Likewise, weakening of commitment mechanisms was associated with greater decreases in commitment in high, relative to low,

**TABLE 2**  
**Regressing commitment onto narcissism, commitment mechanism, and the narcissism × mechanism interaction**

Satisfaction <sup>a</sup>					
Predictors	b	Std. error	β	t	ΔR <sup>2</sup>
Constant	7.202				
Narcissism	-.032	.012	-.164	-2.57*	
Satisfaction	.594	.084	.513	7.06***	
Narcissism × Satisfaction	.028	.011	.183	2.56*	.026
Quality of Alternatives <sup>b</sup>					
Predictors	b	Std. error	β	t	ΔR <sup>2</sup>
Constant	7.197				
Narcissism	-.033	.013	-.169	-2.60*	
Q Alternatives	-.397	.046	-.551	-8.57***	
Narcissism × Q Alternatives	-.025	.007	-.233	-3.60***	.053
Investment <sup>c</sup>					
Predictors	b	Std. error	β	t	ΔR <sup>2</sup>
Constant	7.198				
Narcissism	-.038	.014	-.195	-2.68**	
Investment	.378	.073	.394	5.17***	
Narcissism × Investment	.022	.010	.164	2.20*	.024

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

ΔR<sup>2</sup> = proportion of variance in commitment accounted for by interaction term.

<sup>a</sup> Model  $R^2 = .453$ ,  $F(3,140) = 38.61$ ,  $p < .001$ .

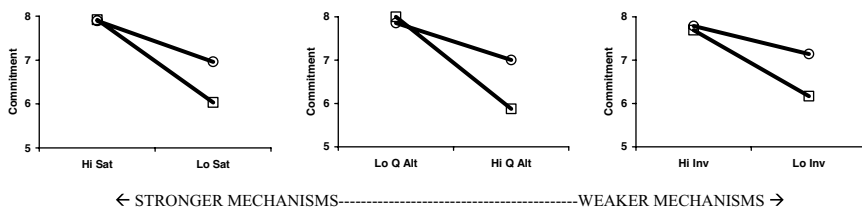
<sup>b</sup> Model  $R^2 = .433$ ,  $F(3,140) = 35.59$ ,  $p < .001$ .

<sup>c</sup> Model  $R^2 = .292$ ,  $F(3,140) = 19.25$ ,  $p < .001$ .

narcissists. Note, however, that commitment was significantly predicted by each mechanism at both high and low levels of narcissism. Therefore, the validity of the investment model was not challenged by these results.

Another interesting way to view Figure 1 is that changes in narcissism predicted almost no difference in commitment when its regulatory mechanisms were strong (i.e., high satisfaction/investment, low quality of alternatives) but predicted large differences in commitment when they were weak. In other words, narcissism appeared to play more of a role in commitment when the mechanisms of commitment were weakened. Even high narcissists were highly committed when these mechanisms were strong.

**FIGURE 1**  
Plots of narcissism  $\times$  commitment mechanism interactions predicting commitment



*Note:* Circle = hypothetical participant low in narcissism (i.e., NPI score one standard deviation below mean); Square = hypothetical participant high in narcissism (i.e., NPI score one standard deviation above mean). Sat = Satisfaction; Q Alt = Quality of Alternatives; Inv = Investment. Low/High values on abscissa equal to hypothetical participants one standard deviation below/above mean for respective commitment mechanism. All simple slopes are significantly different from zero (i.e.,  $ps < .05$ ).

## Discussion

The investment model has survived more than 25 years of scientific testing because of its remarkable ability to predict and explain commitment in a wide variety of contexts and individuals. For the most part, the forces that maintain commitment (i.e., satisfaction, quality of alternatives, and investment) are highly stable in terms of the direction and strength of their influence. This is evidenced by studies that reveal near identical associations between commitment and its mechanisms across a variety of individual differences and contexts (Le & Agnew, 2003). The results of the present study offer continued validation of the investment model, but also suggest a malleability to these links that is influenced by the personality trait of narcissism.

In the present study, high narcissists reported more pronounced lack of commitment associated with low satisfaction, high quality of alternatives, and low investment. It is perhaps most intuitive to view these results in terms of what they suggest about narcissism in relational contexts that are not conducive to high commitment. Based on these results, it may be suggested that high narcissists are less willing to endure periods of low

satisfaction, more opportunistic when attractive alternatives present themselves, and particularly quick to abandon their relationships when in their minds they have little to lose by doing so. Put succinctly, when times are tough, romantic opportunities abound, and potential loss is low, high narcissists are particularly unmotivated to maintain their relationships. These results are consistent with what is known about how high narcissists approach their relationships. As discussed earlier, high narcissists view their relationships in terms of how they directly benefit from them. They have less concern for their partners (Campbell et al., 2006, 2007). This type of relational approach lends itself well to the self-focused nature of the investment model. High narcissists are likely to assess their motivation to maintain their relationships based largely on anticipated personal gains/losses associated with maintaining and leaving their relationships, which is what the investment model stresses. The commitment of low narcissists is perhaps more strongly influenced by interpersonal factors that extend beyond the self, such as concern for partner wellbeing. Because of this, the commitment of high narcissists should be more strongly influenced by the mechanisms of the investment model.

One implication of these results is that narcissism would seem to be powerfully toxic to the long-term survival of relationships. Because commitment is a strong predictor of relationship break-up (Le & Agnew, 2003), and because nearly all relationships will experience periods of dissatisfaction, the presence of attractive alternatives, and varying degrees of investment, it is probable that the relationships of high relative to low narcissists will be more susceptible to early demise (Foster et al., 2006). Of course, the results of the present study can only address this issue from the perspective of the high or low narcissist. It has never been settled in the narcissism literature the roles that high narcissists and/or their partners play in the functioning and fate of their relationships. Studies that prospectively assess investment model and other relationship variables in both partners will likely provide important insight into these issues.

Another way to view these results is in terms of what they suggest about narcissism in relational contexts that are conducive to high commitment. In general, high narcissists report lower commitment (Campbell & Foster, 2002), and the results of the present study suggest that this trend is magnified when commitment mechanisms are weak. It is also interesting to note, however, that when commitment mechanisms were strong (i.e., high satisfaction, low quality of alternatives, high investment), narcissism was largely unrelated to commitment. When times were good, few romantic opportunities existed, and potential loss was high, high and low narcissists alike were intent on continuing their relationships. This is an example of the classic person–situation interaction; in this case, narcissism appears to exert greater influence on commitment in situations where commitment forces are weak. An implication is that deleterious behavioral patterns associated with narcissism in relationships (e.g., playing games, infidelity; Campbell, Foster, & Finkel, 2002) may not manifest in situations that are conducive to high commitment. They may emerge abruptly, however, as circumstances

change. This may explain why romantic partners of high narcissists often report periods of relative happiness in their relationships that are followed by precipitous declines in satisfaction (Campbell et al., 2006; Foster et al., 2003). Granted, this is speculative, but it seems like a topic worth further investigating.

### **Limitations and caveats**

It is worth cautioning against inferring causation from any of the reported findings because of the cross-sectional nature of the study. It is intuitive to infer from these results, for example, that changes in satisfaction have more pronounced effects on the commitment of high relative to low narcissists. Indeed, I used causal language throughout this article to reflect how the investment model posits the links between commitment and its mechanisms. Future research may further examine this important issue by manipulating perceived commitment mechanisms and probing whether their effect on commitment is moderated by narcissism. This certainly presents a challenge to researchers, as evidenced by the relative lack of published research in this domain that employs these sorts of manipulations. Perhaps a more practical alternative would be to conduct longitudinal research, which can answer many of the same questions as experimental research. Efforts using either of these techniques may prove to be particularly enlightening.

It is also worth noting that the gender make-up of the present sample was heavily skewed female (87% female) and this might have influenced results. I did not observe any gender interactions involving narcissism and the investment model variables, although it is possible that with more male participants these interactions might emerge due to increased statistical power. However, previous work suggests that gender and narcissism do not interact when predicting commitment (Campbell & Foster, 2002; Foster et al., 2006). Furthermore, Le and Agnew (2003) showed that gender does not moderate links between commitment and its mechanisms. Therefore, it seems unlikely that gender interactions would have emerged even had more male participants been included in the present study. Nevertheless, it still might be worthwhile to investigate this issue further in future.

Finally, it should be stated that although narcissism played a moderating role in the investment model, the effect sizes of the interactions were quite small. Likewise, the direction and significance of associations between commitment and its regulatory mechanisms were consistent across levels of narcissism. That is, satisfaction, quality of alternatives, and investment significantly predicted commitment in a manner consistent with the investment model for both high and low narcissists. Granted, the investment model may fail to predict commitment at extraordinarily low levels of narcissism. The present study was not designed to test this, however, nor was the investment model ever purported to explain commitment in individuals at the extremes of psychological continua. Furthermore, it is uncertain what it means psychologically to possess extraordinarily low narcissism. In light of this, it seems reasonable to conclude that the investment model is robust enough to explain commitment in individuals that exhibit a wide range of

narcissism levels. The results of the present study simply suggest that the investment model mechanisms influence commitment slightly stronger in individuals that exhibit higher levels of narcissism.

## Conclusion

Very few studies have been conducted on moderating influences on the investment model (an exception is Le & Agnew, 2003). The findings of the present study are the first, to my knowledge, to demonstrate a moderating effect of personality. High, relative to low, narcissists reported more pronounced lack of commitment associated with lower satisfaction and investment, and higher quality of alternatives. These results have a number of implications for theory and research on narcissism and relationships. They also suggest the need to explore and test further potential moderating variables, such as additional aspects of personality (e.g., Big 5), the self (e.g., self-esteem), and relationships (e.g., attachment style). Identifying and examining moderators of the investment model has the potential to improve the precision and scope of the model, and ultimately enhance our understanding of the commitment process across individuals and relational contexts. In short, future studies on this topic are likely to further validate and extend the investment model – and ultimately improve upon one of social psychology's most influential ideas.

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