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Abstract

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 three studies, we show that individuals who hold an independent self-concept performed more creatively following social rejection relative to inclusion. We also show that this boost in creativity is mediated by a differentiation mindset, 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

Disciplines

Labor Relations | Organizational Behavior and Theory | Sociology

Comments

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Outside Advantage:

Can Social Rejection Fuel Creative Thought?

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Abstract

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 three studies, we show that individuals who hold an independent self-concept performed more creatively following social rejection relative to inclusion. We also show that this boost in creativity is mediated by a differentiation mindset, 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

Outside Advantage:

Can Social Rejection Fuel Creative Thought?

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). Thus, we investigate the implications of Wilson's (1956) provocative thesis: Is there a causal link between social rejection and creativity?

Considerable research seems to suggest otherwise 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 paper, 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

While 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 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 selves, 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 selves to respond to rejection by engaging in reparative strategies like strengthening friendships (Williams, 2001; Maner, DeWall, Baumeister & Schaller, 2007; Knowles & Gardner, 2008) 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 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 (Galinsky, Magee, Gruenfeld, Whitson & Liljenquist, 2008; Forster, Friedman, Butterbach & Sassenberg, 2005).

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, Kim, Polman, Ong, Qiu, Goncalo & Sanchez-Burks, 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 hypothesize that for individuals with an independent self-concept, rejection will reinforce their desire to differentiate themselves from others and that mindset should, in turn, lead to more creative outcomes. In three studies, we examine the independent self-concept both by measuring 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 predict moderates the experience of rejection and leads to greater creativity.

Study 1

Method and procedure

Forty-three U.S. university students (58% male; $M_{\text{age}} = 20$ years) participated in exchange for course credit. We measured participants' NfU using Snyder and Fromkin's (1977) 32-item scale ($\alpha = 0.84$) one 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 seven minutes to complete seven RAT problems (Isen, Daubman & Nowicki, 1987). Specifically, they were asked to find a word that connects three seemingly unrelated words (e.g., 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 (Mednick, 1968; Mednick, Mednick & Mednick, 1964; Kaufman, Plucker & Baer, 2008; Miron-Spektor, E., Gino, F. & Argote, L., 2011). Associates are conceptually distant and the non-dominant 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 (Mednick, 1968; Kaufman et al., 2008).

Results and Discussion

Manipulation Check

Rejection. The manipulation of rejection was checked using 6 self-report items ($\alpha = .81$) (e.g., “I feel rejected by the group”). 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 included participants ($M = 2.61, SD = 0.98$), $F(1, 39) = 4.50, p < .05, \eta^2 = .10$. The NfU covariate, $F(1, 39) = .01, p = .93, \eta^2 = .00$, and interaction term, $F(1, 39) = .57, p = .38, \eta^2 = .02$, were non-significant.

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, $\beta = .07, t(39) = 2.58, p < 0.025, \eta^2 = .10$, demonstrating that individuals with higher NfU performed more creatively following 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, $\beta = -.04, t(39) = -.04, p = .88$.

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.

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 PANAS-X (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 and colleagues (2009) who describe the initial response to rejection as one of affective “numbness.”

Study 2

Method and procedure

The experiment was a 2 (independent versus interdependent self-construal) X 2 (rejection versus inclusion) design. 80 U.S. university students (51% male; $M_{\text{age}} = 20$ 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 procedure described in Study 1.

Dependent Measures

Creativity. Participants completed the same RAT items from Study 1.

Verbal Reasoning. To distinguish between creativity and mere task effort, participants were given 6 minutes to complete 3 moderately difficult verbal reasoning items from the Graduate Record Examination (GRE).

Results

Manipulation Checks

Social Rejection. Manipulation of rejection was checked using the items and procedure described in Studies 1 and 2 ($\alpha = .80$). 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 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 non-significant.

Self-construal. Manipulation of self-construal was checked using the Twenty Statements Test (TST) (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") ($r_{ICC} = .86$). 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 to 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 non-significant.

Dependent Measures

Creativity. ANOVA revealed a non-significant main effect of rejection, $F(1, 76) = 2.06, p = .15, \eta^2 = .02$, significant main effect of self-construal, $F(1, 76) = 4.40, p < .05, \eta^2 = .04$, and significant interaction, $F(1, 76) = 29.21, p < .01, \eta^2 = .26$ on creativity (Fig. 1). As predicted, individuals primed with the independent self-construal solved more RAT problems correctly following rejection ($M = 4.00, SD = 1.59$) than following 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 following rejection ($M = 1.25, SD = 1.41$) than following 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 participants in the other three conditions ($M = 1.82, SD = 1.74$), $t(78) = 4.96, p < .001, \eta^2 = .24$.

Verbal reasoning. ANOVA revealed non-significant main effects of rejection, $F(1, 76) = 1.59, p = .21, \eta^2 = .02$, self-construal, $F(1, 76) = 1.59, p = .21, \eta^2 = .02$, and a non-significant interaction, $F(1, 76) = .10, p = .75, \eta^2 = .001$, on verbal reasoning. The number of correct answers did not differ between rejected participants ($M = 2.38, SD = .71$) and included participants ($M = 2.17, SD = .71$), or independent participants ($M = 2.38, SD = .63$) and interdependent participants ($M = 2.18, SD = .78$). 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 non-creative 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 and Procedure

The experiment was a 2 (independent versus interdependent self-construal) X 2 (rejection versus inclusion) design. 100 U.S. university students (42% male; $M_{\text{age}} = 20$ years) participated in exchange for course credit.

Manipulations

Self-construal. The same task described in Study 2.

Social Rejection. The same procedure used in Studies 1 and 2.

Dependent Variable

Creativity. Participants completed Ward's Structured Imagination Task (1994), 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 figures (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). Inter-rater agreement was satisfactory ($r_{ICC} = .80$), 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 TST (Kuhn & McPartland, 1954) ($r_{ICC} = .81$). 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 to interdependent participants ($M = .49, SD = .12$). The main effect of rejection, $F(1, 96) = .07, p = .80, \eta^2 = .001$, and interaction, $F(1, 96) = .007, p = .93, \eta^2 = .00$, were non-significant.

Rejection. 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 included participants ($M = 2.26, SD = 0.62$). The main effect of self-construal, $F(1, 96) = .06, p = .81, \eta^2 = .001$ and the interaction, $F(1, 96) = .20, p = .51, \eta^2 = .01$, were non-significant.

Dependent Measure

Creativity. ANOVA revealed a marginally significant main effect of rejection, $F(1, 96) = 3.72, p = .06, \eta^2 = .03$, a significant main effect of self-construal, $F(1, 96) = 16.20, p < .001, \eta^2 = .13$, and a significant interaction on creativity, $F(1, 96) = 14.13, p < .001, \eta^2 = .11$ (Fig. 2). As predicted, individuals primed with an independent self-construal generated more creative drawings following rejection ($M = 6.01, SD = 1.90$) than following 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.

Mediational Analyses

We examined whether the relationship between independent self-concept and rejection on creativity was mediated by a differentiation mindset, 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 to five statements including “I prefer being different from other people” ($\alpha = .73$ and $\alpha = .77$, respectively) using a 5-point Likert 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, differentiation mindset fully mediated the effect

of self-concept and rejection on creativity, 95% $CI = .10 - .19$, $p = .04$ (Study 2) and 95% $CI = .52 - 1.17$, $p < .001$ (Study 3) (Fig. 3 and Fig. 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 byproduct of the fact that creative people can be unconventional but that the experience itself 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. Though it may liberate individuals who are not heavily invested in belonging to a group by affirming pre-existing 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 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.

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Table 1

Positive Affect Means and Standard Deviations

Positive Affect	Rejection	Inclusion
Study 1	$M = 23.05, SD = 8.58$	$M = 26.32, SD = 9.60$
Study 2	$M = 22.30, SD = 5.19$ [Independent]	$M = 23.85, SD = 6.77$ [Independent]
	$M = 22.10, SD = 7.52$ [Interdependent]	$M = 24.20, SD = 7.23$ [Interdependent]
Study 3	$M = 29.56, SD = 7.34$ [Independent]	$M = 29.08, SD = 6.12$ [Independent]
	$M = 27.72, SD = 8.57$ [Interdependent]	$M = 26.16, SD = 9.24$ [Interdependent]

Table 2

Positive Affect Inferential Statistics

Positive Affect	Self-concept	Social Rejection	Interaction
Study 1	$\beta = .12, t(39) = .46, p = .21, \eta^2 = .02$	$\beta = -.20, t(39) = -1.27, p = .21, \eta^2 = .04$	$\beta = .06, t(39) = .22, p = .82, \eta^2 = .00$
Study 2	$F(1, 76) = .003, p = .96, \eta^2 = .00$	$F(1, 76) = 1.47, p = .23, \eta^2 = .02$	$F(1, 76) = .03, p = .86, \eta^2 = .00$
Study 3	$F(1, 96) = .12, p = .73, \eta^2 = .001$	$F(1, 96) = .42, p = .52, \eta^2 = .004$	$F(1, 96) = 2.27, p = .14, \eta^2 = .02$

Figure Captions

Figure 1. Number of RAT items solved by condition (Study 2).

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

Figure 3. Main and mediating effects of social rejection and self-construal conditions, differentiation mindset, and creativity. Dotted arrow indicates that the relationship fell below significance in the full model (i.e., full mediation) (Study 2).

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

