

Is It New? Personal and Contextual Influences on Perceptions of Novelty and Creativity

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Novelty recognition is the crucial starting point for extracting value from the ideas generated by others. In this paper we develop an associative evaluation account for how personal and contextual factors motivate individuals to perceive novelty and creativity. We report 4 studies that systematically tested hypotheses developed from this perspective. Study 1 (a laboratory experiment) showed that perceivers' regulatory focus, as an experimentally induced state, affected novelty perception. Study 2 (a field study) found that perceivers' promotion focus and prevention focus, measured as chronic traits, each interacted with normative level of novelty and creativity: perceivers who scored higher on promotion focus perceived more novelty (or creativity) in novel (or creative) targets than those who scored lower, whereas perceivers who scored higher on prevention focus perceived less novelty (or creativity) in novel (or creative) targets than those who scored lower. Study 3 (a field study) showed that organizational culture affected the perception of novelty and creativity. Study 4 (a laboratory experiment) found perceiver-by-idea-by-context 3-way interaction effects: for perceivers with prevention focus, the positive relation between normative level of novelty and novelty ratings was weakened in the loss-framing condition versus the gain-framing condition. We discuss implications of the findings for future research and management practice.

Keywords: novelty perception, creativity perception, regulatory focus, organizational culture, goal framing

“While creative individuals have received considerable attention . . . those with the gift of spotting significant new ideas . . . are rare and equally vital to the process. Corporations will dole out small fortunes to hire consultants or ‘creative stars’, having failed to recognize the seeds of homegrown innovation all around them.”

—Hirshberg (1998, p. 21)

This quote suggests two key issues: spotting novelty in an idea is the crucial starting point in the long process of putting new ideas generated into good use and the phenomenon of novelty recognition has received little attention. Understanding this phenomenon has practical significance. Today's dynamic environment presents problems and challenges never seen before. Organizations need new alternatives to survive and prosper. Workers may come up with new ideas to improve work processes, human-resource management (HRM) professionals may design new human-resource (HR) practices, and scientists and engineers may generate fresh ideas for products. Fundamentally, novelty drives differentiation and competitiveness; it is the engine of growth. Most people have opportunities to encounter novel information, ideas, and knowledge. However, many of them fail to notice these novel sources of competitive advantage. Thus, being sensitive to novelty and recognizing it upon encounter are crucial for organizations (Schulz, 2001).

A novel idea may be just an initial thinking that is far from complete or a fresh thought for which the value is not yet known. Novel ideas are raw materials at early stages of development. They need to be recognized by others to be fully developed so as to be useful and add value to the organization (West, 2002; Zhou & Woodman, 2003). Otherwise, no matter how successful an organization is in fostering new idea generation by employees and how promising these initial ideas are, they may be ignored and wasted.

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Because understanding what factors lead individuals to recognize novelty has such significant managerial implications, novelty recognition is a phenomenon that deserves research attention in and of itself.

Indeed, novelty recognition is consequential in its own right. Analyzing U.S. patents granted during 1836–2010, *Packalen and Bhattacharya (2015)* found that work built on new ideas was more likely to spur subsequent inventions than work built on established ideas. Findings such as theirs suggest that perceiving novelty is fundamentally important. Prior research suggests that after perceiving novelty in a target, individuals devote more attention and cognitive resources to the target (*Bunzeck & Düz el, 2006; Johnston, Hawley, Plewe, Elliott, & DeWitt, 1990; Schulz, 2001*). The more time and energy they spend on thinking about and exploring a novel idea, the more likely they will find a use for it (*Li, Maggitti, Smith, Tesluk, & Katila, 2013*). The increased attention and cognitive resources have also been shown to affect managers' decisions on which issues they choose to address and which projects they support (*Dutton, Ashford, O'Neill, & Lawrence, 2001; Li et al., 2013*). Thus, it is problematic that few studies investigated novelty perception. We address this issue by investigating, for the first time, how the perceiver and the context independently and jointly affect it.

We define novelty recognition as the extent to which a person perceives a normatively new idea generated by others to be novel. Normatively new ideas refer to the ideas being considered as original, unique, or unconventional by normative standards. Novelty recognition is different from new ideas generation. The former focuses on the perception of an idea that has already been generated yet the latter focuses on the act of producing the idea; the former deals with the perceiver yet the latter deals with the generator of the idea. Despite its practical significance, few studies examined what propels individuals to recognize novelty. By contrast, an impressive body of work on antecedents of idea generation has been done (see *Anderson, Potocnik, & Zhou, 2014; Hennessey & Amabile, 2010; Shalley, Zhou, & Oldham, 2004*, for reviews).

Research on recognizing novelty in ideas generated by others is emerging. We contribute in important aspects. First, prior work looked at creativity recognition (*Mueller, Wakslak, & Krishnan, 2014*) whereas we put novelty recognition center stage while also testing creativity and usefulness. Novelty recognition is conceptually different from creativity recognition. Creativity only comprises novelty and usefulness (*Amabile, 1996*). The creativity literature posits that novelty and usefulness are so different that it will pay greater dividend for conceptual clarity and empirical rigor if they are separately studied (*Montag, Maertz, & Baer, 2012*). Indeed, prior work suggests that what influences novelty perception may not influence usefulness perception (*Kaufman, Baer, Cromptley, Reiter-Palmon, & Sinnett, 2013*). Research has just begun to touch the surface of its complexity. Because novelty perception is primary for creativity perception and usefulness is secondary (*Diedrich, Benedek, Jauk, & Neubauer, 2015*), and novelty perception precedes usefulness perception (*Jackson & Messick, 1965; Rindova & Petkova, 2007; Scherer, 2001*)—recognizing that novelty facilitates exploring usefulness (*Bunzeck & Düz el, 2006; Li et al., 2013*)—we put novelty perception center stage

so as to develop in-depth knowledge about the main and interactive effects of the perceiver and the context on it.

Second, prior work tested whether individuals accurately classified the ideas generated by themselves as creative when the same ideas were rated as creative by experts (*Rietzschel, Nijstad, & Stroebe, 2010*) and how personal factors affected this accuracy. Classifying one's own ideas and perceiving others' ideas may be influenced by different factors. When classifying an idea generated by oneself, the individual does not just evaluate the idea itself; he or she is likely to be affected by additional information, such as how he or she generated the idea, what other options he or she had, and the amount of time and effort invested. However, while perceiving others' ideas, the perceiver does not have as much information about how the ideas were generated as the generators do. Thus, recognizing novelty in ideas generated by others may be influenced by very different factors. Much research is needed to reveal factors influencing individuals' recognition of novelty in the ideas generated by others, and such research needs to go beyond an exclusive focus on personal factors. We examine the perceiver factors, the context, and their interactions.

Third, building on the notion of associative evaluation (*Gawronski & Bodenhausen, 2006, 2011*), we develop a new theoretical account for an understanding of novelty recognition, and by extension, creativity recognition. We conducted four studies to systematically investigate the important phenomena. We started with an experimental study on novelty recognition. Regulatory focus is key for understanding work-related cognition and behavior (*Lanaj, Chang, & Johnson, 2012*), yet few studies revealed how it influences novelty recognition. Study 1 compared and contrasted effects of promotion versus prevention focus on novelty recognition by priming the two regulatory focus states. We found that compared with prevention focus, promotion focus allowed perceivers to recognize greater novelty in targets that have higher levels of novelty. Study 2 was a field study measuring employees' trait promotion and prevention focus and testing how they each related to novelty and creativity perception of ideas submitted by others. Employees scoring higher on promotion focus perceived greater novelty in targets having higher novelty, and so did employees scoring lower on prevention focus. We found the same pattern of results for creativity recognition. The contribution of Studies 1 and 2 is that regulatory focus is a key personal factor that influences novelty (or creativity) recognition.

Study 3 showed that compared with HR managers who had organizational culture not encouraging innovation, managers from companies encouraging innovation recognized greater novelty (and creativity) in new HR practices. Its contribution is that even a general contextual factor (i.e., organizational culture) has a powerful effect on novelty and creativity recognition of a specific target. In Study 4, students rated the novelty and creativity of suggestions on how to improve teaching. Experimentally inducing regulatory foci and manipulating a contextual factor that framed the goal of improving teaching as either obtaining gains or avoiding losses, we found a person (regulatory foci) by context (gain vs. loss framing) interaction. The contribution is that personal and contextual factors interact to affect novelty and creativity recognition.

An Associative Evaluation Account of Novelty and Creativity Recognition

Zhou and Woodman (2003) argued that the degree to which an individual sees an idea as novel or creative has a subjective component, beyond objective or normative standards. The subjective component is affected by the perceiver, the context in which the perception occurs, and their interaction. We advance earlier work by theorizing that the subjective component is rooted in an associative evaluation process. Associative evaluation refers to a perceiver's impression of and evaluative responses to a target (e.g., an idea) being automatically activated by relevant stimuli (Gawronski & Bodenhausen, 2011). It is likely to occur when there is temporal closeness or feature similarity between the external stimuli and relevant information stored in the perceiver's memory (Bassili & Brown, 2005; Smith, 1996). When the elements in the memory being activated are primarily associated with positive valence, the perception of the target will lean toward the nature of those activated elements. The higher the activated level of positive associations is, the more the perceiver will "see" in a target the feature that is consistent with the elements retrieved from his or her memory (Gawronski & Bodenhausen, 2006).

We extend the associative evaluation perspective to the phenomenon of novelty recognition, and by extension, creativity recognition as novelty is a primary component of creativity (Diedrich et al., 2015; Jackson & Messick, 1965). A new idea may be associated with different concepts. For example, it may be associated with positive concepts such as "adventurous" or negative concepts such as "dangerous." The perception of the idea at a specific moment depends on what kinds of associations are primarily activated. If largely positive associations with novelty are activated, then the perceiver tends to favor novelty; the more positive associations are activated, the greater novelty the perceiver will see in the idea and rate it as such. By contrast, if largely negative associations with novelty are activated, then the perceiver tends to not favor novelty and see less novelty in the idea and hence give lower novelty ratings.

Integrating this associative view with Zhou and Woodman's (2003) classification of personal, contextual, and the person-context interactional effects enables us to develop a more complete theoretical account of novelty and creativity recognition. We provide an outline of this account in this section, and we will present more detailed analysis in the hypothesis development subsection of each of our four studies after this overview section.

First, personal factors affect how much perceivers see novelty. When encountering targets ranging from less to more novel, perceivers who have higher levels of an orientation toward exploring, aspiring, approaching, and striving for positive outcomes will rate the targets with greater novelty as more novel than perceivers who have an orientation toward being safe, avoiding errors, and escaping from negative outcomes. This is because novelty is linked to exploring, budding, nascent, and hopeful, which match the state of the perceivers who have higher levels of the orientation toward exploring, aspiring, approaching, and striving for positive outcomes. Thus, the normatively more novel targets activate more positive associations in the perceivers, leading them to "see" more novelty in the targets. Because novelty is the primary element in creativity (e.g., Diedrich et al., 2015), when the perceivers face targets from less to more creative, the features linked to novelty in

the normatively more creative targets also activate more positive associations in the perceivers, leading them to "see" more creativity.

Second, contexts influence how much perceivers see the novelty and creativity in a target. The context may cue that novelty is encouraged or not. For targets with greater normative novelty, a context encouraging novelty may lead the perceivers to see more novelty in the targets than a context that does not encourage novelty. This is because the context that encourages novelty, in combination with the actual presence of normatively greater novelty in the target, is likely to activate more elements in the perceivers' memory that associate novelty with positive experiences. The positive associations will lead the perceivers to "see" greater novelty in the target. Because novelty is the primary element in creativity, the same condition that activates the perceivers to "see" more novelty also leads them to "see" more creativity.

Third, the perceiver and the context have interaction effects. When facing a normatively more novel target in a context that cues being novel is good, perceivers possessing personal factors that favor novelty will have even more elements associated with novelty activated. This is because the personal factors reinforce the positive associations triggered by the context, making the positive associations even more salient and causing the perceiver to "see" even greater novelty, and by extension, creativity. By contrast, when facing a normatively novel idea in a context that cues being novel is bad, the personal factors disfavoring novelty reinforce the negative associations suggested by the context, making the negative associations even more salient and leading the perceiver to "see" even less novelty (and creativity) in the target.

Study 1: Comparing State Promotion Versus Prevention Focus for Novelty Perception

When encountering ideas with varying novelty levels according to normative criteria, perceivers generally see greater novelty in the ideas that have relatively high normative novelty than the ideas that have low normative novelty (Allen, 2010; Lu & Luh, 2012). For example, when the idea of buying books online from Amazon first emerged, most people could recognize that this was a new way of buying books compared with going to their neighborhood bookstores. The associative evaluation account suggests that the perception of novelty is affected by personal factors beyond the normative level of novelty. A recent meta-analysis found that compared with most other personal factors such as openness to experience, regulatory focus is more proximal in influencing work-related cognition and behavior and most personal factors affect cognition and behavior via regulatory focus (Lanaj et al., 2012). Thus, regulatory focus is at the center stage in affecting work-related cognition and behavior. This is because self-regulation is essential for how individuals perceive and react to external opportunities and threats, granting regulatory focus a central role in regulating cognitive processing and behavioral responses during adaptive functioning and goal pursuit (Carver & Scheier, 1998; Higgins, 2001; Lanaj et al., 2012). To the extent that the sensitivity to and recognition of novelty enable adaptive functioning, regulatory focus is likely to play a vital role in novelty recognition.

Higgins (1997) theorized that people may pursue two kinds of desired end-states: a promotion focus emphasizing aspirations and

accomplishments and a prevention focus emphasizing responsibilities and safety. People with promotion focus are drawn to positive outcomes and adopt approach strategies to get them. People with prevention focus are sensitive to negative outcomes and use avoidance strategies to avoid them. Promotion and prevention focus may be externally induced psychological states or traits (Higgins, 1996, 1997). Because states are what individuals experience at a given moment, they are more malleable than chronic traits. Study 1 focuses on states. We experimentally induced either a promotion or a prevention focus and asked the participants to rate the novelty of targets. For conceptual clarity, we refer to such experimentally induced regulatory focus as induced promotion or prevention focus.

In theory, promotion focus is particularly relevant for the recognition of novelty because it has profound cognitive and motivational orientation toward novelty. The associative evaluation account suggests that regulatory foci affect how much novelty a perceiver sees in a target. When individuals have induced promotion focus, their desired end-states are aspirations and accomplishments; they are explorative, sensitive to new possibilities for growth and advancement, and eager to approach targets that match their desired end-states (Higgins, 1997, 1998). When encountering targets ranging from normatively lower to higher novelty, the targets with normatively higher levels of novelty activate a larger number of positive associations with novelty for those in the promotion-focus state than those in the prevention-focus state. This is because novelty is linked to connotations such as exploring, budding, growing, intriguing, and adventurous, which match the end-states of individuals having induced promotion focus. It is important to note that here “positive” does not mean “useful.” When referring to an idea as being “useful,” the creativity literature conceptualizes it as being practical, feasible, and implementable for a given context (e.g., Amabile, 1996; Anderson et al., 2014; Oldham & Cummings, 1996; Sullivan & Ford, 2010). By contrast, when individuals have induced prevention focus, their desired end-states are obligation and safety; they are risk-averse, sensitive to possibilities of losing and suffering failure, and eager to avoid mismatches to their desired end-states of obligation and safety (Higgins, 1998; Liberman, Idson, Camacho, & Higgins, 1999). When encountering targets ranging from normatively lower to higher novelty, the targets with normatively higher levels of novelty activate a smaller number of positive associations with novelty for those having induced a prevention-focus state than those having induced promotion focus because novelty or newness is often risky, could lead to failure, and does not match well with safety and security. Thus, although ideas with normatively higher levels of novelty tend to receive higher novelty ratings, when encountering targets with normatively higher novelty, the raters in a promotion-focus state are likely to have more positive associations in the memory activated than those in a prevention-focus state. The associative evaluation account suggests that the more activated positive associations will lead the raters in a promotion focus to “see” greater novelty in the target than the perceivers in a prevention-focus state. Thus,

Hypothesis 1 (H1): Induced regulatory focus moderates the relation between a target’s normative level of novelty and perceivers’ novelty ratings: the positive relation is stronger

when the perceivers are in the promotion than in the prevention-focus state.

Study 1: Method

Participants and design. Ninety-two undergraduates (38 men and 54 women; mean age = 20 years) participated to earn extra credit for a management course. The experiment used a one-factor (promotion vs. prevention focus) between-participants design.

Experimental manipulation. We induced regulatory focus by using the widely used procedure for inducing promotion versus prevention focus (e.g., Friedman & Förster, 2001; Gino & Margolis, 2011). It uses a pencil-and-paper maze task that unobtrusively cues the representations characterizing promotion or prevention (Friedman & Förster, 2001). In both conditions, participants were instructed to “find the way out for the mouse” trapped inside of a maze. In the promotion condition, a piece of cheese was shown outside of the maze, in front of a brick wall with an exit. Thus, the motivation to leave the maze was to get the cheese, thereby activating the semantic concept of “seeking nurturance” and the procedural representation of moving to the desired end-state of nurturance. In the prevention condition, an owl was depicted hovering above the maze, presumably ready to swoop down and capture the mouse unless it found the exit and escaped the maze. Thus, the motivation to leave the maze was to flee from the owl, thereby activating the semantic concept of “seeking security” and the procedural representation of escaping to the desired end-state of safety.

To check manipulation effectiveness, we followed prior studies (e.g., Gino & Margolis, 2011) to test on a nonoverlapping group of 70 participants (29 women, 40 men, 1 unknown; mean age = 22 years) by using a one-factor (promotion vs. prevention) between-subjects design. They first completed the maze task, then they reported their goals from the perspective of the mouse. Two judges coded the goals as promotion focus (e.g., to get the cheese), prevention focus (e.g., to avoid the owl), or no focus (e.g., to get out). The interrater reliability (Cohen’s κ) was 1.00, $p < .01$. One-way analyses of variance (ANOVAs) showed that those in the promotion-focus condition listed more promotion-oriented goals ($M = 0.68$, $SD = 0.47$) than those in the prevention-focus condition ($M = 0.08$, $SD = 0.28$), $F(1, 68) = 41.65$, $p < .01$, $\eta^2 = .38$; those in the prevention-focus condition listed more prevention-oriented goals ($M = 0.82$, $SD = 0.38$) than those in the promotion-focus condition ($M = 0.08$, $SD = 0.28$), $F(1, 68) = 85.13$, $p < .001$, $\eta^2 = .56$. Thus, the manipulations were effective.

Materials. We needed to ask raters to rate the novelty of targets, which should have varying degrees of normative level of novelty (Loneragan, Scott, & Mumford, 2004; Silvia, 2008). We ran two pairs of pilot studies to create the targets: Pilots 1a and 1b were for an alien task, and Pilots 2a and 2b were for a circle pictures task. In Pilots 1a and 2a, we collected many potential targets. In Pilots 1b and 2b, we obtained a normative level of novelty and then selected targets that had high or low levels of novelty to be used in Study 1. More detailed information about these pilot studies are provided in the Appendix.

Procedure. Participants were told the study included various unrelated tasks combined for convenience. The first was the cheese-or-owl maze task for manipulating regulatory foci (Friedman & Förster, 2001). After completing the maze task, participants

were asked to rate the novelty of nine aliens and 24 circle pictures. Last, they filled out a survey that had demographic questions and an awareness check question. Two persons mentioned that the maze task might affect later novelty ratings. Their data were excluded from analyses. In all, 90 participants' data were analyzed. The results were identical if the two persons' data were not excluded.

Dependent variable. Novelty rating was the dependent variable. On a scale from 1 (*extremely low*) to 7 (*extremely high*), the participants rated

- For the alien task, the extent to which each alien was novel, and participants responded to three items concerning the extent to which each alien was similar to any Earth creatures (reverse-scored; Maddux & Galinsky, 2009; Ward, 1994). We averaged these four items to create an overall novelty index ($\alpha = .81$).
- For the circle pictures task, the extent to which each circle picture was novel.

Study 1: Results and Discussion

We used HLM to analyze the data because it accounts for the nested nature of the data and simultaneously estimates effects of the factors at different levels on individual-level outcomes while maintaining appropriate levels of analysis for the predictors (Bryk & Raudenbush, 1992). We used two-level models (HLM2): rating scores were Level 1 cases nested within Level 2 raters. The normative level of novelty for aliens (or circle pictures) was entered as the predictor at Level 1. To examine effects of regulatory focus on novelty ratings on targets with varying degree of normative levels of novelty, we tested the regulatory focus (promotion vs. prevention) by normative level of novelty interaction in the Level 1 model. We group-mean centered the Level 1 predictors to reduce potential multicollinearity in Level 2 estimation (Aguinis, Gottfredson, & Culpepper, 2013; Mathieu, Aguinis, Culpepper, & Chen, 2012).

We first estimated null models to examine the between-rater variability of the intercept (τ_{00}) and intraclass correlation coefficient (ICC) for different dependent variables (see Table 1). For aliens, we found no significant between-rater variability for novelty rating ($\tau_{00} = .05$, *ns*, ICC1 = .02). When normative level of novelty was entered in the model, the random intercept and the random slope were significant ($\tau_{00} = .13$, $p < .01$, U1 variance = .15, $p < .05$; Table 1, Model 2). For circle pictures, we found significant between-rater variance for the novelty rating ($\tau_{00} = .34$, $p < .05$, ICC1 = .10). When normative level of novelty was entered in the model, the random intercept and the random slope were significant ($\tau_{00} = .39$, $p < .01$, U1 variance = .13, $p < .05$; Model 6). The results suggested a nesting effect in our data and that it was appropriate to test the cross-level interactions.

Test of hypothesis. H1 predicted that induced regulatory focus moderated the relation between a target's normative level of novelty and perceivers' novelty ratings so that the positive relation was stronger when the perceivers were in the promotion-than in the prevention-focus state. For the aliens' novelty rating, HLM results (Table 1, Model 4) showed a significant interaction between regulatory focus and normative level of novelty ($\gamma = .21$, $p < .05$). Similarly, for the circle pictures' novelty rating, results (Table 1, Model 8) showed a significant interaction between reg-

ulatory focus and normative level of novelty ($\gamma = .20$, $p < .05$). Figures 1 (aliens) and 2 (circles) show the patterns of the interactions consistent with H1. Testing H1 is to compare the relative strength of the positive relation between normative level novelty and novelty ratings in promotion versus prevention conditions. The slope of a given condition indicates the strength of the positive relation; the larger slope indicates a stronger relation. The simple slope test evaluates whether the relation (slope) between the independent variable (normative level novelty) and dependent variable (novelty ratings) is truly positive for a given condition (promotion or prevention focus) (Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003; Dawson, 2014; Preacher, Curran, & Bauer, 2006). The slope difference test evaluates whether the strength of the two positive relations is different. Simple slope tests showed that for the aliens task, the relation between normative level of novelty and novelty rating was significantly positive for the promotion ($b = 1.34$, $p < .01$) and prevention ($b = 1.13$, $p < .01$) conditions. A slope difference test showed that the positive relation for the promotion condition was stronger than the prevention condition ($z = 1.97$, $p < .05$), supporting H1. A similar pattern of results occurred for the circle pictures task. The relation between normative level of novelty and novelty rating was significantly positive for the promotion ($b = 1.06$, $p < .01$) and prevention ($b = 0.86$, $p < .01$) conditions. A slope difference test showed that the positive relation for promotion focus was stronger than the relation for prevention focus ($z = 2.10$, $p < .05$), also supporting H1.¹

Effect sizes. Following LaHuis, Hartman, Hakoyama, and Clark (2014), we estimated the effect sizes of multilevel models using *Pseudo R*², based on Snijders and Bosker (1994), and the effect sizes of cross-level interaction's explanatory power—the slope variance explained by the Level 2 predictors (Aguinis et al., 2013). Our models accounted for 57% and 33% of the total variance for the alien and circle pictures tasks, respectively. The cross-level interactions accounted for 7% and 8% of the slope variance in the relation between normative novelty score and novelty ratings for the alien and circle pictures tasks, respectively.

Discussion. Study 1 used two tasks and obtained identical results: the positive relation between a target's normative level of novelty and perceivers' novelty ratings was stronger when the perceivers were in the promotion-than in the prevention-focus

¹ One might wonder whether Figures 1 and 2 obtained for testing H1 are "cross-over" interactions and whether such a pattern is consistent with the associative evaluation theory. Empirically, we checked whether the novelty rating for "Low normative novelty—Promotion" was significantly lower than the novelty rating for "Low normative novelty—Prevention." For the alien task, the novelty rating for "Low normative novelty—Promotion" ($M = 2.62$) was not significantly different from "Low normative novelty—Prevention" ($M = 2.75$), $z = 0.83$, $p = .40$. For the circle task, the novelty ratings for "Low normative novelty—Promotion" ($M = 3.04$) were not significantly different from "Low normative novelty—Prevention" ($M = 3.21$), $z = 0.98$, $p = .32$. Theoretically, a cross-over interaction is consistent with the associative evaluation account. For perceivers in the promotion-focus state, as the normative novelty of targets becomes lower, fewer positive associations will be activated in their memory system; thus, they will give lower novelty ratings. Theoretically, it could reach a point at which the normative novelty of a target is so low that the promotion-focused perceivers, whose desired end-states are aspirations and accomplishments and who are eager to approach targets that match their desired end-states (e.g., Higgins, 1998), are bored and turned off by the severe lack of novelty and have even less positive association activated and hence see even less novelty than prevention-focused perceivers.

Table 1
Study 1 HLM Results for Interaction Effects of Normative Level of Novelty and Induced Regulatory Focus on Novelty Ratings

Variables	Alien Pictures				Circle Pictures			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Level 1 variables								
Intercept	3.75** (.05)	3.75** (.05)	3.70** (.07)	3.72** (.07)	4.13** (.07)	4.13** (.07)	4.12** (.11)	4.11** (.11)
Normative level of novelty		1.24** (.06)	1.24** (.06)	1.13** (.08)		.97** (.05)	.97** (.05)	.87** (.07)
Level 2 variables								
Induced regulatory focus (0 = prevention; 1 = promotion)			.10 (.10)	.06 (.10)			.02 (.15)	.04 (.15)
Cross-level interaction								
Normative Level of Novelty × Induced Regulatory Focus				.21* (.10)				.20* (.09)
Variance component								
Residual σ^2	2.22	.82	.82	.82	3.21	2.00	2.00	2.00
Intercept τ_{00}	.05	.13	.13	.13	.34	.39	.39	.39
Slope variance τ_{11}		.15	.15	.14		.13	.13	.12
Deviance	2,943.00	2,291.84	2,290.84	2,287.04	8,758.34	7,869.64	7,869.60	7,865.22
Pseudo R^2 _a		.57	.57	.57		.33	.33	.33
Slope variance explained by regulatory focus ^b				.07				.08

Note. Standard errors in parentheses. Two-tailed test. N (Level 2) = 90, N (Level 1) = 810 for alien drawing ratings, N (Level 1) = 2,159 for circle picture ratings.

^a $R^2(S\&B) = 1 - \frac{(\sigma^2_{full} + \tau_{00}/full)}{(\sigma^2_{null} + \tau_{00}/null)}$ ^b $R_{Level 2}$ for slope = $\frac{(\tau_{11} \text{ of model 3} - \tau_{11} \text{ of model 4})}{\tau_{11} \text{ of model 3}}$.

* $p < .05$. ** $p < .01$.

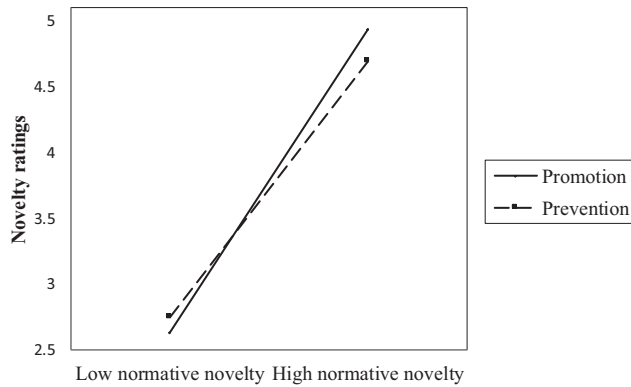


Figure 1. Study 1: Cross-level interaction plot (alien drawings).

state. The consistency of results across two tasks suggests that the results are robust. Using these tasks, two streams of work—past studies on what factors led individuals to produce novel outputs and our study on how the novelty perception of targets produced by others is shaped—complement each other. Another strength of Study 1 is that its randomized experimental design showed the causal relations among regulatory focus, normative level of novelty, and novelty perception, thereby establishing internal validity. As the first study, its pure focus on novelty perception provided a clean understanding of how regulatory focus affected the novelty perception of targets with varying degree of normative level of novelty only, minimizing potential noise that might have been introduced had the targets also varied in usefulness.

Study 1 has limitations. It used a student sample and tasks that had variation only on novelty. To enhance external validity, Study 2 used an employee sample; they rated ideas relevant for the workplace. In addition to the methodological improvements, Study 2 also made conceptual extensions. Study 1 followed prior research in conceptualizing regulatory focus as two induced psychological states (Higgins, 1996, 1997) and compared and contrasted the influences of promotion versus prevention states. On the other hand, regulatory focus may also be conceptualized as two separate trait continuums (Higgins et al., 2001; Lockwood, Jordan, & Kunda, 2002). We can develop a fuller understanding by examining the relatively stable trait. Thus, Study 2 took a fine-tuned approach and measured trait promotion and prevention focus separately: high versus low levels of promotion focus and high versus low prevention focus. Being the first of this series of studies, Study 1 focused on novelty perception so as to understand the phenomena of interest in a clean fashion. Novelty is the primary component of creativity. To extend Study 1 findings, Study 2 investigated novelty and creativity perceptions.

Study 2: Influences of Trait Regulatory Foci on Perceptions of Novelty, Creativity, and Usefulness

The associative evaluation account suggests that trait-like regulatory foci influence perceivers' novelty (and by extension, creativity) recognition because the information being activated by a target and retrieved from the perceivers' memory reflects the perceivers' past experiences, which are a function of the perceivers' trait-like regulatory foci (Mayo, 1983; Sanitioso, Kunda, &

Fong, 1990; Touryan et al., 2007). When perceivers possessing higher levels of trait promotion focus on encounter targets ranging from less to more novel, they may rate the targets with greater novelty as being more novel than do perceivers who possess lower levels of promotion focus because they are more explorative and inclined to seek novel alternatives than those who have lower levels of promotion focus (Higgins, 1997). The inclination to explore leads them to often pursue new things. Cumulative life experiences of pursuing new things lead them to attach more positive attributes to novelty, such as it being approachable, intriguing, adventurous, and exciting, and to store these positive associations in their memory (Higgins & Tykocinski, 1992). As such, here "positive" is different from the notion of "useful" defined in the creativity literature (i.e., being practical, feasible, and implementable for a given context; Amabile, 1996; Anderson et al., 2014; Oldham & Cummings, 1996; Sullivan & Ford, 2010). Because of their natural inclinations of approaching new things, the perceivers with a higher level of promotion focus have more past experience and hence more elements in the memory suggesting novelty is intriguing, endearing, and approachable than perceivers having lower levels of promotion focus (Higgins, King, & Mavin, 1982; Higgins & Tykocinski, 1992; von Hippel, Hawkins, & Narayan, 1994). Targets with higher novelty are likely to activate more associated elements in their memory that suggest novelty is advantageous and approachable. Hence, when encountering a target with a higher level of normative novelty, they are likely to "see" greater novelty than those having lower promotion focus. Because novelty is the primary component of creativity, the perception of creativity follows the same theoretical logic as the perception of novelty.

Hypothesis 2a (H2a): Promotion focus moderates the positive relation between a target idea's normative level of novelty and perceivers' novelty ratings: the positive relation is stronger when the perceivers score higher than lower on promotion focus.

Hypothesis 2b (H2b): Promotion focus moderates the positive relation between a target idea's normative level of creativity and perceivers' creativity ratings: the positive relation is stronger when the perceivers score higher than lower on promotion focus.

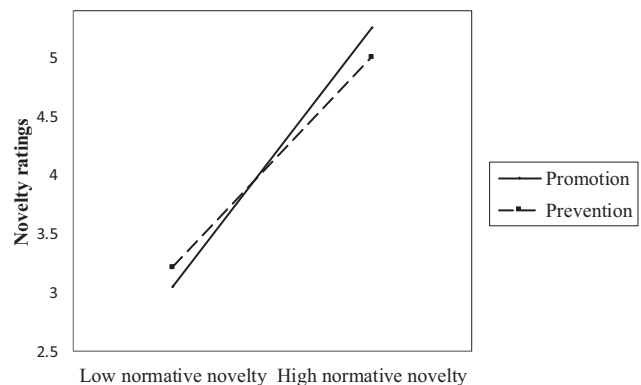


Figure 2. Study 1: Cross-level interaction plot (circle pictures).

By contrast, individuals with higher levels of prevention focus are more risk averse and less inclined to seek novelty than those with lower levels of this trait. The tendency often leads them to avoid new things. The lack of cumulative experiences of pursuing new things leads them to attach fewer positive attributes to novelty and store fewer positive associations with novelty in their memory. When encountering a normatively higher novelty target, perceivers with higher prevention focus activate less associated elements that suggest novelty is positive in the memory than those with lower prevention focus. Thus, they are likely to “see” less novelty in the target than those with lower prevention focus. Following the same theoretical logic, their creativity perception has the same pattern.

Hypothesis 3a (H3a): Prevention focus moderates the positive relation between a target idea’s normative level of novelty and perceivers’ novelty ratings: the positive relation is weaker when the perceivers score higher than lower on prevention focus.

Hypothesis 3b (H3b): Prevention focus moderates the positive relation between a target idea’s normative level of creativity and perceivers’ creativity ratings: the positive relation is weaker when the perceivers score higher than lower on prevention focus.

The secondary element in creativity is usefulness. According to the creativity literature, “useful” means practical, feasible, and implementable for a given context (e.g., Amabile, 1996; Oldham & Cummings, 1996; Sullivan & Ford, 2010); the novelty and usefulness dimensions are orthogonal (e.g., Litchfield, 2008), therefore they need to be investigated separately because factors influencing novelty are often not the factors that influence usefulness, and vice versa (e.g., Montag et al., 2012; Yuan & Zhou, 2008). Because novelty is the primary component of creativity, how novelty recognition is shaped should be understood first (e.g., Diedrich et al., 2015; Ford & Sullivan, 2004). We relied on the associative evaluation account to select factors that are particularly relevant for influencing novelty perception. Because novelty is the primary component of creativity, these factors are also theorized to influence creativity perception. What influences novelty and creativity perceptions may not influence usefulness perception. In fact, a recent study found that in the workplace, the usefulness of any product or idea is dynamic and readily manipulated and changed by an employee, sometimes autonomously and sometimes directed by managers (Sonenshein, 2014). This dynamic nature suggests that usefulness perception is complex, and to a degree, its complexity reflects the fact that whether a target is useful is contingent upon situational demands and often takes time, considerable mental energy, and experimentation to figure out. Thus, in an exploratory vein and to spark future research into usefulness perception, we present research questions instead of formal hypotheses:

Research question 1: Does promotion focus moderate the positive relation between a target ideas’ normative level of usefulness and perceivers’ usefulness ratings?

Research question 2: Does prevention focus moderate the positive relation between a target ideas’ normative level of usefulness and perceivers’ usefulness ratings?

Study 2: Method

Sample and procedures. We ran Study 2 in a production unit at a Fortune 500 company in the power and automation technology industry. The unit has a system in which the employees submit suggestions regarding products, processes, and other work-related improvements. We took two steps to collect data. First, using a panel of expert judges (two managers and three senior engineers; all men, mean age = 31.7 years, mean company tenure = 6.8 years, mean job tenure = 5.5 years) in this company, we developed normative levels of novelty, creativity, and usefulness for the suggestions. We follow the creativity literature and refer to them as expert judges because they were subject matter experts who were appropriate for evaluating the extent to which the suggestions from employees were novel, useful, and creative. The suggestions proposed by the employees were related to production, testing, quality control, and management aspects of the business. They were context specific, which, according to the creativity literature need to be evaluated by experts who are familiar with the specific domain (Amabile, 1996; Hennessey & Amabile, 2010). The expert judges were selected because they were very familiar with the business and production processes and have the expertise and knowledge in the domain to evaluate the suggestions. In fact, they were the people tasked with evaluating suggestions proposed by employees at the company. Two to three expert judges are usually sufficient (e.g., Zhou & Shalley, 2003). We used five to ensure robustness of the ratings.

We asked the expert judges to rate, on a scale from 1 (*extremely low*) to 7 (*extremely high*), the “novelty,” “originality,” “usefulness,” and “feasibility” of each of the 40 suggestions submitted to the suggestion system from January to June 2015. We calculated the interrater reliability and agreement among the five expert judges. Mean average deviation (AD) index = 0.75 for novelty ratings, ICC1 = .38, and ICC2 = .75. Mean AD index = 0.51 for creativity ratings, ICC1 = .39, and ICC2 = .76. Mean AD index = 0.67 for usefulness ratings, ICC1 = .18, and ICC2 = .68. All AD indices are less than 1.20 for 7-point scales, supporting the aggregation of ratings across the five expert judges² (LeBreton & Senter, 2008). We averaged the ratings to generate the normative score of novelty, creativity, and usefulness for each of the suggestions (Amabile, 1996). Because the second step of data collection involved all employees in this unit at work, we needed to limit the number of suggestions to evaluate so as not to take too much time away from their work. We selected 10 suggestions, including 3 with high novelty means (mean > 4.10), 4 with medium (2.81 < mean < 4.10), and 3 with low means (mean < 2.81) to be used at the second step of data collection. The mean novelty rating score = 3.64 and *SD* = 0.88.

Second, all 63 employees (51 men, 10 women, 2 did not report gender; mean age = 26 years) in this unit were invited to fill out a survey. Participation was voluntary, and their responses were strictly confidential. The survey had measures of regulatory foci, demographics, and other control variables. Next, they independently rated the 10 suggestions. We received 51 completed and usable surveys for a response rate of 81%. There were no statistically significant differences between the five expert judges’ promotion focus (*M* = 5.37, *SD* = 0.94) and the employees’ (*M* = 5.20, *SD* = 0.74), *t* = 0.48, *p* = .63, and between their prevention

focus ($M = 4.78$, $SD = 0.73$) and the employees' ($M = 5.11$, $SD = 0.82$), $t = 0.86$, $p = .39$.

Measures.

Prevention and promotion foci. We used Lockwood and colleagues' (2002) promotion- and prevention-focus scales. On a scale from 1 (*not at all true of me*) to 7 (*very true of me*), the employees indicated the extent to which each statement was true. Sample items for the promotion-focus ($\alpha = .78$) and the prevention-focus scales ($\alpha = .72$) were "Overall, I am more oriented toward achieving success than preventing failure" and "In general, I am focused on preventing negative events in my life," respectively.

Perceptions of novelty, creativity, and usefulness. On a scale from 1 (*extremely low*) to 7 (*extremely high*), participants rated the "novelty," "originality," "usefulness," and "feasibility" of each suggestion. We averaged their responses to create a creativity index ($\alpha = .94$), responses to "novelty" and "originality" to create a novelty index ($\alpha = .93$), and responses to "usefulness" and "feasibility" to create a usefulness index ($\alpha = .94$).

Control variables. Age may be related to one's life experiences with novelty and creativity. Thus, according to the associative evaluation perspective, it may influence novelty and creativity perception. Gender, risk-taking, and openness to experience may also influence creativity perception (Kaufman, Niu, Sexton, & Cole, 2010; Silvia, 2008; Sitkin & Pablo, 1992). To partial out their potential effects, we controlled for them in the analyses. Risk taking was measured by Westaby and Lowe's (2005) four-item scale ($\alpha = .80$). Openness to experience was measured by McCrae and Costa's (1987) 13-item scale ($\alpha = .85$). The significance test results were identical whether or not the control variables were included, indicating that they were robust.

Study 2: Results and Discussion

We again ran HLM. Novelty, creativity, and usefulness perceptions were at Level 1 nested in Level 2 raters. We entered normative novelty (or creativity; usefulness) as the predictor at Level 1. The hypotheses predicted differential rating patterns given by raters with different regulatory foci for different normative novelty (or creativity, usefulness). Thus, we tested the interaction of the

suggestion's normative novelty (or creativity; usefulness) and rater's regulatory focus in the Level 1 model. We group-mean centered the Level 1 predictors (Aguinis et al., 2013; Mathieu et al., 2012). Table 2 has descriptive statistics. Table 3 has HLM results.

Test of hypotheses. H2a (H2b) predicted that promotion focus moderated the positive relation between normative level of novelty (creativity) and perceivers' novelty (creativity) ratings such that the positive relation was stronger when the perceivers scored higher than lower on promotion focus. H3a (H3b) predicted that prevention focus moderated the positive relation between normative level of novelty (creativity) and perceivers' novelty (creativity) ratings such that the positive relation was weaker when the perceiver scored higher than lower on prevention focus. We checked whether there was significant rating variance across raters. We estimated a null model to examine the between-rater variability of the intercept (τ_{00}) and ICC1. ICC1 represents the proportion of variance in the outcome variable that resided between raters. We found significant between-rater variation for novelty ($\tau_{00} = .65$, $p < .05$, ICC1 = .39; Table 3, Model 1), creativity ($\tau_{00} = .51$, $p < .05$, ICC1 = .44; Model 6), and usefulness ratings ($\tau_{00} = .81$, $p < .05$, ICC1 = .45; Model 11). Thus, it was appropriate to use HLM. A precondition for testing cross-level interaction is that the slopes of the relation between normative scores and ratings vary across raters. The results revealed significant variance in the Level 1 slopes for novelty (U1 variance = .13, $p < .05$), creativity (U1 variance = .12, $p < .05$), and usefulness ratings (U1 variance = .22, $p < .05$). Thus, it was appropriate to test the cross-level interactions.

For novelty ratings (Model 5), the interaction between promotion focus and normative level of novelty was significant ($\gamma = .23$, $p < .05$), supporting H2a. The interaction between prevention focus and the normative level of novelty was significant ($\gamma = -.18$, $p < .05$), supporting H3a. Figures 3 and 4 show that the patterns of the interactions are consistent with H2a and H3a, respectively. Slope difference tests showed that the positive relation for high promotion raters ($b = 0.48$, $p < .01$) was stronger than for low promotion raters ($b = 0.14$, *ns*), $z = 2.37$, $p < .05$, supporting H2a; the positive relation for low prevention raters

Table 2
Study 2 Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Normative level of creativity	4.62	0.52												
2. Normative level of novelty	3.64	0.83	.87**											
3. Normative level of usefulness	5.59	0.52	.61**	.14**										
4. Creativity ratings	4.51	1.07	.10**	.09*	.06	(.94)								
5. Novelty ratings	3.86	1.30	.15**	.21**	-.03	.80**	(.93)							
6. Usefulness ratings	5.15	1.34	.02	-.06	.12**	.82**	.32**	(.94)						
7. Age	26.12	3.80	.00	.00	.00	-.05	-.07	-.02						
8. Gender	0.84	0.37	.00	.00	.00	-.12*	-.14**	-.06	-.01					
9. Openness to experience	4.38	0.97	.00	.00	.00	.12**	.14**	.06	-.04	.09	(.85)			
10. Risk taking	3.24	1.26	.00	.00	.00	.02	.03	.00	-.27*	.08	.32*	(.80)		
11. Promotion focus	5.20	0.74	.00	.00	.00	.03	.00	.05	-.20	.31*	-.06	-.04	(.78)	
12. Prevention focus	5.11	0.82	.00	.00	.00	-.19**	-.13**	-.17**	-.04	.21	-.02	.19	.30*	(.72)

Note. Internal consistency reliability (α) estimates are on the diagonal in parentheses. Two-tailed test. N (Level 1) = 510, N (Level 2) = 51. Scores of Level 2 variables were disaggregated to the Level 1 for calculating correlations between Level 1 variables and Level 2 variables.

* $p < .05$. ** $p < .01$.

Table 3

Study 2 HLM Results for Interaction Effects of Normative Level and Regulatory Focus

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Novelty ratings	Novelty ratings	Novelty ratings	Novelty ratings	Novelty ratings	Creativity ratings	Creativity ratings	Creativity ratings	Creativity ratings	Creativity ratings	Usefulness ratings	Usefulness ratings	Usefulness ratings	Usefulness ratings	Usefulness ratings
Level 1 variables															
Intercept	3.86*** (.12)	3.86*** (.12)	3.90*** (.11)	3.92*** (.11)	3.92*** (.11)	4.51** (.10)	4.51** (.10)	4.52* (.11)	4.54** (.10)	4.54** (.10)	5.15*** (.13)	5.15*** (.13)	5.13*** (.14)	5.16*** (.13)	5.16*** (.13)
Normative level	.32*** (.07)	.32*** (.07)	.31*** (.07)	.31*** (.07)	.32*** (.07)	.21** (.08)	.22* (.08)	.22* (.08)	.22* (.08)	.23** (.08)	.32** (.10)	.32** (.10)	.36*** (.10)	.36*** (.10)	.37*** (.10)
Level 2 variables															
Age			-.01 (.03)	-.00 (.03)	-.00 (.03)			-.01 (.03)	-.00 (.03)	-.00 (.03)			-.01 (.04)	.00 (.04)	.00 (.04)
Gender			-.90* (.35)	-.80* (.35)	-.80* (.35)			-.60 (.33)	-.54 (.33)	-.54 (.33)			-.17 (.43)	-.14 (.43)	-.14 (.43)
Openness to experience			.29* (.12)	.27* (.12)	.27* (.12)			.17 (.12)	.15 (.11)	.15 (.11)			.08 (.15)	.05 (.15)	.05 (.15)
Risk taking			-.10 (.11)	-.01 (.11)	-.01 (.11)			-.03 (.10)	.03 (.10)	.03 (.10)			-.07 (.13)	.03 (.13)	.03 (.13)
Promotion focus				.24 (.17)	.14 (.17)				.20 (.16)	.22 (.16)				.30 (.20)	.27 (.20)
Prevention focus				-.34* (.16)	-.27 (.16)				-.30* (.15)	-.32* (.15)				-.38* (.19)	-.35 (.19)
Cross-level interactions															
Normative Level × Promotion					.23* (.10)					.37** (.11)					.20 (.15)
Normative Level × Prevention					-.18* (.09)					-.25* (.10)					-.16 (.14)
Variance component															
Residual σ ²	1.03	0.87	0.87	0.87	0.87	0.64	0.60	0.61	0.61	0.61	0.99	0.90	0.90	0.90	0.90
Intercept τ ₀₀	.65	.67	.56	.54	.53	.51	.51	.50	.45	.45	.81	.82	.85	.78	.78
Slope variance τ ₁₁		.13	.13	.13	.09	.14	.14	.14	.14	.06	.22	.22	.22	.22	.19
Deviance	1,685.26	1,629.96	1,515.36	1,511.00	1,504.22	1,436.50	1,419.54	1,329.66	1,325.76	1,314.34	1,678.56	1,655.74	1,536.52	1,532.04	1,529.78
Pseudo R ^{2a}		.08	.15	.16	.17	.03	.03	.03	.08	.08	.04	.04	.03	.07	.07
Slope variance explained by regulatory focus ^b					.31					.57					.14

Note. Standard errors in parentheses. Two-tailed test. N (Level 1) = 510, N (Level 2) = 51.
^a $R^2(S&B) = 1 - \frac{(\sigma^2_{full} + \tau_{00(full)})}{(\sigma^2_{null} + \tau_{00(null)})}$ ^b R_{level2} for slope = $\frac{(\tau_{11} \text{ of model 4} - \tau_{11} \text{ of model 5})}{\tau_{11} \text{ of model 4}}$
^{*} $p < .05$. ^{**} $p < .01$. ^{***} $p < .001$.

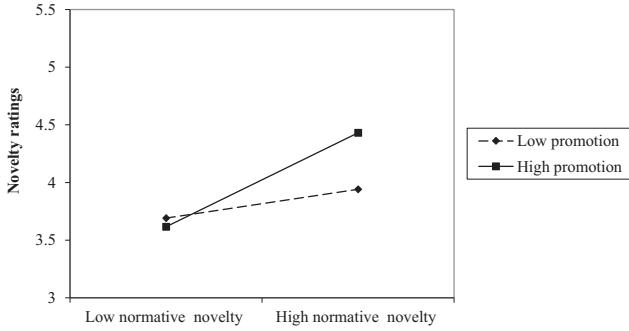


Figure 3. Study 2: Moderating effect of promotion focus on the relation between normative novelty score and novelty ratings.

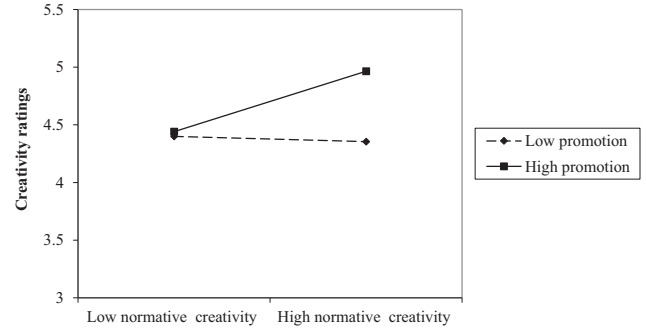


Figure 5. Study 2: Moderating effect of promotion focus on the relation between normative creativity score and creativity ratings.

($b = 0.47, p < .01$) was stronger than for high prevention raters ($b = 0.17, ns$), $z = 2.01, p < .05$, supporting H3a.

For creativity ratings (Model 10), the interaction between promotion focus and normative level of creativity was significant ($\gamma = .37, p < .01$), supporting H2b. The interaction between prevention focus and normative level of creativity was significant ($\gamma = -.25, p < .05$), supporting H3b. Figures 5 and 6 show that the patterns of the interactions are consistent with H2b and H3b, respectively. Slope difference tests showed that the positive relation for high promotion raters ($b = 0.49, p < .01$) was stronger than for low promotion raters ($b = -0.05, ns$), $z = 3.31, p < .01$, supporting H2b; the positive relation for low prevention raters ($b = 0.44, p < .01$) was stronger than for high prevention raters ($b = 0.03, ns$), $z = 2.39, p < .05$, supporting H3b.

For usefulness ratings (Model 15), neither the interaction between promotion focus and the normative level of usefulness ($\gamma = .20, p > .05$) nor the interaction between prevention focus and the normative level of usefulness ($\gamma = -.16, p > .05$) was significant.

Effect sizes. We estimated the effect sizes of multilevel models using *Pseudo R*² based on Snijders and Bosker (1994) and the effect sizes of cross-level interaction's explanatory power—the slope variance explained by the Level 2 predictors (Aguinis et al., 2013; LaHuis et al., 2014). Our model accounted for 17%, 8%, and 7% of the total variance for novelty, creativity, and usefulness ratings, respectively. The cross-level interactions accounted for 31% of the slope variance in the relation between normative novelty score and novelty ratings, 57% of the slope variance in the

relation between normative creativity score and creativity ratings, and 14% of the slope variance in the relation between normative usefulness and usefulness ratings.

Discussion. Study 2 conceptualized and measured promotion and prevention focus as two separate continuums (Higgins et al., 2001; Lockwood et al., 2002). It supported the notion that perceivers with different regulatory foci rated targets with varying levels of normative novelty differently: promotion focus moderated the positive relation between a target's normative level of novelty and perceivers' novelty ratings such that the relation was stronger when perceivers scored higher than lower on promotion focus. On the other hand, prevention focus moderated the positive relation between a target's normative level of novelty and perceivers' novelty ratings such that the relation was weaker when the perceivers scored higher than lower on prevention focus. Similar patterns of results were found for creativity, but not usefulness ratings. The results were consistent with our associative evaluation account. Together, Studies 1 and 2 showed that regulatory foci as induced psychological states or as perceivers' traits affected novelty and creativity recognition; their primary theoretical contribution was highlighting the role played by the perceivers' regulatory foci in seeing the novelty and creativity of a target.

Perceivers encounter targets in certain contexts. Do contexts affect the degree to which perceivers see the novelty and creativity of the same target? Studies 1 and 2 took a perceiver-centered approach; thus, they cannot answer this question. To shift our theoretical treatment from a perceiver-centered approach to the

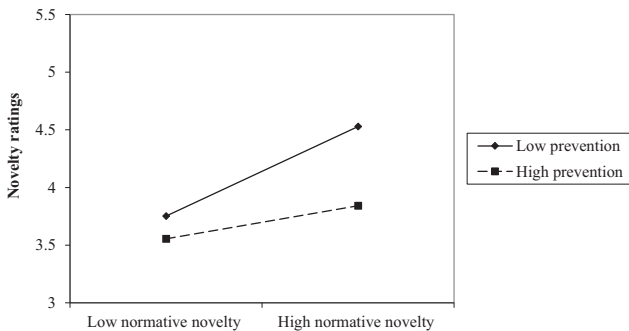


Figure 4. Study 2: Moderating effect of prevention focus on the relation between normative novelty score and novelty ratings.

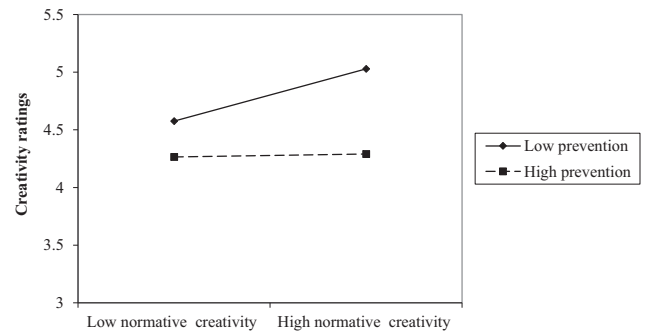


Figure 6. Study 2: Moderating effect of prevention focus on the relation between normative creativity score and creativity ratings.

context, we designed Study 3 to examine whether innovation culture as a general contextual factor affected novelty and creativity recognition.

Study 3: Influences of Innovation Culture on Perceptions of Novelty, Creativity, and Usefulness

The act of seeing how much novelty or creativity there is in a target does not happen in a vacuum; it often takes place in a context and is influenced by the context (Harvey & Kou, 2013; Mueller et al., 2014). A contextual factor essential for novelty and creativity recognition is whether organizational culture encourages creativity and innovation. Organizational culture is “a system of shared values defining what is important, and norms, defining appropriate attitudes and behaviors, that guide members’ attitudes and behaviors” (O’Reilly & Chatman, 1996, p. 160). It is prevalent in the workplace, and it has profound impact on employee perceptions because it defines what is important and appropriate in the organization.

When organizational culture encourages creativity and innovation (hereafter, “innovation culture”), it cues employees that creativity and innovation are valued and endorsed. Working in such an organization, individuals understand that new ideas are desirable because novelty or newness is a hallmark of creativity and innovation, and attitudes and behaviors that capture new ideas are encouraged. They gradually attach positive features and connotations to novelty and newness. Over time, the positive connections get stored in their memory. By contrast, when organizational culture does not encourage creativity and innovation (hereafter, “noninnovation culture”), individuals are not cued that creativity and innovation are valued and endorsed. They do not receive the signal from their organizations’ culture that new ideas are desirable and attitudes and behaviors that capture new ideas are encouraged, which leaves open the possibility that new ideas are ignored and discouraged. Compared with those in organizations with an innovation culture, they have fewer opportunities to attach positive features and connotations to novelty and newness. Over time, they have fewer such positive connections stored in their memory system.

The associative evaluation account suggests that under the different influences of innovation culture versus noninnovation culture, perceivers see the novelty and creativity of the same target to different degrees. In the innovation culture condition, the context cues that novelty and creativity are desirable. It propels the perceivers to see greater novelty in the targets high on normative novelty. This is because the context that cues novelty to be desirable, in combination with the actual presence of a normatively novel target, is likely to activate more elements in the perceivers’ memory that associate novelty with positive experiences and desirable outcomes (Tesser & Martin, 1996; Yeh & Barsalou, 2006). These positive associations will result in the perceivers “seeing” greater novelty in the target. By contrast, a noninnovation cultural does not activate as many elements in the perceivers’ memory that associate novelty with positive experiences, resulting in the perceivers “seeing” less novelty.

Thus, essentially there is an interaction between a target’s normative level of novelty and organizational culture. When the target’s normative level of novelty is high, perceivers working in organizations having innovation culture will have more positive

associations with novelty activated, resulting in their giving higher novelty ratings than perceivers working in organizations having noninnovation culture. Because novelty is the primary component of creativity, creativity perception follows the same theoretical logic as novelty perception.

Hypothesis 4a (H4a): Organizational culture moderates the positive relation between a target high on novelty and perceivers’ novelty ratings: the positive relation is stronger when innovation culture is present than when it is absent.

Hypothesis 4b (H4b): Organizational culture moderates the positive relation between a target high on creativity and perceivers’ creativity ratings: the positive relation is stronger when innovation culture is present than when it is absent.

As we elaborated in Study 2, although the theoretical logic maintains that novelty perception and creativity perception are influenced by similar factors, usefulness perception is likely influenced by different factors. Results in Study 2 were consistent with this theoretical logic. Thus, we again pose a research question instead of a formal hypothesis regarding usefulness:

Research question 3: Does organizational culture moderate the relation between a target’s normative novelty and perceivers’ usefulness ratings?

Study 3: Method

Sample and procedures. Participants were 44 HR managers (16 men, 28 women, mean age = 37 years). They evaluated six HR practices. We searched HR texts (e.g., Armstrong & Taylor, 2014; Aswathappa, 2013), annual reports from HR professional associations (e.g., Society for HRM), reports from leading consulting firms (e.g., Deloitte, Towers, Watson), and publications for practitioners (e.g., *Harvard Business Review*) to select the six practices as evaluation materials. Three practices existed before 2010 (e.g., “using CVs and interviews in employee selection”); therefore, we classified them as old practices. The other three emerged after 2010 (e.g., “using micro courses on the mobile phone platform for employee training”); therefore, we classified them as new practices.

Measures.

Innovation culture versus noninnovation culture. We obtained formal organizational culture statements from the websites of the companies in which those HR managers worked. The organizations are in various industries, including power (26.2%), manufacturing (16.7%), finance (14.3%), information technology (14.3%), real estate (9.5%), logistic (7.1%), and others (11.9%). Two coders who had work experiences and were blind to Study 3’s design and hypotheses independently coded the organizational culture statements. If the organizational culture statement contains “innovation” or “creativity,” then organizational innovation culture was coded as 1; if not, then it was coded as 0. The two coders were 95.5% in agreement; they disagreed on two organizations’ culture. Two authors discussed and solved the disagreement. Among the 44 organizations, 29 organizations’ culture were coded as innovative, and 15 organizations’ culture were coded as not innovative. We used the innovation culture coding scheme (1 = *innovative culture*, 0 = *noninnovative culture*) as the measure of the contextual variable in Study 3—innovation culture.

Perceptions of novelty, creativity, and usefulness. On a scale ranging from 1 (*extremely low*) to 7 (*extremely high*), the 44 HR managers rated the “novelty,” “originality,” “usefulness,” and “feasibility” of each of the six HR practices. We averaged responses to these four items to create an overall creativity index ($\alpha = .83$), responses to “novelty” and “originality” to create an overall novelty index ($\alpha = .89$), and responses to “usefulness” and “feasibility” to create an overall usefulness index ($\alpha = .77$).

Control variables. To partial out their potential effects, we controlled for age, gender, regulatory foci (measured by Lockwood et al.’s [2002] promotion [$\alpha = .80$] and prevention [$\alpha = .83$] focus scales), openness to experience (measured by Donnellan, Oswald, Baird, & Lucas’s [2006] scale [$\alpha = .77$]), and risk taking (measured by Zhao, Seibert, & Hills’s [2005] scale [$\alpha = .76$]). Results were identical when the controls were excluded, indicating their robustness.

Study 3: Results and Discussion

We ran HLM. The novelty, creativity, or usefulness perceptions were at Level 1 nested in Level 2 raters. We entered the HR practice newness as the predictor in Level 1. To test the hypotheses on the influences of innovation culture on novelty (or creativity, usefulness) ratings of new or old HR practices, we tested the HR practice newness by innovation culture interaction in the Level 1 model. Table 4 presents descriptive statistics. Table 5 presents HLM results.

To examine the between-rater variability of the intercept (τ_{00}) and ICC1, we first estimated a null model and found significant between-rater variance for novelty ratings ($\tau_{00} = .60, p < .05, ICC1 = .31$; Model 1), creativity ratings ($\tau_{00} = .15, p < .05, ICC1 = .18$; Model 6), and usefulness ratings ($\tau_{00} = .19, p < .05, ICC1 = .19$; Model 11). When we entered the HR practice newness variable, the results revealed significant variance in the Level 1 slopes for novelty (U1 variance = .46, $p < .05$), creativity (U1 variance = .25, $p < .05$), and usefulness ratings (U1 variance = .30, $p < .05$). The results suggested that it was appropriate to test the cross-level interactions with our data.

Test of hypotheses. H4a (H4b) predicted that organizational culture moderated the positive relation between HR practice

newness and novelty (creativity) ratings: the positive relation was stronger when innovation culture was present than when it was absent. For novelty ratings (Model 5), the interaction between newness and innovation culture was significant ($\gamma = .67, p < .05$), supporting H4a; Figure 7 shows that it is consistent with H4a. Simple slope tests showed that the positive relation was stronger for raters in the companies with innovation culture ($b = 1.34, p < .01$) than raters in the companies that did not have innovation culture ($b = 0.67, p < .01$), supporting H4a. For creativity ratings (Model 10), the interaction between newness and innovation culture was significant ($\gamma = .52, p < .05$), supporting H4b; Figure 8 shows that it is consistent with H4b. Simple slope test results showed that the positive relation was stronger for raters in the companies that had the innovation culture ($b = 0.80, p < .05$) than raters in the companies that did not ($b = 0.29, ns$), supporting H4b. For usefulness ratings (Model 15), the newness-by-innovation culture interaction was not significant ($\gamma = .41, p > .05$).

Effect sizes. We used the same procedure as Studies 1 and 2 to estimate effect sizes. Our model accounted for 28%, 25%, and 6% of the total variance for novelty, creativity, and usefulness ratings, respectively. The cross-level interactions accounted for 24% of the slope variance in the relation between HR practice newness and novelty ratings, 23% of the slope variance in the relation between HR practice newness and creativity ratings, and 10% of the slope variance in the relation between HR practice newness and usefulness ratings.

Discussion. Study 3 found that innovation culture influenced novelty and creativity perception. HR managers from companies that had innovation culture gave new HR practices higher novelty and creativity ratings than the ratings given by those from companies that did not have innovation culture. Study 3 contributed to the associative evaluation perspective by showing contextual influences on novelty and creativity perception, whereas Studies 1 and 2 showed the effects of personal factors. However, Studies 1, 2, and 3 focused on either the perceivers’ personal factors or the context, but not their interaction. Study 4 extended them by examining the interactions of personal and contextual factors on novelty and creativity recognition.

Table 4
Study 3 Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. HR practice newness	0.50	0.50										
2. Creativity ratings	4.48	0.91	.34**	(.83)								
3. Novelty ratings	3.70	1.40	.40**	.83**	(.89)							
4. Usefulness ratings	5.23	0.99	.06	.65**	.11	(.77)						
5. Age	37.16	5.47	.00	.07	.05	.09						
6. Gender	0.36	0.48	-.00	.01	.06	-.04	.08					
7. Promotion	5.57	0.64	.00	-.05	-.09	.04	.17	-.15	(.80)			
8. Prevention	3.81	0.96	.00	.08	.17*	-.10	-.13	-.12	.03	(.83)		
9. Openness to experience	4.59	1.03	.00	.06	.17*	-.16*	-.17	-.06	.16	.29	(.77)	
10. Risk taking	4.37	0.99	.00	-.01	.06	-.05	-.01	-.15	.49**	.27	.34*	(.76)
11. Organizational innovation culture	0.66	0.47	-.00	.10	.15*	-.03	.02	-.14	.03	.08	-.02	-.15

Note. Internal consistency reliability (α) estimates are on the diagonal in parentheses. Two-tailed test. N (Level 1) = 264, N (Level 2) = 44. Scores of Level 2 variables were disaggregated to the Level 1 for calculating correlations between Level 1 variables and Level 2 variables.

* $p < .05$. ** $p < .01$.

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Table 5
Study 3 HLM Results for Interaction Effects of HR Practice Newness and Innovation Culture

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Novelty ratings	Novelty ratings	Novelty ratings	Novelty ratings	Novelty ratings	Creativity ratings	Creativity ratings	Creativity ratings	Creativity ratings	Creativity ratings	Usefulness ratings	Usefulness ratings	Usefulness ratings	Usefulness ratings	Usefulness ratings
Level 1 variables															
Intercept	3.71*** (.14)	3.16*** (.16)	3.13*** (.14)	2.85*** (.14)	3.07*** (.24)	4.49** (.08)	4.18** (.09)	4.15** (.08)	4.08** (.13)	4.22** (.14)	5.24*** (.09)	5.18*** (.11)	5.15*** (.11)	5.21*** (.16)	5.34*** (.18)
HR practice newness		1.09*** (.15)	1.10*** (.16)	1.10*** (.16)	.67** (.25)		.61** (.11)	.62** (.12)	.62** (.12)	.29 (.19)		.12 (.13)	.13 (.13)	.13 (.13)	-.13 (.22)
Level 2 variable															
Age			.03 (.02)	.03 (.02)	.03 (.02)			.02 (.01)	.02 (.01)	.02 (.01)			.01 (.02)	.01 (.02)	.01 (.02)
Gender			.07 (.26)	.01 (.26)	.01 (.26)			-.04 (.15)	-.05 (.15)	-.05 (.15)			-.12 (.17)	-.10 (.18)	-.10 (.18)
Promotion focus			-.34 (.22)	-.38 (.22)	-.38 (.22)			-.09 (.13)	-.10 (.13)	-.10 (.13)			.11 (.15)	.12 (.15)	.12 (.15)
Prevention focus			.19 (.14)	.17 (.14)	.17 (.13)			.08 (.08)	.08 (.08)	.08 (.08)			-.05 (.09)	-.04 (.09)	-.04 (.09)
Openness to experience			.22 (.13)	.21 (.13)	.21 (.13)			.06 (.07)	.06 (.07)	.06 (.07)			-.14 (.09)	-.14 (.09)	-.14 (.09)
Risk-taking			.06 (.16)	.11 (.16)	.11 (.16)			.00 (.09)	.01 (.09)	.01 (.09)			-.01 (.10)	-.02 (.10)	-.02 (.10)
Innovation culture			.42 (.26)	.42 (.26)	.08 (.30)			.11 (.15)	.11 (.15)	-.10 (.18)			-.09 (.18)	-.09 (.18)	-.29 (.22)
Cross-level interaction															
HR Practice Newness × Innovation Culture					.67* (.31)					.52* (.23)					.41 (.28)
Variance component															
Residual σ^2	1.35	0.87	0.87	0.87	0.87	0.68	0.49	0.49	0.49	0.49	0.80	0.70	0.70	0.70	0.70
Intercept τ_{00}	.60	.84	.54	.54	.54	.15	.21	.14	.14	.13	.19	.33	.25	.24	.23
Slope variance τ_{11}		.46	.46	.46	.35		.26	.26	.26	.20	.30	.30	.30	.30	.27
Deviance	861.50	788.22	763.40	761.08	756.64	680.16	633.16	613.14	612.70	608.02	725.14	718.82	698.78	698.56	696.42
Pseudo R^2 ^a		.12	.28	.28	.28		.16	.24	.24	.25		.00	.04	.05	.06
Slope variance explained by innovation culture ^b					.24					.23					.10

Note. Standard errors in parentheses. Two-tailed test. N (Level 1) = 264, N (Level 2) = 44.
^a $R^2(S\&B) = 1 - \frac{(\sigma^2_{full} + \tau_{00}/full)}{(\sigma^2_{null} + \tau_{00}/null)}$.
^b R_{Level2} for slope = $\frac{\tau_{11} \text{ of model 4} - \tau_{11} \text{ of model 5}}{\tau_{11} \text{ of model 4}}$.

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

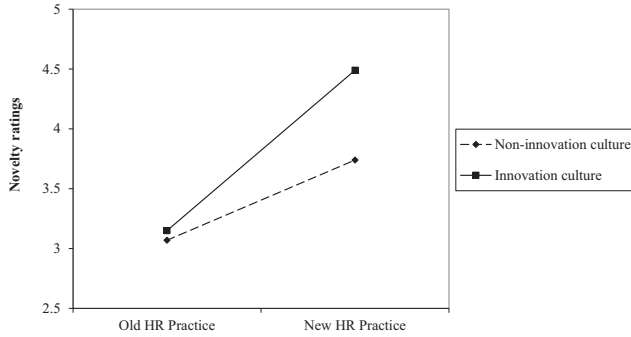


Figure 7. Study 3: Cross-level interaction plot for novelty ratings.

Study 4: Interactive Effects of Induced Regulatory Focus and Goal Framing on Perceptions of Novelty, Creativity, and Usefulness

Study 4 aimed to further contribute to the associate evaluation perspective of novelty recognition by examining effects of the interaction between regulatory focus as the perceiver factor and goal framing as the contextual factor. Goal framing is a more specific contextual factor than the innovation culture examined in Study 3 because innovation culture suggested general norms and beliefs about whether innovation is desired and encouraged whereas goal framing specifically states whether the purpose of generating the ideas being evaluated was to achieve a gain or to avoid a loss. Furthermore, goal framing is a contextual factor synergic with perceivers' regulatory focus. Perceivers in a promotion focus pursue achievements, and the gain-framing condition emphasizes getting positive outcomes. In contrast, perceivers in a prevention focus seek safety, and the loss-framing condition emphasizes avoiding negative outcomes.

Our theory posits that the novelty-relevant characteristic of the perceiver and the context jointly affect novelty recognition. When perceivers with promotion focus encounter a target with higher normative novelty in a gain-framing context, the end-states of achievements and flourishing fit well with the gain-framing context. The fit leads them to reinforce each other—promotion focus activates positive elements associated with novelty that are linked to promotion focus and its approach orientation; the gain-framing context activates positive elements associated with novelty and reflect gains; and the positive elements in memory connect with one another, affirm each other, and spread to activate even more positive associations. The interactive effects will lead to even more positive elements associated with novelty being activated in the memory, especially when the target has a higher normative level of novelty.

By contrast, prevention focus desires the end-states of security and safety and favors avoidance orientation, which runs counter to novelty because novel endeavors are risky and uncertain (Zhou & George, 2001). Thus, prevention focus activates few positive elements associated with novelty from memory. By highlighting the need to avoid losses, the loss-framing context fits well with prevention focus. This fit leads prevention focus and loss framing to reinforce each other in terms of not activating many positive elements and even activating negative elements associated with novelty, especially when the target has a higher normative level of

novelty. These interactive effects will lead to even less positive elements being activated; consequently, the perceivers will perceive less novelty in the target.

Hypothesis 5 (H5): There is a three-way interaction among normative level of novelty, regulatory focus, and goal framing such that

H5a: For perceivers with promotion focus, the positive relation between normative level of novelty and novelty ratings is strengthened in the gain-framing condition versus the loss-framing condition.

H5b: For perceivers with prevention focus, the positive relation between normative level of novelty and novelty ratings is weakened in the loss-framing condition versus the gain-framing condition.

As stated in Studies 2 and 3, because novelty is the primary component of creativity, creativity perception follows the same theoretical logic as novelty perception. This reasoning was supported by results obtained in Studies 2 and 3. Thus, we make similar predictions regarding creativity perception:

Hypothesis 6 (H6): There is a three-way interaction among normative level of creativity, regulatory focus, and goal framing such that

H6a: For perceivers with promotion focus, the positive relation between normative level of creativity and creativity ratings is strengthened in the gain-framing condition versus the loss-framing condition.

H6b: For perceivers with prevention focus, the positive relation between normative level of creativity and creativity ratings is weakened in the loss-framing condition versus the gain-framing condition.

As we elaborated in Study 2 and as the results from Studies 2 and 3 showed, although the theoretical logic posits that novelty and creativity perceptions are influenced by the same factors in similar ways, usefulness perception is influenced by different factors. Thus, we again ask a research question instead of presenting a formal hypothesis regarding usefulness perception:

Research question 4: Is there a three-way interaction effect among normative level of usefulness, regulatory focus, and goal framing on usefulness ratings?

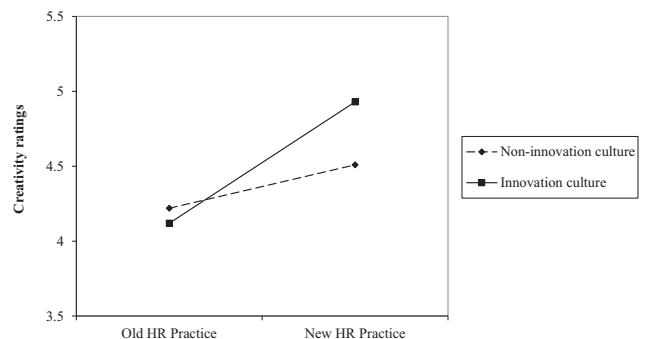


Figure 8. Study 3: Cross-level interaction plot for creativity ratings.

Study 4: Method

Participants and design. One hundred and twenty undergraduates (48 men, 72 women; mean age = 19.5 years) participated to earn extra credit for a management course. The experiment used a 2 (regulatory focus: promotion vs. prevention) \times 2 (goal framing: gain vs. loss) between-participant design.

Pilot studies of experimental materials. For ecological validity, we developed a new task for Study 4—rating the novelty, creativity, and usefulness of suggestions on how to improve teaching quality at a business school. Similar tasks were used in the literature (Bechtoldt, De Dreu, Nijstad, & Choi, 2010; De Dreu, Baas, & Nijstad, 2008). We ran two pilot studies to generate suggestions and then to obtain the normative scores for the suggestions, respectively.

In the first pilot, 101 participants (46 men, 52 women, 3 unknown) generated 432 unique suggestions. Three coauthors independently coded them and then discussed and solved disagreements. Next, they sorted each nonredundant suggestion into one of six categories: (a) improving instructional facilities, (b) improving student quality (e.g., selecting better students), (c) improving teaching methods, (d) improving the management of professors (e.g., teaching evaluations, selection, and training), (e) improving the management of the school (e.g., reducing bureaucratic barriers, building connections with companies), and (f) others. We discussed and selected 46 representative suggestions. They represented different categories and had varying frequencies. The mean frequency was 3.39 ($SD = 3.29$, min = 1, max = 12).

In the second pilot, 157 nonoverlapping participants (67 men, 85 women, 5 unknown) rated, on a scale from 1 (*extremely low*) to 7 (*extremely high*), the “novelty,” “originality,” “usefulness,” and “feasibility” of each of the suggestions. We calculated the interrater reliability and agreement among the 157 raters for the 46 suggestions. The mean AD index = 1.14 for novelty ratings, ICC1 = .11, and ICC2 = .95; the mean AD = 0.88 for creativity ratings, ICC1 = .07, and ICC2 = .93; the mean AD = 0.99 for usefulness ratings, ICC1 = .07, and ICC2 = .92. All AD indices were less than 1.20 for 7-point scales (LeBreton & Senter, 2008). We average the ratings to get the normative scores for novelty, creativity, and usefulness.

Because it would be overwhelming for the participants in the main Study 4 to rate all 46 suggestions, we chose 19 suggestions to be used in the main Study 4. We chose 4 with high (mean > 4.00), 5 with low (mean < 3.50), and 10 with medium novelty

means ($3.50 < \text{mean} < 4.00$). Their mean rating of novelty = 3.79 and $SD = 0.48$.

Procedure. The participants were told that the study had various unrelated tasks combined for convenience. The first task was for manipulating regulatory foci (i.e., the cheese-or-owl maze task; Friedman & Förster, 2001). Participants received either the cheese (promotion focus) or the owl (prevention focus) version of the maze task. The second task asked the participants to rate the novelty, usefulness, and creativity of the 19 suggestions in either the gain-framing or the loss-framing condition. Those in the gain-framing condition were told that the suggestions were proposed to enhance teaching quality whereas those in the loss-framing condition were told that the suggestions were proposed to prevent the teaching quality from decreasing. The suggestions used in both conditions were identical. After completing the ratings, the participants filled out a survey with demographic and awareness check questions. No one mentioned that the maze task or goal framing might affect the ratings. Two persons did not complete the maze task and their data were not usable. In all, 118 participants provided complete and usable data.

Perceptions of novelty, creativity, and usefulness. On a scale ranging from 1 (*extremely low*) to 7 (*extremely high*), the participants rated the “novelty,” “originality,” “usefulness,” and “feasibility” of each of the 19 suggestions. We averaged their responses to these four items to create an overall creativity index ($\alpha = .96$), their responses to “novelty” and “originality” to create an overall novelty index ($\alpha = .96$), and their responses to “usefulness” and “feasibility” to create an overall usefulness index ($\alpha = .94$).

Study 4: Results

We ran HLM. Novelty (or creativity, usefulness) rating scores constituted the Level 1 cases nested within Level 2 raters. We entered the relevant normative score as the predictor in Level 1. To examine the effect of regulatory focus and goal framing on novelty (or creativity, usefulness) ratings for ideas with varying normative levels of novelty (or creativity, usefulness), we tested the regulatory focus by goal framing by normative level three-way interaction in the Level 1 model. Table 6 presents descriptive statistics. Table 7 presents HLM results.

To check whether there was significant rating variance across raters, we estimated a null model to examine the between-rater variability of the intercept (τ_{00}) and ICC1. We found significant between-rater variance for novelty ($\tau_{00} = .73$, $p < .05$, ICC1 =

Table 6
Study 4 Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Normative level of creativity	4.47	0.27								
2. Normative level of novelty	3.79	0.46	.69**							
3. Normative level of usefulness	5.14	0.40	.54**	-.24**						
4. Regulatory focus	0.50	0.50	.00	.00	.00					
5. Goal framing	0.52	0.50	.00	.00	.00	-.02				
6. Creativity ratings	4.55	1.10	.26**	.25**	.06	.08**	.06**	(.96)		
7. Novelty ratings	3.94	1.50	.24**	.38**	-.11**	.02	.05*	.83**	(.96)	
8. Usefulness ratings	5.17	1.28	.16**	-.01	.23**	.11**	.05*	.75**	.26**	(.94)

Note. Internal consistency reliability (α) estimates are on the diagonal in parentheses. Two-tailed test.

* $p < .05$. ** $p < .01$.

Table 7
Study 4 HLM Results for Interaction Effects of Normative Level, Regulatory Focus, and Goal Framing

Variables	(1) Novelty ratings	(2) Novelty ratings	(3) Novelty ratings	(4) Novelty ratings	(5) Creativity ratings	(6) Creativity ratings	(7) Creativity ratings	(8) Creativity ratings	(9) Usefulness ratings	(10) Usefulness ratings	(11) Usefulness ratings	(12) Usefulness ratings
Intercept	3.94*** (.08)	3.83*** (.15)	3.92*** (.17)	3.92*** (.17)	4.55*** (.06)	4.40*** (.11)	4.41*** (.13)	4.38*** (.13)	5.17*** (.07)	4.95*** (.12)	4.83*** (.14)	4.84*** (.14)
Normative level	1.23*** (.07)	1.14*** (.12)	1.14*** (.12)	.99*** (.14)		1.09*** (.07)	1.04*** (.13)	.88*** (.15)		.74*** (.06)	.67*** (.11)	.60*** (.13)
Regulatory focus		.07 (.17)	-.12 (.24)	-.11 (.24)		.20 (.12)	.14 (.18)	.20 (.18)		.28* (.14)	.53** (.20)	.50* (.20)
0 = prevention												
1 = promotion												
Goal framing		.14 (.17)	-.04 (.23)	-.03 (.23)		.10 (.12)	.09 (.17)	.15 (.18)		.17 (.14)	.38* (.19)	.36 (.19)
0 = loss framing												
1 = gain framing												
Normative Level × Regulatory Focus			.09 (.14)	.39 (.19)			-.09 (.15)	.22 (.21)			-.01 (.12)	.15 (.18)
Regulatory Focus × Goal Framing			.37 (.33)	.34 (.33)			.09 (.24)	-.03 (.25)			-.47 (.27)	-.42 (.27)
Normative Level × Goal Framing			.08 (.14)	.37 (.19)			.18 (.15)	.48* (.20)			.13 (.12)	.27 (.17)
Normative Level × Regulatory Focus × Goal Framing				-.57* (.27)				-.60* (.29)				-.30 (.24)
Variance component												
Residual σ^2	1.51	1.11	1.11	1.11	0.79	0.69	0.69	0.69	1.13	1.02	1.02	1.02
Intercept τ_{00}	.73	.75	.74	.74	.43	.42	.42	.42	.52	.50	.49	.49
Slope τ_{11}		.29	.29	.27		.13	.12	.10		.09	.09	.09
Deviance	7.555.16	6.978.42	6.976.44	6.972.12	3.054.02	2.921.68	2.920.68	2.818.56	7.000.98	6.809.70	6.805.52	6.804.00
Pseudo R^2 ^a		.17	.17	.17		.09	.09	.09		.08	.08	.08
Slope variance explained by regulatory focus and framing ^b				.07				.17				.00

Note. Standard errors in parentheses. N (Level 1) = 2,240, N (Level 2) = 118.

^a $R^2(S&B) = 1 - \frac{(\sigma^2_{full} + \tau_{00full})}{(\tau_{11} \text{ of model 3} - \tau_{11} \text{ of model 4})}$.

^b R^2_{Level2} for slope = $\frac{\tau_{11} \text{ of model 4}}{\tau_{11} \text{ of model 3}}$.

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

.33; Model 1), creativity ($\tau_{00} = .43, p < .01, ICC1 = .35$; Model 5), and usefulness ratings ($\tau_{00} = .52, p < .05, ICC1 = .32$; Model 9). Thus, it was appropriate to use HLM. A precondition for testing cross-level interaction is that the slopes of the relation between normative scores and ratings vary across raters. The results revealed significant variance in the Level 1 slopes for novelty (U1 variance = .29, $p < .05$), creativity (U1 variance = .13, $p < .05$), and usefulness ratings (U1 variance = .09, $p < .05$). Thus, it was appropriate to test the cross-level interactions with our data.

Test of hypotheses. H5 predicted that there was a three-way interaction among normative level of novelty, promotion focus, and goal framing such that (H5a) for perceivers with promotion focus, the positive relation between normative level of novelty and novelty ratings was strengthened in the gain-framing condition versus the loss-framing condition; (H5b) for perceivers with prevention focus, the positive relation between normative level of novelty and novelty ratings was weakened in the loss-framing condition versus the gain-framing condition.

Table 7, Model 4, shows that the hypothesized three-way interaction was significant ($\gamma = -.57, p < .05$). The top plot in Figure 9 shows the interaction for H5a, which is not consistent with H5a. Simple slope tests showed that for raters with promotion focus, the relation between normative level of novelty and novelty ratings was significantly positive in the gain-framing ($b = 1.17, p < .05$)

and the loss-framing ($b = 1.37, p < .05$) conditions. Slope difference tests showed that there was no significant slope difference between the gain-framing and the loss-framing conditions, $z = 1.05, ns$. H5a was not supported.

The bottom plot in Figure 9 shows the interaction for H5b. Simple slope tests showed that for perceivers with prevention focus, the relation between normative level of novelty and novelty ratings was significantly positive for the gain-framing ($b = 1.35, p < .05$) and the loss-framing ($b = 0.99, p < .05$) conditions. Slope difference tests showed significant slope difference between the gain-framing and loss-framing conditions, $z = 1.97, p < .05$, indicating that the relation between normative level of novelty and novelty ratings was weaker in the loss-framing than the gain-framing condition, thereby supporting H5b.

H6 predicted a three-way interaction among normative level of creativity, regulatory focus, and goal framing such that (H6a) for perceivers with promotion focus, the positive relation between normative level of creativity and creativity ratings was strengthened in the gain-framing condition versus the loss-framing condition; (H6b) for perceivers with prevention focus, the positive relation between normative level of creativity and creativity ratings was weakened in the loss-framing condition versus the gain-framing condition.

Table 7, Model 8, shows that the hypothesized three-way interaction was significant ($\gamma = -.60, p < .05$). The top plot in Figure 10 shows the interaction for H6a, which is not consistent with H6a. Simple slope tests showed that for raters with promotion focus, the relation between normative level of creativity and creativity ratings was significantly positive in the gain-framing ($b = 0.98, p < .05$) and loss-framing ($b = 1.10, p < .05$) conditions. Slope difference tests showed no significant slope difference between the gain-framing and the loss-framing conditions, $z = 0.60, ns$. Thus, H6a was not supported.

The bottom plot in Figure 10 shows the interaction for H6b. Simple slope tests showed that for perceivers with prevention focus, the relation between normative level of creativity and creativity ratings was significantly positive for the gain-framing ($b = 1.36, p < .05$) and loss-framing ($b = 0.88, p < .05$) conditions. Slope difference tests showed that there was a significant slope difference between the gain-framing and loss-framing conditions, $z = 2.34, p < .05$, indicating that the relation between normative level of creativity and creativity ratings was weaker in the loss-framing than the gain-framing condition, thereby supporting H6b.

For usefulness ratings, as Table 7 (Model 12) shows that the interaction between promotion focus and the normative level of usefulness was not significant, $\gamma = -.30, ns$.

Effect sizes. Our model accounted for 17%, 9%, and 8% of the total variance for novelty, creativity, and usefulness ratings, respectively. The cross-level interactions accounted for 7% of the slope variance in the relation between normative novelty and novelty ratings, 17% of the slope variance in the relation between normative creativity and creativity ratings, and none of the slope variance in the relation between normative usefulness and usefulness ratings.

General Discussion

We conducted a programmatic set of laboratory or field studies. Each later study conceptually and methodologically built on and

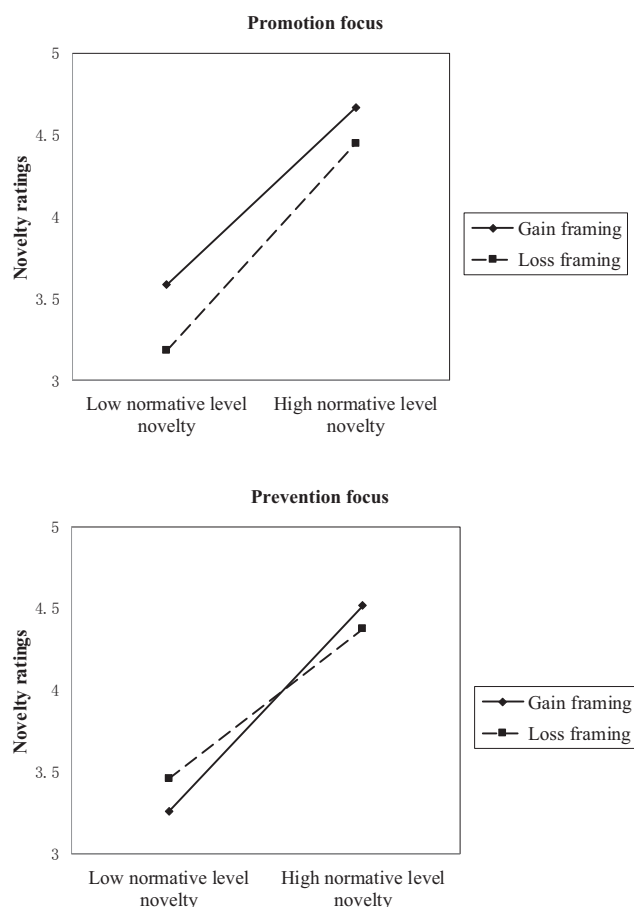


Figure 9. Study 4: Cross-level interaction plots for novelty ratings.

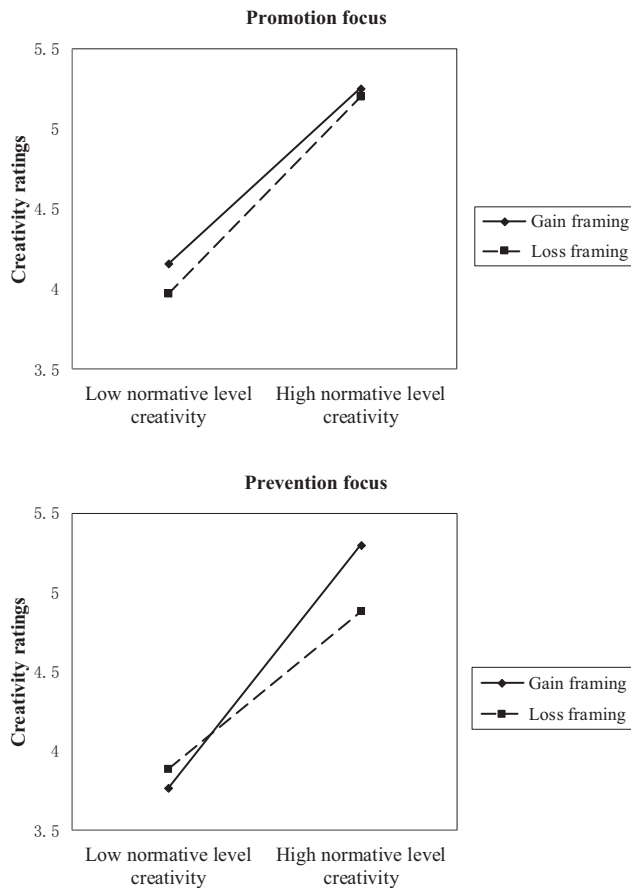


Figure 10. Study 4: Cross-level interaction plots for creativity ratings.

extended the prior study. Studies 1 and 2 showed that a central personal factor—regulatory focus, either as induced states or as traits—affected novelty and creativity perception. We found between-person variation in the novelty and creativity ratings of the same target, showing that it was a function of the individuals' state or trait regulatory focus. Study 3 examined the impact of a contextual factor fundamentally related to novelty—whether the organization had innovation or noninnovation culture—on novelty and creativity recognition. Study 4 found person (regulatory focus) by context (gain or loss goal framing) interaction effects on novelty and creativity recognition. Most results were consistent with the theorizing that novelty and creativity recognition is an associative evaluation process, which is influenced by the perceiver and the context in which the perceivers work.

Theoretical Implications

A key contribution is that we developed the associative evaluation perspective for understanding novelty and creativity recognition and used it to systematically examine the variation in novelty and creativity recognition among perceivers who had different regulatory foci and were exposed to different contexts. Novelty may be associated with positive or negative information in memory. Perceivers' personal factors and contextual cues influence which of these associations are activated and the magnitude of positive associations activated. Thus,

associative evaluation is dependent on person and context (Gawronski & Bodenhausen, 2011).

Our associative evaluation perspective and the supportive results highlight the motivated and context-dependent nature of novelty and creativity recognition. Regulatory foci are essential in individuals' goal pursuit and are proximal and fundamental in influencing work-related outcomes (Lanaj et al., 2012). Even so, few studies focused on how regulatory foci influenced novelty and creativity recognition. Our studies suggest that promotion-focus motivated individuals to perceive more novelty and creativity in targets with greater normative novelty and creativity, respectively, than prevention focus; furthermore, individuals scoring higher on promotion focus perceived more novelty and creativity in targets with greater normative novelty and creativity, respectively, than individuals scoring lower on promotion focus, whereas individuals scoring higher on prevention focus perceived less novelty and creativity in targets with greater novelty and creativity than individuals scoring lower on prevention focus. Thus, our research contributes to the regulatory foci literature by examining novelty and creativity recognition as unique criterion variables. It is important to note that the results were obtained via a mixed-method research design—an experiment establishing internal validity and a field study using employees and workplace rating materials, increasing external validity. Our results also showed the context-dependent nature of novelty and creativity recognition. In a context that encouraged innovation, individuals saw greater novelty or creativity than in a context that did not have such a culture.

Turning to the interaction effects between regulatory foci and the contextual cues regarding the purpose for which the ideas were generated, Study 4 did not support H5a and H6a but supported H5b and H6b. The joint condition between the contextual cues (gain vs. loss framing of the purpose of the target ideas) and the normative level of novelty or creativity exerted greater influence on perceivers with prevention focus, a personal factor not favoring novelty. An explanation is that for perceivers having promotion focus, a personal factor favoring novelty, the two-way interaction between the personal factor and the normative level of the idea's novelty or creativity may already be sufficient in activating associative elements in the memory that suggest that novelty or creativity was positive. It is for perceivers whose characteristic did not favor novelty that the unified tone of the idea's normative novelty or creativity and the contextual cues helped to activate associative elements in their memory suggesting that novelty or creativity was positive. The results suggest that the positive contextual cues (gain framing) had a diminishing-gain effect on novelty or creativity recognition for people with promotion focus and a remedy effect for people with prevention focus (see Zhou & Hoever, 2014, for a typology of the nature of interaction effects). Our results highlight the need to consider the nature of the configuration of personal and contextual variables in understanding novelty and creativity recognition.

It is interesting to note that in Studies 2, 3, and 4 in which the perceptions of novelty, usefulness, and creativity were all examined, the pattern of results for the novelty and creativity perceptions was identical whereas the personal and contextual factors had little effect on usefulness perception. We rely on the associative evaluation account to select factors that are particularly relevant for novelty (i.e., either favor or disfavor it). The factors favoring novelty (e.g., promotion focus) are theorized to activate a larger number of positive associations with novelty when perceivers

encounter ideas with greater normative novelty, which then lead the perceivers to give higher novelty ratings than under the influence of factors that disfavor it (e.g., prevention focus). Because novelty and usefulness are orthogonal from each other (e.g., Litchfield, 2008), factors that favor novelty are not factors that favor usefulness. Consequently, they will not activate many positive associations with usefulness. Indeed, our results are consistent with the theoretical analysis. This aspect of our studies extended prior work on reactions to creativity. Creativity comprises novelty and usefulness (Amabile, 1996), and they are orthogonal from each other (Ford & Gioia, 2000; Litchfield, 2008). Different sets of factors may influence novelty and usefulness perceptions (Mueller, Melwani, & Goncalo, 2012). Given these fundamental differences, and the fact that novelty drives differentiation in products and services and it is often possible to find a novel idea useful after one spends sufficient time and resources to explore it (Finke, Ward, & Smith, 1992; Schulz, 2001), our studies add value by putting the phenomenon of novelty recognition center stage.

We also built on but advanced prior work looking at whether individuals correctly picked the ideas generated by them as creative when the same ideas were considered creative by experts (Runco & Smith, 1992). Our participants rated ideas generated by others. Therefore, their ratings were not affected by what happened in the idea-generation process. By contrast, individuals' ratings of the ideas generated by themselves were likely to be affected by additional factors, including how they generated the idea, what other ideas they generated, and the amount of time and effort they spent on generating the ideas. Our studies did not have these confounding influences.

Limitations and Implications for Future Research

Novelty and creativity recognition is a nascent research area. As an early-stage inquiry in this area, our studies have limitations. First, our four studies as a set aimed at revealing the influences of person and context factors external to the target in a systematic and in-depth manner. However, an important factor internal to the target—the good or bad practicality of the target—may also influence perceptions. An idea (e.g., nanotechnology) may have good (e.g., solving medical testing problems), bad (e.g., contaminating the water supply), or good and bad uses. Given the focus of our paper, testing the influences of the good or bad practicality on ratings is beyond its scope. We call for future research to systematically examine this important topic.

Second, three-way interactions are difficult to detect. Given the mixed support for the three-way hypotheses in Study 4, future research is needed to replicate the observed three-way interaction to increase our confidence in the findings. Third, our studies were at the individual level. It is interesting to test novelty and creativity recognition at the group level. Such research may benefit from insights in a study on a related topic—how groups generated and evaluated the ideas they generated. In a qualitative study, Harvey and Kou (2013) observed that when new ideas were evaluated in a sequential, parallel, or iterative mode, groups adopted different criteria and problem frameworks. Future research may investigate how novelty and creativity recognition unfolds in groups. Last, studies may test other person and context factors (e.g., leadership) in shaping novelty and creativity perceptions and identify factors that influence usefulness perception. Are there any individual

differences that enable some perceivers to see usefulness more than others? Can managers create a context that encourages employees to see the usefulness of new ideas? We call for future research into these and other interesting questions regarding usefulness perception.

Implications for Management Practice

Our results are informative for managers. If organizations value novel ways of designing products, services, and work methods, then they should pay attention to the recognition of novel and creative ideas, not just to the generation of such ideas. Our results underscore the fact that even for ideas that have the same normative levels of novelty or creativity, perceivers with different regulatory foci may perceive them to different degrees. To fully harvest new ideas and initiatives originated from employees, organizations may assign people with promotion focus to this idea-hunting task because they are sensitive to and thus are better suited for recognizing new ideas and initiatives at an early stage. Our results also suggest that contextual cues influence spotting new ideas. When organizational culture encourages creativity and innovation, managers do better at spotting new ideas and initiatives than organizations that do not emphasize creativity and innovation. Our results further alert managers that in a context framing that the purpose of being novel or creative is to avoid loss, novel or creative ideas are less likely to be noticed, especially when the perceivers have prevention focus. On the flip side, the results suggest that contextual influences can be so powerful that in a context cuing that the purpose of being novel is to seek gain, even perceivers who do not favor novelty (e.g., prevention focus) are better able to see novelty or creativity in ideas than when they are in a context cuing that the purpose of being novel or creative is to avoid loss.

In closing, our studies' key contribution is showing significant variations in perceiving novelty and creativity in the same idea by different people in different contexts. Research has proliferated on how to foster new idea generation. We suggest that spotting novelty is the crucial first step in getting people to pay attention to the ideas already generated; it connects idea generation to implementation. Without it, ideas will not be captured and developed to add value to organizations. If managers are inadequate at spotting employees' new ideas, then the employees may feel discouraged and cease their effort at generating new ideas, and organizations will lose a valuable source for sustainable competitive advantage. Our studies provide initial evidence suggesting how organizations may encourage the recognition of novelty and creativity to fully harvest the benefit of their employees' ideas.

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Appendix

Pilot Studies for Generating Experimental Materials in Study 1

Pilot Study 1a (generating alien drawings). We collected 86 different drawings from 101 students (46 men, 52 women, 3 unknown; mean age = 21 years) working on an alien drawing task that produces drawings of varying degrees of novelty (Maddux & Galinsky, 2009; Ward, 1994). Each drawing belonged to one of five categories (i.e., such as an animal, a human, a plant, a geometric shape, or others). We chose 15 representative drawings for Pilot 1b.

Pilot Study 1b (selecting drawings based on normative levels of novelty). Novelty is independently assessed by judges. If their ratings are in agreement, then the mean ratings are used (Amabile, 1996; Shalley & Perry-Smith, 2001; Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010; Zhou & Oldham, 2001). Because of the need to obtain normative levels of novelty, we used 157 judges (79 undergraduates, 32 master's, and 46 MBAs; 85 women, 67 men, 5 unknown; mean age = 23 years). Following prior studies (Maddux & Galinsky, 2009; Ward, 1994), on a scale from 1 (*extremely low*) to 7 (*extremely high*), judges rated the extent to which the 15 drawings from Pilot 1a were novel and were similar to earth creatures with three additional items (reverse scored). We created an overall novelty score by averaging the four items ($\alpha = .90$). We assessed interrater reliability using intraclass correlations (ICCs) and interrater agreement using average deviation (AD) among the

157 raters for the 15 aliens. The widely used AD “estimates agreement in the metric of original scale of the item” (LeBreton & Senter, 2008, p. 820; see also Bashshur, Hernández, & González-Romá, 2011; Grant, 2013; Vandenbergh et al., 2007; Wong & Kwong, 2007). AD values less than 1.2 suggest high agreement for 7-point scales (Burke & Dunlap, 2002). Our mean AD index = 0.75 for all drawings, ICC1 = .34, and ICC2 = .99. To reduce the number of drawings so that the task would not be overly taxing, we chose three aliens each from the clusters of the highest means of novelty (mean > 4.70), the lowest (mean < 2.95), and medium means (3.40 < mean < 4.30), nine aliens in total ($M = 3.93$, $SD = .92$), to be used as the task materials for the main Study 1.

Pilot Studies 2a and 2b (generating and selecting circle pictures). To rigorously test H1, we used another task—rating the novelty of circle pictures. Following the similar procedure as Pilots 1a and 1b, we developed materials for the circle pictures task—24 circle pictures. A detailed description of Pilots 2a and 2b is available from the authors upon request.

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