

BRIEF REPORT

Outside Advantage: Can Social Rejection Fuel Creative Thought?

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Eminently creative people working in fields as disparate as physics and literature refer to the experience of social rejection as fuel for creativity. Yet, the evidence of this relationship is anecdotal, and the psychological process that might explain it is as yet unknown. We theorize that the experience of social rejection may indeed stimulate creativity but only for individuals with an independent self-concept. In 3 studies, we show that individuals who hold an independent self-concept performed more creatively after social rejection relative to inclusion. We also show that this boost in creativity is mediated by a differentiation mind-set, or salient feelings of being different from others. Future research might investigate how the self-concept—for example, various cultural orientations—may shape responses to social rejection by mitigating some of the negative consequences of exclusion and potentially even motivating creative exploration.

Keywords: creativity, social rejection, self-concept

In his seminal book, *The Outsider*, Colin Wilson (1956) argued that eminently creative people live on the margins of society, rejected for playing by their own rules in an environment that demands conformity. Of course, the very traits that distinguish highly creative people, such as unconventionality, make them easy targets for rejection (Kurzban & Leary, 2001). Here, we investigate the implications of Wilson's provocative thesis: Is there a causal link between social rejection and creativity?

Considerable research seems to suggest that there is not a causal link between social rejection and creativity given the numerous deleterious effects of rejection on cognitive performance, especially on tasks that require executive control (Baumeister, Twenge, & Nuss, 2002). It is theorized that rejection influences cognitive processes because the experience thwarts a core need to belong (Baumeister & Leary, 1995; DeWall & Bushman, 2011). Self-regulation, an effortful process, becomes less of a priority when social acceptance appears to be out of reach, resulting in decrements in cognitive performance (Baumeister, DeWall, Ciarocco, & Twenge, 2005).

In this article, we argue that the negative consequences of social rejection are not inevitable and may depend on the degree of

independence in one's self-concept. The self-concept may shape responses to rejection because independent selves are motivated to remain distinctly separate from others. This motivation is pivotal because, for these individuals, the experience of rejection may trigger a psychological process that stimulates rather than stifles performance on creative tasks.

Social Rejection, Creativity, and Self-Concept

Although it is true that people have a strong motivation to form and maintain relationships (Baumeister & Leary, 1995), the need to belong is not the only social motive, nor is it always the most salient. Indeed, the need to individuate has been shown to be an equal, if not stronger, motive in certain situations (Brewer, 1991; Snyder & Fromkin, 1977). For instance, individuals with an independent self-concept tend to think of themselves as separate from others and to emphasize personal goals over group goals (Markus & Kitayama, 1991).

An independent self-concept has been shown to blunt some consequences of rejection, including embarrassment (Singelis & Sharkey, 1995). These people remain less sensitive to rejection because of the reduced value placed on being part of a group (Markus & Kitayama, 1991; Sharkey & Singelis, 1995). For independent individuals, individuality is a positive distinction and, therefore, rejection may strengthen this sense of independence. In contrast, the motivation to fit in and maintain harmony with the group will likely drive interdependent individuals to respond to rejection by engaging in reparative strategies like strengthening friendships (Knowles & Gardner, 2008; Maner, DeWall, Baumeister, & Schaller, 2007; Williams, 2001) and even mimicry to signal the desire to affiliate (Lakin & Chartrand, 2003).

The willingness to distinguish one's self from others has important implications for performance on creative tasks. Creativity is a process by which ideas are recombined to yield

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solutions that are both novel and appropriate (Amabile, 1983; Markman, Lindberg, Kray, & Galinsky, 2007). Exploring remote or unusual ideas can increase the probability of reaching creative solutions (Guilford, 1967; Guilford & Hoepfner, 1971). Given that creative solutions are, by definition, unusual, infrequent, and potentially controversial, they are stimulated by the desire to stand out and to assert one's uniqueness (Goncalo & Krause, 2010). In other words, the need to be seen as separate from others within groups promotes nonconformity (Imhoff & Erb, 2009) and can lead to more creative outcomes (Förster, Friedman, Butterbach, & Sassenberg, 2005; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008).

We posit that for individuals with an independent self-concept, rejection may amplify feelings of distinctiveness and increase creativity by conferring the willingness to recruit ideas from unusual places and move beyond existing knowledge structures (Leung et al., 2012). In contrast, among individuals with an interdependent self-concept, the effort to conform and regain approval from others may preserve self-esteem but may also extinguish the sense of independence that is optimal for producing creative solutions (Ashton-James & Chartrand, 2009). Therefore, we hypothesized that for individuals with an independent self-concept, rejection reinforces their desire to differentiate themselves from others and that mind-set should, in turn, lead to more creative outcomes. In three studies, we examined the independent self-concept both by measuring the trait need for uniqueness (NfU; Snyder & Fromkin, 1977; Study 1) and by manipulating self-construal (Studies 2 and 3). Both NfU and the independent self-construal reflect the desire to remain separate from others that we predicted moderates the experience of rejection and leads to greater creativity.

Study 1

Method

Forty-three U.S. university students (58% men; $M_{\text{age}} = 20$ years) participated in exchange for course credit. We measured each participant's NfU using Snyder and Fromkin's (1977) 32-item scale ($\alpha = 0.84$) 1 week prior to the study. These items were presented among others, and the delay was implemented to minimize demand effects.

Manipulation.

Rejection. A demarcated rejection manipulation was used, clearly telling participants that they were rejected (Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997). Individuals were told that they were not selected to be in a group and to complete remaining tasks as individuals (rejection condition) or that they would join their group after completing some tasks (inclusion condition).

Dependent measure.

Creativity. Participants were given 7 min to complete seven Remote Associates Test (RAT) problems (Isen, Daubman, & Nowicki, 1987). Specifically, they were asked to find a word that connects three seemingly unrelated words (e.g., for the words *fish*, *mine*, and *rush*, the correct answer is *gold*). The RAT has been used effectively to measure creativity in previous studies (Isen et al., 1987; Kray, Galinsky, & Wong, 2006).

The RAT is based on associative theory and is inclusive of divergent thinking ability (M. T. Mednick, Mednick, & Mednick,

Table 1
Positive Affect Means and Standard Deviations

Study and participants	Positive affect			
	Rejection		Inclusion	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1	23.05	8.58	26.32	9.60
2				
Independent	22.30	5.19	23.85	6.77
Interdependent	22.10	7.52	24.20	7.23
3				
Independent	29.56	7.34	29.08	6.12
Interdependent	27.72	8.57	26.16	9.24

1964; S. A. Mednick, 1968; Kaufman, Plucker, & Baer, 2008; Miron-Spektor, Gino, & Argote, 2011). Associates are conceptually distant, and the nondominant meaning of at least one word must be accessed to reach the solution (Bowden & Beeman, 1998). Less creative individuals perform worse because they are biased toward high-frequency (common but incorrect) responses (Gupta, Jang, Mednick, & Huber, 2012). The RAT is a useful measure because the correct solution meets both definitional criteria of creativity, namely, novelty and appropriateness (Kaufman et al., 2008; S. A. Mednick, 1968).

Results and Discussion

Manipulation check.

Rejection. The manipulation of rejection was checked using six self-report items ($\alpha = .81$; e.g., "I feel rejected by the group"). An analysis of variance (ANOVA) comparing the rejection conditions while controlling for the effects of NfU revealed that participants randomly assigned to the rejection condition felt more rejected ($M = 3.19$, $SD = 0.73$) than did included participants ($M = 2.61$, $SD = 0.98$), $F(1, 39) = 4.50$, $p < .05$, $\eta^2 = .10$. The NfU covariate, $F(1, 39) = 0.01$, $p = .93$, $\eta^2 = .00$, and interaction term, $F(1, 39) = 0.57$, $p = .38$, $\eta^2 = .02$, were nonsignificant.

Dependent measure.

Creativity. We centered the continuous predictor variable (NfU) to ease the interpretation of the interaction (Aiken & West, 1991). Regression analysis revealed significant main effects for both rejection and NfU. Rejection led to greater creativity, $\beta = .87$, $t(39) = 3.73$, $p < .01$, $\eta^2 = .21$, as did higher NfU, $\beta = .06$, $t(39) = 2.32$, $p < .05$, $\eta^2 = .08$. As we predicted, there was a significant interaction, $\beta = .07$, $t(39) = 2.58$, $p < .025$, $\eta^2 = .10$, demonstrating that individuals with higher NfU performed more creatively after rejection. Simple slope tests revealed that NfU was positively related to creativity for rejected individuals, $\beta = .62$, $t(39) = 4.23$, $p < .001$, and unrelated to creativity for included individuals, $\beta = -.04$, $t(39) = -.04$, $p = .88$.

Positive affect. We investigated the possibility that positive affect could explain the relationship between rejection and creativity (e.g., Isen et al., 1987) using the Positive and Negative Affect Schedule—Expanded Form (Watson, Clark, & Tellegen, 1988). Additional analyses revealed no differences in positive affect among conditions (see Tables 1 and 2), aligning with the work of Baumeister, DeWall, and Vohs (2009), who described the initial response to rejection as one of affective numbness.

Table 2
Positive Affect Inferential Statistics

Study	Positive affect		
	Self-concept	Social rejection	Interaction
1	$\beta = .12, t(39) = 0.46, p = .21, \eta^2 = .02$	$\beta = -.20, t(39) = -1.27, p = .21, \eta^2 = .04$	$\beta = .06, t(39) = 0.22, p = .82, \eta^2 = .00$
2	$F(1, 76) = .003, p = .96, \eta^2 = .00$	$F(1, 76) = 1.47, p = .23, \eta^2 = .02$	$F(1, 76) = 0.03, p = .86, \eta^2 = .00$
3	$F(1, 96) = 0.12, p = .73, \eta^2 = .001$	$F(1, 96) = 0.42, p = .52, \eta^2 = .004$	$F(1, 96) = 2.27, p = .14, \eta^2 = .02$

These results supported our hypothesis that people who hold an independent self-concept are more creative following rejection, relative to inclusion. In Study 2, we experimentally primed self-concept rather than measuring an individual difference. We predicted that rejection would boost creativity for individuals with an independent self-construal but not for individuals with an interdependent self-construal.

Study 2

Method

The experiment was a 2 (independent vs. interdependent self-construal) \times 2 (rejection vs. inclusion) design. Eighty U.S. university students (51% men; $M_{\text{age}} = 20$ years) participated in the study in exchange for \$15.00.

Manipulations.

Self-construal. Self-construal was primed by circling pronouns in a vignette (presented as a proofreading task). The independent version was composed using first-person pronouns (e.g., *I, my*), and the interdependent version was composed using collective pronouns (e.g., *we, our*; Brewer & Gardner, 1996; Gardner, Gabriel, & Lee, 1999).

Rejection. The same rejection manipulation procedure described in Study 1 was used in Study 2.

Dependent measures.

Creativity. Participants completed the same RAT items that were used in Study 1.

Verbal reasoning. To distinguish between creativity and mere task effort, we gave participants 6 min to complete three moderately difficult verbal reasoning items from the Graduate Record Examination (Educational Testing Service, n.d.).

Results

Manipulation checks.

Social rejection. Manipulation of rejection was checked using the items and procedure described in Studies 1 and 2 ($\alpha = .80$). An ANOVA indicated a significant main effect of rejection, $F(1, 76) = 12.68, p < .01, \eta^2 = .13$. Rejected participants reported feeling more rejected ($M = 3.35, SD = 0.75$) than did included participants ($M = 2.72, SD = 0.85$). The self-construal main effect, $F(1, 76) = 1.31, p = .26, \eta^2 = .01$, and interaction, $F(1, 76) = 3.80, p = .09, \eta^2 = .05$, were nonsignificant.

Self-construal. Manipulation of self-construal was checked using the Twenty Statements Test (Kuhn & McPartland, 1954). Two independent coders rated participants' answers to the prompt "I am . . ." as independent (e.g., "pretty") or interdependent (e.g., "my father's daughter"; $r = .86$). An ANOVA revealed a significant main

effect of self-construal, $F(1, 76) = 4.84, p < .05, \eta^2 = .06$. Individuals in the independent condition listed a higher proportion of independent responses ($M = .72, SD = .15$) compared with individuals in the interdependent condition ($M = .65, SD = .13$). The rejection main effect, $F(1, 76) = 1.99, p = .16, \eta^2 = .04$, and interaction, $F(1, 76) = 3.74, p = .54, \eta^2 = .00$, were nonsignificant.

Dependent measures.

Creativity. An ANOVA revealed a nonsignificant main effect of rejection, $F(1, 76) = 2.06, p = .15, \eta^2 = .02$; a significant main effect of self-construal, $F(1, 76) = 4.40, p < .05, \eta^2 = .04$; and a significant interaction, $F(1, 76) = 29.21, p < .01, \eta^2 = .26$, on creativity (see Figure 1). As predicted, individuals primed with independent self-construal solved more RAT problems correctly after rejection ($M = 4.00, SD = 1.59$) than after inclusion ($M = 1.50, SD = 1.43$), $F(1, 38) = 23.40, p < .01, \eta^2 = .42$. Furthermore, individuals primed with an interdependent self-construal solved significantly fewer problems correctly after rejection ($M = 1.25, SD = 1.41$) than after inclusion ($M = 2.70, SD = 1.41$), $F(1, 38) = 7.87, p < .01, \eta^2 = .16$. Additionally, a three-versus-one planned contrast revealed that participants in the independent self-construal rejection condition ($M = 4.00, SD = 1.59$) were more creative than were participants in the other three conditions ($M = 1.82, SD = 1.74$), $t(78) = 4.96, p < .001, \eta^2 = .24$.

Verbal reasoning. An ANOVA revealed nonsignificant main effects of rejection, $F(1, 76) = 1.59, p = .21, \eta^2 = .02$, and self-construal, $F(1, 76) = 1.59, p = .21, \eta^2 = .02$, and a nonsignificant interaction, $F(1, 76) = 0.10, p = .75, \eta^2 = .001$, on verbal reasoning. The number of correct answers did not differ between rejected participants ($M = 2.38, SD = 0.71$) and included participants ($M = 2.17, SD = 0.71$) or between independent participants ($M = 2.38, SD = 0.63$) and interdependent participants ($M = 2.18, SD = 0.78$). In sum, rejection was an advantage on a creative task (RAT) for individuals with an independent self-concept; however, these variables did not influence verbal reasoning, a noncreative outcome.

Discussion

These results further supported our hypothesis that the self-concept can interact with rejection to facilitate creativity. In our third study, we sought to extend these results by investigating how these variables influence idea generation via a creativity measure that requires participants to diverge from existing knowledge to generate an original idea.

Study 3

Method

The experiment was a 2 (independent vs. interdependent self-construal) \times 2 (rejection vs. inclusion) design. One hundred U.S.

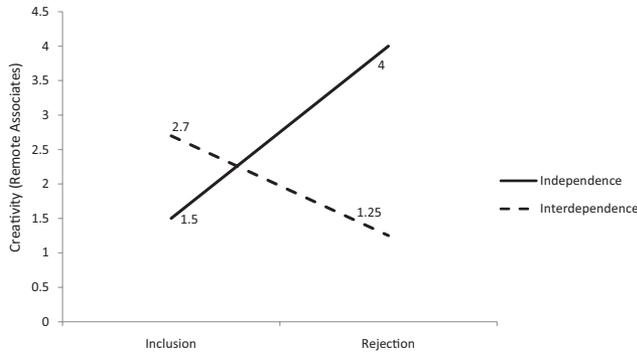


Figure 1. Number of Remote Associates Test items solved by condition (Study 2).

university students (42% men; $M_{\text{age}} = 20$ years) participated in exchange for course credit.

Manipulations.

Self-construal. The self-construal manipulation consisted of the same task described in Study 2.

Social rejection. The social rejection manipulation consisted of the same procedure used in Studies 1 and 2.

Dependent variable.

Creativity. Participants completed Ward's (1994) structured imagination task, which has been used in previous research (e.g., Kray et al., 2006) to assess creative generation ability by evaluating the drawings of creatures from a planet unlike Earth. Three independent coders rated drawings for divergence from existing knowledge structures (creativity) using Ward's (1994) original coding scheme. Characteristics that diverged from standard Earth animals or humans were tallied to provide a composite score of creativity per drawing. Invariants included atypical placement of features (e.g., eyes below nose), lack of bilateral symmetry (e.g., two appendages on one side and one on the other), and description of extraordinary abilities (e.g., fire breathing). Interrater agreement was satisfactory ($r = .80$), and ratings were averaged to create a single score per drawing.

Results and Discussion

Manipulation checks.

Self-construal. As in Study 2, two coders rated responses to the Twenty Statements Test (Kuhn & McPartland, 1954; $r = .81$). An ANOVA revealed a significant main effect for self-construal, $F(1, 96) = 57.85, p < .001, \eta^2 = .38$. Individuals in the independent condition listed a higher proportion of independent responses ($M = .71, SD = .17$) compared with interdependent participants ($M = .49, SD = .12$). The main effect of rejection, $F(1, 96) = 0.07, p = .80, \eta^2 = .001$, and the interaction, $F(1, 96) = 0.007, p = .93, \eta^2 = .00$, were nonsignificant.

Rejection. An ANOVA on participants' responses ($\alpha = .86$) indicated a significant main effect of rejection, $F(1, 96) = 62.53, p < .001, \eta^2 = .39$. Rejected participants reported feeling more rejected ($M = 3.26, SD = 0.63$) than did included participants ($M = 2.26, SD = 0.62$). The main effect of self-construal, $F(1,$

$96) = 0.06, p = .81, \eta^2 = .001$ and the interaction, $F(1, 96) = 0.20, p = .51, \eta^2 = .01$, were nonsignificant.

Dependent measure.

Creativity. An ANOVA revealed a main effect of rejection that approached significance, $F(1, 96) = 3.72, p = .06, \eta^2 = .03$; a significant main effect of self-construal, $F(1, 96) = 16.20, p < .001, \eta^2 = .13$; and a significant interaction on creativity, $F(1, 96) = 14.13, p < .001, \eta^2 = .11$ (See Figure 2). As predicted, individuals primed with an independent self-construal generated more creative drawings after rejection ($M = 6.01, SD = 1.90$) than they did after inclusion ($M = 3.73, SD = 2.14$), $F(1, 48) = 15.89, p < .001, \eta^2 = .25$. Finally, a three-versus-one contrast revealed that participants in the independent self-construal rejection condition ($M = 6.01, SD = 1.90$) were significantly more creative than participants in the other three conditions ($M = 3.42, SD = 2.05$), $t(98) = 5.81, p < .001, \eta^2 = .24$. These results help support and further demonstrate the robustness and generalizability of this effect.

Mediation analyses. We examined whether the relationship between independent self-concept and rejection on creativity was mediated by a differentiation mind-set or heightened feelings of being different from others (Goncalo & Krause, 2010). In Studies 2 and 3, after completing the creativity tasks and the manipulation checks, participants were asked to rate their agreement with five statements such as, "I prefer being different from other people" ($\alpha_s = .73$ and $.77$, respectively) using a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*; Goncalo & Krause, 2010).

We used a bias-corrected bootstrap mediation model to assess indirect effects (Preacher & Hayes, 2004). Each analysis used 1,000 bootstrap resamples with a 95% confidence interval (CI). In both studies, the differentiation mind-set fully mediated the effect of self-concept and rejection on creativity, 95% CI [0.10, 0.19], $p = .04$ (Study 2) and 95% CI [0.52, 1.17], $p < .001$ (Study 3; see Figures 3 and 4). For people with an independent self-concept, rejection, relative to inclusion, appears to promote feelings of being different from others, allowing them to think more creatively.

General Discussion

By integrating the literatures on rejection and creativity, we showed that rejection is not merely a by-product of the fact that creative people can be unconventional but that the experience itself

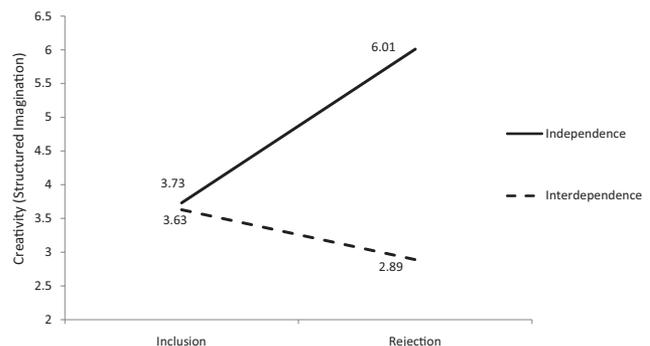


Figure 2. Divergence score on creative generation task by condition (Study 3).

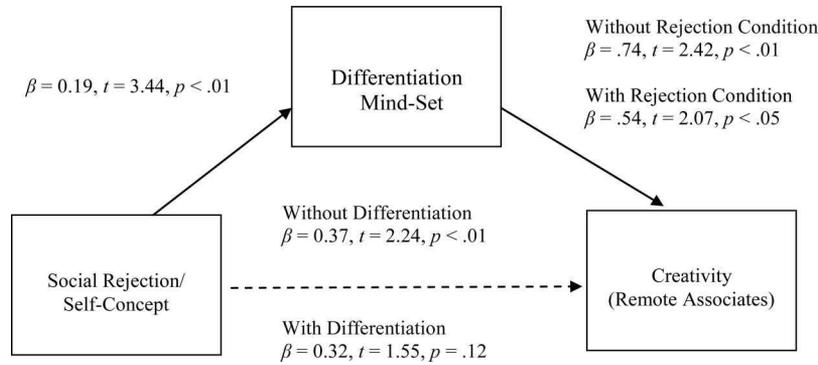


Figure 3. Main and mediating effects of social rejection and self-concept conditions, differentiation mind-set, and creativity. The dotted arrow indicates that the relationship fell below significance in the full model (i.e., full mediation; Study 2).

may promote creativity. However, the interaction of rejection and independence of self-concept exposes a caveat to those who would follow the path of a creative individual. Although it may liberate individuals who are not heavily invested in belonging to a group by affirming preexisting feelings of independence, rejection may constrain individuals with a more interdependent self-concept by activating inclinations to devote resources to reparative social strategies.

Social rejection can impair memory and learning (Baumeister et al., 2002), which should, in turn, reduce creativity (De Dreu, Baas, & Nijstad, 2008; De Dreu, Nijstad, Baas, Wolsink, & Roskes, 2012). However, our findings suggest that the negative consequences of rejection for creativity may be mitigated and even reversed for individuals with an independent self-concept. This is not to suggest that rejection is necessarily a positive experience. Our analyses showed that positive affect did not explain the relationship between social rejection and creativity (e.g., Isen et al., 1987) in any of the three studies (see Tables 1 and 2).

In future research, it may be interesting to investigate related cultural variables that may modify the experience of rejection and facilitate cognitive processes related to creativity. For instance,

self-construal has been theorized to explain a variety of cultural differences, including cognitive style (Varnum, Grossmann, Kitayama, & Nisbett, 2010). Our findings suggest that social contexts can shape creativity differently across cultures that vary in terms of independence in social orientation. These results also dovetail with extant research showing that an outsider's perspective, whether gained by the experience of living abroad (Maddux & Galinsky, 2009) or even the manipulation of spatial distance (Jia, Hirt, & Karpen, 2009) can facilitate creativity. Though existing research suggests that the outsider's creativity emerges via cognitive effort of adapting to new situations, our studies suggest that outsiders can be creative not only by adapting but also by retaining and asserting their uniqueness.

Finally, this work is important in light of the burgeoning interest in social rejection and its significant psychological and social impact (Gerber & Wheeler, 2009). Our results suggest that bolstering independence in self-concept can help manage some of the consequences of rejection and even present opportunities for increased creative expression, offering a constructive alternative to other generally negative outcomes. For the socially rejected, creativity may be the best revenge.

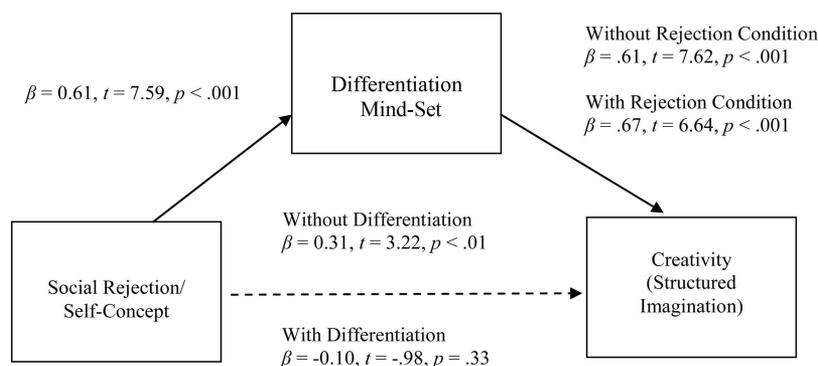


Figure 4. Main and mediating effects of social rejection and self-concept conditions, differentiation mind-set, and creativity. Dotted arrow indicates that the relationship fell below significance in the full model (i.e., full mediation; Study 3).

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