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**FROM TRAIT AND CONTEXT TO CREATIVITY AT WORK: FEEDBACK-SEEKING  
BEHAVIOR AS A SELF-REGULATION STRATEGY FOR CREATIVE  
PERFORMANCE**

KATLEEN DE STOBBELEIR

[Katleen.DeStobbeleir@vlerick.be](mailto:Katleen.DeStobbeleir@vlerick.be)

SUSAN ASHFORD

DIRK BUYENS

[Dirk.Buyens@vlerick.be](mailto:Dirk.Buyens@vlerick.be)

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**KATLEEN DE STOBBELEIR**

Vlerick Leuven Gent Management School

**SUSAN ASHFORD**

University of Michigan

**DIRK BUYENS**

Vlerick Leuven Gent Management School

Correspondence regarding this manuscript can be addressed to [katleen.destobbeleir@vlerick.be](mailto:katleen.destobbeleir@vlerick.be)

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**Contact:**

Katleen De Stobbeleir

Vlerick Leuven Gent Management School

Tel: +32 09 210 9

Fax: +32 09 210 97 00

Email: [Katleen.DeStobbeleir@vlerick.be](mailto:Katleen.DeStobbeleir@vlerick.be)

## **ABSTRACT**

Using a sample of 456 supervisor-employee dyads from 4 organizations, this study examined how employees use feedback seeking as a self-regulation strategy to manage their creative performance. As hypothesized, employees' cognitive style and perceived organizational support for creativity affected two patterns of their feedback seeking, i.e. their tendency to inquire for feedback from various sources and their propensity to monitor their environment for indirect feedback cues. Feedback inquiry from various sources further related to supervisor ratings of employee creative performance. These results highlight the importance of studying employees' self-regulatory behaviors in the creative process and support the proposition that feedback seeking is not only a strategy that facilitates individual adaptation, but also an individual resource that can help individuals to achieve creative outcomes.

Keywords: self-regulation, feedback-seeking behavior, employee creativity, cognitive style, perceived organizational support for creativity.

## **FROM TRAIT AND CONTEXT TO CREATIVITY AT WORK: FEEDBACK-SEEKING BEHAVIOR AS A SELF-REGULATION STRATEGY FOR CREATIVE PERFORMANCE**

*“The secret to creativity is knowing how to hide your sources”*. - Albert Einstein

As the above quote by Albert Einstein highlights, creativity is far from a solitary process. Recent theory and research on employee creativity show that creative outcomes are often the result of employees' social interactions, mentoring relationships and collaborations with others (e.g. Amabile, Schatzel, Moneta, & Kramer, 2004; Ford, 1996; Perry-Smith & Shalley, 2003; Shalley, Zhou, & Oldham, 2004; Tierney & Farmer, 2004; Zhou & George, 2003). Via their interactions, employees are exposed to new perspectives, which enhances their domain-relevant knowledge and facilitates the generation of unique ideas and solutions (Perry-Smith & Shalley, 2003). Not all interactions necessarily affect creativity, however. Feedback exchanges in particular, i.e. the exchange of evaluative information about (creative) performance, impact the creative process considerably (see Zhou, 2008 for a recent review). For example, there is convergent evidence that providing task-focused developmental feedback in an informative and constructive manner stimulates employee creativity, while the delivery of negative and controlling feedback undermines employees' creative performance (e.g., Amabile, 1996; Carson & Carson, 1993; Zhou, 1998; Zhou et al., 2003).

As noted by Zhou (2008), however, studies investigating the role of feedback in the creative process have tended to focus on dyadic feedback exchanges that occur within the immediate work context of the employee (e.g., supervisor feedback), without considering the multiple sources from whom individuals receive feedback, both within and beyond their immediate job context (e.g., clients, peers in other organizations). In addition, the majority of creativity research has conceived feedback as a context factor, i.e. as information that is in essence available or not available to employees (e.g. Shalley, Zhou, & Oldham, 2004; Zhou, 1998; Zhou & George, 2003). By doing so, the literature has delineated the boundary conditions for the effective delivery of feedback on creative work, but has tended to disregard that employees actively manage their own performance by proactively seeking out feedback in many ways and from a wide variety of feedback sources (see Ashford, Blatt, & VandeWalle, 2003; VandeWalle, 2003, for recent reviews).

This self-regulation perspective, conceiving feedback as an individual resource rather than as a context factor has received little attention in the creativity literature. Also within the feedback-seeking literature, no studies have explored the role of feedback seeking in the creative process. Indeed, despite Ashford and Cummings' (1983) initial focus on employee proactivity in their conceptualization of feedback seeking, this behavior has generally been depicted as a strategy that facilitates individual adaptation (e.g., Ashford & Black, 1996; Parker & Collins, in press) rather than as an individual resource that can help individuals to achieve creative outcomes: "The general tone of feedback-seeking literature has been one of seeking to survive, to fit in, and to tailor oneself to the prevailing view held by others in the organization" (Ashford et al., 2003, p. 794).

In response to the above issues, the present study invokes a self-regulation perspective on creative performance by exploring the role of feedback-seeking behavior in the creative process. We develop and test a model (Figure 1) that integrates and extends previous creativity research by simultaneously considering traits and context factors as antecedents of creativity and by identifying feedback-seeking behavior as an underlying mechanism through which these antecedents affect creative performance. Specifically, we propose that the individual difference variable of a cognitive style (Kirton, 1994) and the context factor of perceived organizational support for creativity (Scott & Bruce, 1994; Zhou & George, 2001) independently and interactively affect two elements of employees' feedback-seeking behaviors, i.e., their overall propensity to inquire for feedback from various sources and their tendency to monitor their environment for indirect feedback cues. Employees' feedback-seeking behaviors are in turn expected to influence (supervisor ratings of) employee creativity, which we define as employees' generation of novel and useful ideas regarding work related procedures and processes (Amabile, 1988; Oldham & Cummings, 1996; Shalley, 1991; Zhou, 2003).

## **THEORY AND RESEARCH BACKGROUND**

### **Self-Regulation for Creative Performance**

In the past decade, considerable research efforts have been invested in identifying and describing the individual and contextual factors that facilitate and hinder creative performance. Indeed, several literature reviews have consistently concluded that employee creativity is a function of the employee's individuality, of features of the context surrounding the employee, and of the interaction between the two (Perry-Smith et al., 2003; Shalley & Zhou, 2008; Shalley et al., 2004; Woodman, Sawyer, & Griffin, 1993). The majority of work on individual differences in creativity has focused on identifying the personality characteristics and traits that are likely to be associated with creative outcomes. For example, research has shown that creative individuals tend to be more flexible in absorbing information (McCrae & Costa, 1997), prefer to solve problems in innovative ways (Kirton, 1976, 1994), and are more open to new experiences (Feist, 1998). Regarding the contextual factors affecting employee creativity, the key finding is that managers and organizations can build work environments that support employee creativity by setting creativity work goals, making creativity a job requirement, providing developmental feedback on creative goal progress and rewarding employees when they achieve creative outcomes (Amabile & Mueller, 2008; Paulus, 2008; Shalley, 2008; Shalley & Liu, 2007; Tierney, 2008; West & Richter, 2008; Zhou, 2008). Considering this impressive support for how employee traits and managerial actions affect employee creativity, it is surprising that so little is known about the actions employees take to manage their own creative performance (Drazin, Glynn, & Kazanjian, 1999; Mumford, 2000). For example, a widely described, but relatively understudied phenomenon within the creativity literature is the notion of individual creative cognitive processing, i.e., the cognitive and behavioral process of analyzing problems, preparing to solve issues, generating ideas and evaluating these ideas (Amabile & Mueller, 2008; Drazin et al., 1999; Drazin, Kazanjian, & Glynn, 2008). While the mainstream literature assumes that such a process takes place and that employees behaviorally attempt to produce creative outcomes, empirically, we know little about the specific strategies employees use to manage their creative performance and how this relates to actual creative performance (Drazin et al., 2008; Ruscio, Whitney, & Amabile, 1998).

The view that employees actively manage their creative performance resonates with self-regulation theory, a general framework that highlights individuals' ability to guide their own goal-directed activities and performance, by setting their own standards and monitoring their progress toward these standards (Carver & Scheier, 1981; Vohs & Baumeister, 2004). Self-regulation theory has been applied to a variety of organizational phenomena, including managerial work (Ashford & Tsui, 1991; Tsui & Ashford, 1994), employee socialization (Ashford & Black, 1996), and employee performance (Porath & Bateman, 2006; VandeWalle, Brown, Cron, & Slocum, 1999). On the basis of self-regulation theory's proven use for studying organizational phenomena, we believe that it also offers a promising lens for studying employee creativity.

One key self-regulation tactic that has been identified in literature is feedback-seeking behavior, i.e. individual's proactive search for evaluative information about their performance (e.g. Ashford & Tsui, 1991; Porath & Bateman, 2006). Two elements suggest that feedback-seeking behavior may also be central to the creative process. First, research has shown that feedback can be used as a tool to promote and nurture employee creativity (Zhou, 2008). However, in a dynamic world of work where creativity and innovation have become a source of competitive advantage, organizations may not always be able to systematically pre-define and pre-specify the goals that employees need to achieve (Ashford et al., 2003). Because of the ambiguity accompanying creative work, evaluating the (creative) performance of employees has become an increasingly intricate task for managers (Shalley, 2008). With the exchange of system-level feedback being somewhat constrained, today's organizations largely depend on employees' self-regulation efforts to acquire feedback (Ashford et al., 2003; Tsui & Ashford, 1994).

Second, the creative process has a marked social character (Perry-Smith et al., 2003) and individuals outside employees' immediate work setting are increasingly important contributors to employees' creative performance (Madjar, 2005; Madjar, Oldham, & Pratt, 2002). Given that such external sources may not always provide their feedback spontaneously, actively seeking it out may be the only way for employees of obtaining this crucial external input. Hence, while managers can use feedback as a tool to stimulate and foster employee creativity (Zhou, 2008), the above two realities suggest that feedback seeking may be a valuable resource for employees in managing their own creative performance.

## **Feedback-Seeking Behavior and Employee Creativity**

Our framework argues that two facets elements of employees' feedback-seeking behaviors will be important within the creative process, i.e., employees' overall propensity to inquire for feedback from various sources and their tendency to monitor their environment for indirect feedback cues.

*Inquiry from various sources.* Consistent with social networks theory (Higgins & Kram, 2001; Perry-Smith, 2006, 2008), we assume that employees self-regulate their creative performance by seeking feedback from a various, rather than limited set of feedback sources. While employees' main feedback sources tend to be their supervisors, employees also solicit feedback from immediate coworkers, other organizational sources (e.g. peers in other departments) and extra-organizational sources (e.g. peers in other organizations) (Ashford & Tsui, 1991; Miller & Jablin, 1991; Morrison, 1993; Vancouver & Morrison, 1995). So far, researchers have focused primarily on employees' feedback source preferences (e.g. Ashford & Tsui, 1991) and on the source characteristics that influence these preferences (e.g. Levy, Cober, & Miller, 2002; Vancouver & Morrison, 1995; Williams, Miller, Steelman, & Levy, 1999). For example, studying feedback seekers' sources for feedback seeking, Ashford and Tsui (1991) found that managers tend to seek more feedback from supervisors than from peers and subordinates. Exploring the underlying mechanisms of these results in the laboratory, Vancouver and Morrison (1995) found that several source characteristics, including their reward power, accessibility and expertise, trigger feedback seekers' preferences for certain sources. While these results highlight that individuals discriminate between the various feedback sources, no studies have explicitly assessed whether individuals also differ in their overall propensities to seek feedback from the various sources and how this affects employee outcomes. For example, to attain creative outcomes, employees may deliberately choose to ask multiple sources for feedback, rather than discriminating among them. This view is consistent with theorizing within the social networks literature that suggests that individuals who are connected to a diverse set of individuals may acquire more varied input, which might result in the generation of more creative ideas. Accordingly, we include employees' propensity to inquire feedback from various sources as a key tactic within our framework.

*Feedback Monitoring.* To this point, we have implied that the self-regulation of creative performance involves that employees directly ask others for feedback via the tactic of inquiry.

However, employees may also seek feedback using other tactics, such as the tactic of monitoring, i.e., employees' observation of indirect cues within their environment to obtain indirect feedback about how they are doing (Ashford & Cummings, 1981). Building on research that has shown that individuals can increase their overall effectiveness by monitoring their environment for indirect cues (Ashford & Tsui, 1991), we believe that this tactic may also be valuable for employees who desire to achieve creative goals. For example, in the early stages of the creative process, such as the incubation phase (i.e., the phase of reflecting on an issue until a novel solution emerges) (Perry-Smith, 2008; Zhou et al., 2003), employees may believe that their ideas need further elaboration and refinement before they can directly ask others for feedback on them. Direct requests for feedback might entail image costs, especially when the seeker is not (yet) performing well (Larson, 1989; Northcraft & Ashford, 1990). By attending to other, more indirect cues in their environment, individuals may overcome some of the potential image costs associated with inquiring for feedback on their ideas, while still attaining the feedback they need to further develop them.

### **Innovative Orientation and Feedback-Seeking Behavior**

Not all individuals may be equally motivated to use feedback seeking as a strategy to manage their creative performance. Building on research that suggests that certain individuals may be predisposed to behave creatively (see Shalley et al., 2004 for a review), we expect that employees' tendency to seek feedback will in part be determined by their cognitive style, i.e., their preferred way of gathering, structuring and applying information (Hodgkinson & Sadler-Smith, 2003; Kirton, 1976, 1994). While debate exists about the dimensionality of cognitive styles (Cools & Van den Broeck, 2007; Hodgkinson et al., 2003), the perspective most frequently adopted in the creativity literature is Kirton's (1994), who uses a bipolar continuum to distinguish between two general orientations: (1) an adaptive style, characterized by a pronounced preference for accurate information, facts, figures, and conventional theories and procedures; and (2) an innovative style, characterized by an orientation toward risk-taking, divergent thinking and creative problem-solving. Empirical work shows that a cognitive style directly and interactively (i.e., in interaction with context variables) impacts employee creativity. For example, Tierney, Farmer and Graen (1999) found that in addition to exerting main effects, an innovative style interacted with employees' high-quality relationships with supervisors

(LMX) in impacting several indicators of creative performance. One limitation of prior studies, however, is that they do not examine *why* cognitive styles affect creativity. Presumably, cognitive styles affect employee creativity through their impact on employee behaviors that enable creative performance. For example, individuals with an innovative style may be better at seeking out and combining new information, which may permit them to achieve more creative outcomes (Shalley et al., 2004).

Specifically, we expect that individuals' cognitive style will affect both employees' propensity to inquire feedback from various sources and their tendency to monitor their environment for indirect feedback cues. For example, by definition, adaptors value information and facts and figures. Intuitively, one could expect that they would also value evaluative information about their own performance and actively seek it out. Adaptors, however, tend to be more introverted than individuals with an innovative style (McKinnel Jacobson, 1993). Given that adaptors tend to be more socially inhibited, it seems unlikely that they would spontaneously inquire for feedback. This does not necessarily imply that they would seek feedback via the tactic of monitoring, though. Adaptors tend to value unbiased and impersonal information, such as facts and figures (Kirton, 1994), while the feedback that is sought via the tactic of monitoring may be biased and inaccurate (Ashford et al., 2003; Brown, Ganesan, & Challagalla, 2001; Morrison & Bies, 1991). Moreover, adaptors only value and conform to others' opinions to the extent that they exert formal control over their (work) goals and rewards (Houtz et al., 2003; Isaksen, Lauer, & Wilson, 2003). This should make supervisor feedback important to adaptors, but decrease the importance of feedback from sources with less formal reward power, such as team members, peers, and extra-organizational sources. That is, while adaptors may value the feedback that they receive from supervisors, we expect their overall tendency to actively seek feedback (both via inquiry and via monitoring) to be rather limited.

Innovators, on the other hand, tend to be more externally oriented, more aware of their social environment and more sensitive to others' opinions (Houtz et al., 2003, Isaksen et al., 2003). Given their interpersonal orientation and interest in others' opinions, innovators should also be interested in how others evaluate them. In addition, rather than relying on individuals with formal reward power, innovators tend to be independent thinkers, who prefer self-direction based on the information they acquire from diverse sources and in diverse ways (Houtz et al., 2003; Kwang et al., 2005). Accordingly, we expect that individuals with a more innovative style

will be more interested in others' feedback and try to acquire this feedback by actively monitoring their environment and directly asking others for feedback. Thus:

*Hypothesis 1:* Employees' cognitive styles will affect their general propensity to seek feedback such that

*1a.* The more individuals endorse an innovative cognitive style, the more they will inquire for feedback from the various sources.

*1b.* The more individuals endorse an innovative cognitive style, the more they will seek feedback via the tactic of monitoring.

### **Perceived Organizational Support for Creativity and Feedback Seeking**

Employees' perceptions of the organizational context for creativity may also be central to their decision to self-regulate their creative performance by seeking feedback. Though the context important for feedback seeking has been relatively understudied within the feedback-seeking literature (Ashford et al., 2003), one context factor that may influence employees' feedback-seeking behaviors (and ultimately their creative performance), is the organizational support for creativity that they receive. In their review of two decades of feedback-seeking research, Ashford et al. (2003) already alluded to the possible role of a supportive organizational context in the feedback-seeking process. They argued that when an organizational context supports feedback seeking, employees will experience few negative consequences when they directly ask for feedback. This view is empirically supported by research showing that supportive contexts neutralize employees' image concerns about raising issues in organizations, a process that also tends to entail image concerns (Ashford, Rothbard, Piderit & Dutton, 1998). In addition to reducing the image costs of feedback seeking within the organization, however, we believe that perceived organizational support for creativity may also stimulate employees to seek feedback from a wider variety of feedback sources. Contexts that support creativity encourage employees to process information from diverse sources, explore alternatives and build informal networks (West et al., 2008). Moreover, when there is a general climate of support throughout the organization, the organization is likely to convey that employees' developmental needs may not only be met by individuals within their immediate work group (e.g., their supervisor or

immediate coworkers), but also by individuals in other departments and even by individuals beyond their own organization (Cole, Shaninger, & Harris, 2002).

Similarly, in addition to stimulating feedback seeking from diverse sources, a supportive context may also stimulate employees to be more attentive to indirect feedback cues about their performance. Employees working in supportive contexts tend to feel that their organization accepts employee feedback and that management throughout the organization is continuously open and attuned to employees' suggestions for improvement (Dutton & Ashford, 1993; Zhou & George, 2001). Employees may respond to this organizational attentiveness to feedback by being more open to feedback themselves and by monitoring their environment for feedback on a more continuous basis. Indeed, research in related areas suggests that employees tend to reciprocate the presence of perceived organizational support by engaging in continuous learning behaviors, e.g., by participating in developmental experiences that are beneficial to the organization (Wayne, Shore, & Liden, 1997), seeking organization-relevant information, learning important work skills (Rhoades & Eisenberger, 2002), and engaging in self-reflection (West et al., 2008). All these elements suggest a possible role of a supportive climate in the feedback-seeking process. Accordingly:

*Hypothesis 2: Perceived organizational support for creativity is positively associated with employees' feedback-seeking behaviors, such that:*

- 2a. The more employees perceive organizational support for creativity, the more they will inquire for feedback from the various sources.*
- 2b. The more employees perceive organizational support for creativity, the more they will seek feedback via the tactic of monitoring.*

### **The Joint Effects of Perceived Organizational Support for Creativity and an Innovative Style**

Our framework also argues that the effect of perceived organizational support for creativity on employees' tendency to seek feedback from various sources (and ultimately on creative performance) is a function of the employee's cognitive style. Only a handful of studies have explicitly looked at the interaction effects of a cognitive style and context factors on

employee creativity (Baer, Oldham, & Cummings, 2003; Tierney et al., 1999). In addition, as pointed out by Zhou (2003), the research exploring person-context interactions has one-sidedly focused on identifying the conditions that maximize the creativity of individuals with a creative predisposition (e.g., individuals with an innovative cognitive style) (e.g. Oldham & Cummings, 1996). Only recently, researchers have begun to untangle the conditions that help individuals with less creative predispositions (e.g., individuals with an adaptive style) to perform creatively. For example, in one study, Tierney et al. (1999) found that employees with an adaptive cognitive style were most creative when they maintained high-quality relationships with their supervisors. Similarly, Zhou (2003) found that the joint contribution of supervisor developmental feedback and the presence of creative coworkers was stronger for employees with less creative personalities than for employees with a creative predisposition. While these results suggest that employees' personality and cognitive styles influence how they respond to contextual factors, these studies do not explain *why* individuals with an adaptive personality were able to improve their creative performance under certain conditions. It is conceivable that under conditions characterized by a high support for creativity, employees with an adaptive cognitive style develop behavioral strategies that help them to improve their creative performance. This suggestion is in accordance with theorizing within the cognitive styles literature suggesting that individuals can learn to behave in ways that are not consistent with their habitual approach, i.e., by adopting a cognitive strategy (e.g., Sadler-Smith & Barger, 1998). That is, whereas a cognitive style is a purely individual attribute, context factors may induce individuals to adopt cognitive strategies that do not necessarily correspond to that cognitive style (Hayes & Allinson, 1996; Sadler-Smith & Barger, 1998).

Specifically, we propose that contexts that support creativity may encourage individuals with an adaptive style to develop the cognitive strategy of feedback seeking. By seeking feedback, individuals with an adaptive style may acquire feedback that helps them to generate more creative ideas and improve their creative performance, regardless of their initial disposition. As stated, supportive contexts may trigger individuals with an adaptive style to develop such a behavioral strategy (Sadler-Smith & Barger, 1998).

Thus, we hypothesize the following:

*Hypothesis 3:* Cognitive styles and perceived organizational support for creativity interact in impacting employees' general tendency to seek feedback such that:

*3a.* Individuals with a more adaptive cognitive style who perceive high support for creativity tend to inquire more feedback from the various sources than adaptors who perceive little support for creativity.

*3b.* Individuals with a more adaptive cognitive style who perceive high support for creativity tend to seek more feedback via monitoring than adaptors who perceive little support for creativity.

### **Feedback-Seeking Behavior and Creative Performance**

Building on research that has highlighted the importance of feedback exchanges in the creative process, the second part of our framework argues that individuals who actively seek feedback will be more creative than individuals with no such tendency.

Though no studies have explicitly linked employees' feedback-seeking behaviors to creative performance, several theories allude to this possibility. For example, drawing on insights derived from the literatures on individual cognition (Ohlsson, 1992), brainstorming (Paulus, Larey, & Dzindolet, 2001) and group diversity (Milliken & Martins, 1996), Madjar (2005) theorized that employees who seek information from individuals within and outside their organization are more creative, because of the variety of information and insights provided by these sources. Also within the realm of social network theory (e.g. Perry-Smith & Shalley, 2003), empirical work shows that employees who are connected to a diverse set of individuals (Perry-Smith, 2006) are more creative, because they are more likely to receive and share fresh information.

Employees do not always need to communicate with others to obtain such input, however. For example, research conducted from a social cognitive perspective has shown that individuals can learn to think and behave creatively by observing and monitoring creative models (Shalley & Perry-Smith, 2001; Zhou et al., 2003). Thus, diverse information, whether obtained directly (e.g., via inquiry) or indirectly (e.g., via monitoring) cognitively stimulates individuals to think out-of-the-box, consider alternatives and generate more ideas (Madjar,

2005). Building on these suggestions and on the demonstrated impact of feedback on the creative process (see Zhou, 2008 for a recent review), we hypothesize:

*Hypothesis 4:* Employees' feedback-seeking behavior affects supervisor ratings of creativity such that:

4a. Employees feedback inquiry from various sources is positively related to creative performance.

4b. Employees monitoring of their environment for indirect feedback cues is positively related to creative performance.

### **The Relationship between Traits and Context and Creative Performance**

We argued that cognitive styles and perceived organizational support for creativity are directly and interactively related to employees' tendency to seek feedback, which, in turn is positively related to their creative performance. Based on previous creativity research that has linked cognitive styles and perceived organizational support for creativity to creative performance (e.g., Bruce & Scott, 1994; Tierney et al., 2002), we expect that these factors will also have a direct impact on employees' creative performance. Linking this to our four hypotheses, we hypothesize that employees' feedback-seeking behaviors will mediate the relationship between our independent variables (cognitive styles, perceived organizational support for creativity and their interaction) and creative performance. Because we assume that self-regulatory mechanisms other than feedback seeking may explain the effects of these variables on creative performance, we expect the mediation to be partial.

*Hypothesis 5:* The impact of cognitive styles, perceived organizational support for creativity and their interaction on creative performance is partially mediated by employees' feedback-seeking behaviors.

*5a.* Employees' tendency to inquire for feedback from various sources partially mediates the impact of a cognitive style, perceived organizational support for creativity and their interaction on creative performance.

*5b.* Employees' tendency to monitor their environment for indirect feedback cues partially mediates the impact of a cognitive style, perceived organizational support for creativity and their interaction on creative performance.

## METHODOLOGY

### **Research population and sampling design**

Data were collected as part of a large research project on proactivity and feedback dynamics in organizations. The sample consisted of 456 supervisor–subordinate dyads from four consulting firms, each employing between 300 and 800 employees. We focused on the knowledge workers within these firms, as behaving creatively and creating new knowledge are key elements of knowledge workers' jobs (Davenport, 2005). Two sets of online questionnaires were used: a subordinate survey and a survey for the immediate supervisors of the subordinates. For each of the organizations a sampling frame of knowledge workers was developed in cooperation with the human resources department. The sampling frame included information about the employee's work group and team supervision. The original sampling frame consisted of 908 subordinates working for 122 managers who each supervised 3 to 11 members. Employees and their supervisors filled out the online survey during regular working hours. To limit the length of the supervisor survey, supervisors were asked to evaluate the creative performance of at least three of their subordinates, whose names appeared randomly in the survey. After three subordinates had been evaluated, the supervisors had the option of evaluating their other subordinates as well. 456 usable supervisor–subordinate dyads out of 908 dyads were returned (i.e., a 50.2% response rate), so each participating supervisor evaluated on average 3.73 employees. On average, the employee sample had held their current job for 2.79 years and had worked in their organization for 4.3 years, of which 2.87 years in their current team.

The average dyadic relationship was 2.63 years. Seventy-three percent of our employee sample was male, 76 percent worked fulltime and their average age was 34 years. No significant differences were observed between the four organizations in terms of their demographic composition.

## Measures

*Cognitive style.* We used a 13-item reduced version of the Kirton (1976) Adaptation-Innovation inventory validated by Bagozzi and Foxall (1995) in three different samples. Respondents were asked to indicate on a scale ranging from 1 (*very hard*) to 5 (*very easy*) how difficult it would be for them maintain specific types of innovative and adaptive behaviors. A sample item from the scale is “Create something new rather than improve it”. Bagozzi and Foxall’s (1995) best-fitting model was a three-factor structure: sufficiency of originality, efficiency and rule governance. Consistent with previous creativity research (e.g., Baer et al., 2003), a confirmatory factor analysis (CFA) on our data yielded a single second-order factor solution with an acceptable fit and adequate measurement properties ( $\alpha = .83$ ) ( $\chi^2 = 59.04$ ,  $df = 62$ ,  $p > .05$ ; NNFI = .99; CFI = .99; RMSEA = .00).

*Perceived organizational support for creativity.* Perceived organizational support for creativity was measured using four items that Zhou and George’s (2001) adopted from a scale developed by Scott and Bruce (1994) ( $\alpha = .85$ ). A sample item includes “Creativity is encouraged at [company]”.

*Feedback inquiry from the various sources.* Most feedback-seeking studies assess feedback seeking from supervisors (e.g., Chen, Lam, & Zhong, 2007; Lam, Huang, & Snape, 2007) and do not distinguish between the various feedback sources. One notable exception is a scale that Callister, Kramer and Turban (1999) adapted from Ashford’s (1986) original feedback-seeking scales. The scale distinguishes between supervisor feedback inquiry and coworker feedback inquiry. Because we sought to assess feedback seeking from other sources as well (e.g. peers in other departments, peers in other organizations), we further adapted the scale so that it also captured the other sources that employees may consult when seeking for feedback (Miller & Jablin, 1991; Morrison, 1993): supervisors, coworkers, other organizational sources (e.g., peers in other departments) and extra-organizational sources (e.g., peers in other organizations).

Using five-point scales ranging from 1 (*never*) to 5 (*very frequently*), respondents indicated the extent to which the feedback-seeking statements corresponded to their own behavior. Sample items include: “How frequently do you directly ask your supervisor for feedback about your work?” [Question repeated for each of the feedback sources], “How frequently do you directly ask your supervisor for an informal appraisal of your work” [Question repeated for each of the feedback sources]. The scales measuring feedback inquiry from colleagues in other departments and from extra-organizational sources had not been used previously. We therefore first conducted an exploratory factor analysis (EFA) on half of the sample, using principal components analysis with a varimax rotation. Inspection of the eigenvalues and screeplots suggested that four factors were represented in the data, corresponding to the four sources of feedback seeking. In a next step, we conducted a confirmatory factor analysis (CFA) on the other half of the data and found an acceptable fit for a single second-order factor solution, which we labeled “inquiry from various sources” ( $\chi^2 = 47.75$ ,  $df = 50$ ,  $p > .05$ ; NNFI = .99; CFI = .99; RMSEA = .00). This single second-order factor solution supports Morrison’s (1993) claim that individuals have a general tendency to seek feedback from various sources. Though we also found a similar acceptable fit for a four-factor solution, we continued using the higher order factor solution because our hypotheses were formulated at the aggregate level (i.e., tendency to seek feedback from various sources). Thus, we collapsed the dimensions of the feedback-seeking construct into a composite of the four sources of feedback seeking and created an index of employees’ tendency to seek feedback from the various feedback sources. This composite variable showed adequate reliability ( $\alpha = .84$ ).

*Feedback Monitoring.* Items measuring feedback monitoring were adopted from the scales developed by Ashford and colleagues (Ashford, 1986, Ashford & Tsui, 1991). Eight items asked how frequently respondents observed and monitored the behaviors of others to obtain information about their own performance. Sample items include: “How frequently do you pay attention to how your boss acts toward you in order to understand how he/she perceives and evaluates your work?”; “How frequently do you compare yourself with peers in your organization (i.e., persons at your level within the organization?”; “How frequently do you compare yourself with peers in other organizations (i.e., persons at your level within other organizations)?” .

An exploratory factor analysis (EFA) on half of the sample and a CFA on the other half of the sample revealed that one factor was represented in the data. Thus, responses to the items were averaged for an overall score of monitoring ( $\alpha = .72$ ).

*Creative Performance.* Consistent with prior research, we used supervisor ratings to assess employees' creative performance (Zhou, 1998; Zhou & George, 2001; Zhou et al., 2003). Using 13 items, each supervisor rated the creative performance of their subordinates on a scale ranging from 1 (*not at all characteristic*) to 5 (*very characteristic*). A sample item taken from the scale includes "Comes up with creative solutions to problems". Responses to the items were averaged for an overall score of creative performance ( $\alpha = .84$ ).

*Controls.* Prior research has shown that employees' tendency to seek feedback largely depends on their work experience (e.g. Ashford, 1986; Ashford & Black, 1996). In keeping with other feedback-seeking studies (e.g., VandeWalle, Ganesan, Challagalla, & Brown, 2002), we therefore included job tenure as a control variable in our analyses. Consistent with previous creativity research (e.g., Zhou & George, 2003), we also controlled for three additional demographic variables: gender, age, and position in the organization. Finally, to control for the potential effects of the organization and of the relationship between the supervisor and the subordinate, we controlled for company membership and the length of the dyadic relationship between the subordinate and his or her supervisor (as reported by the subordinate).

## DATA ANALYSIS AND RESULTS

### Data Considerations and Analytical Plan

After inspecting the measurement properties of our variables, we examined several aspects of our data. First, we ensured that the assumptions of normality, homogeneity of variance, linearity and absence of multicollinearity were met. To deal with multicollinearity caused by the interaction terms, all variables were mean-centered (Aiken & West, 1991). Because of the nested structure of our data (i.e., subordinates are nested within their supervisors, and supervisors' work groups are nested within organizations) we also needed to check our data for the potential presence of dependence and for supervisor-effects on ratings of creative performance (Kenny, Kashy, & Cook, 2006). To assess dependence within our data, we followed the procedure recommended by Lam, Huang, & Snape (2007) to conduct two series of analyses.

In the first series of analyses, we tested our model using a hierarchical multivariate regression procedure in SPSS 15.0. We chose regression over structural equation modeling (SEM) because of the interaction term included in our model. As noted by Jaccard & Wan (1996) interactions are intricate to estimate in SEM. Furthermore, as our measures showed acceptable measurement properties, we felt confident analyzing the data using hierarchical regression (Jaccard & Wan, 1996). In the second set of analyses, we re-did the analyses using multilevel modeling (HLM 6.06) so that we could control for the effects caused by the different supervisors. As both series of analyses yielded similar results, we follow the recommended approach to only report the results of the regressions (Lam et al., 2007; Van der Vegt, Van de Vliert, & Oosterhof; 2003).

## Results

Table 1 presents the means, standard deviations, reliability coefficients and correlations among the study variables.

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Insert Table 1 About Here

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*Analyses for feedback seeking.* To test hypotheses 1 to 3, we conducted two series of hierarchical moderated regressions with employees' feedback-seeking behaviors as the dependent variables<sup>1</sup>. After having entered the control variables step 1, we entered the two hypothesized main effects (cognitive style and perceived organizational support for creativity) in step 2. The two-way interaction was entered in step 3. Table 2 presents the standardized coefficients for hypotheses 1-3.

As shown in Table 2, we found support for hypotheses 1 and 2 ( $\Delta R^2 = .07, p < .01$  for inquiry; and  $\Delta R^2 = .05, p < .01$  for monitoring). As hypothesis 1a and 1b suggested, the more employees endorsed an innovative cognitive style (i.e., a high score on cognitive style), the more they inquired feedback from the various feedback sources ( $\beta = .19, p < .05$ ) and the more they monitored their environment for indirect feedback cues ( $\beta = .11, p < .05$ ). In support of hypothesis 2, we found that perceived organizational support for creativity was positively related to employees' tendency to inquire for feedback ( $\beta = .17, p < .05$ ) and to the monitoring tactic ( $\beta = .18, p < .05$ ).

Hypothesis 3, predicting an interaction between perceived organizational support for creativity and the employee's cognitive style in impacting employees' feedback-seeking behaviors, was not supported<sup>2</sup> ( $\beta = -.05$ , *ns*;  $\Delta R^2 = .00$ , *ns* for inquiry;  $\beta = -.02$ , *ns*;  $\Delta R^2 = .00$ , *ns* for monitoring).

Thus, summarizing hypotheses 1 to 3, we found that employees' cognitive style and perceived organizational support for creativity exerted independent, rather than interactive effects on employees' feedback-seeking behaviors.

*Feedback seeking and creative performance.* We then tested whether employees' feedback-seeking behaviors related to their creative performance. In support of hypothesis 4a, we found that employees with a general tendency to inquire feedback from various sources were rated as being more creative ( $\beta = .15$ ,  $p < .05$ ;  $\Delta R^2 = .03$ ,  $p < .05$ ). Hypothesis 4b, predicting that monitoring would also be positively associated with supervisor ratings of creative performance, was not supported ( $\beta = .06$ , *ns*;  $\Delta R^2 = .00$ , *ns*).

Hypothesis 5 predicted that employees' tendency to seek feedback would mediate the relationship between the independent variables (cognitive style and perceived organizational support for creativity) and supervisor ratings of their creative performance. Hypothesis 5a was tested using the mediated regression method recommended by Baron and Kenny (1986)<sup>3</sup>. First, the independent variables (cognitive style and perceived organizational support for creativity) needed to be related to both the outcome variable and the mediators. As Table 2 shows, the first condition was met by the significant path coefficients of a cognitive style and perceived organizational support on both creative performance and feedback-seeking behavior. Moreover, the path coefficients of the independent variables were reduced once the mediator, i.e., feedback inquiry was entered into the regression. Given that the path coefficients were not reduced to insignificance (which would have implied full mediation), we performed Sobel tests to test for partial mediation. This analysis indicated that feedback inquiry partially carries the main effect of cognitive style and perceived organizational support for creativity on creative performance (Sobel  $z = 2.61$ ,  $p < .05$  and Sobel  $z = 2.04$ ,  $p < .05$  respectively), thereby confirming hypothesis 5a.

Hypothesis 5b, predicting that monitoring would partially mediate the relationship between the independent variables and creative performance could not be confirmed. Mediation

requires that the mediator is significantly related to the outcome variable (Baron & Kenny, 1986), which was not the case for feedback seeking via the tactic of monitoring.

In sum, our results show that the individual characteristic of a cognitive style and the context factor of perceived organizational support for creativity shape employees' feedback-seeking behaviors and that particularly employees' efforts to inquire for feedback from the various feedback sources is related to their creative performance.

### **Supplementary Analyses**

*Assessment of the structural model.* Given that a cognitive style and perceived organizational support for creativity did not interact in impacting employees' feedback-seeking behaviors and creative performance, we used structural equation modeling (SEM) to conduct a supplementary analysis to test the mediated model (i.e., without the interaction term)<sup>3</sup>. This technique allows for a more conservative test of the hypotheses, because it explicitly corrects for measurement error and provides explicit estimates of these parameters (Byrne, 1998).

The indicators and constructs were formed as follows. For constructs with a higher order factor structure, we reduced the number of parameters to be estimated following the partial aggregation method discussed by Bagozzi and Edwards (1998). This procedure involves averaging the responses of subsets of items measuring a construct. Based on exploratory and confirmatory factor analyses, we formed three indicators for cognitive style (representing the three subscales) and four indicators for employees' feedback-seeking inquiry (representing the four sources). Because monitoring and creative performance were one-dimensional constructs and an exploratory factor analysis would not have permitted us to form composite indicators of these variables we conducted an exploratory factor analyses in which we asked for a three factor solution. The items for each factor were averaged, so that we obtained three indicators for each of these variables. Perceived organizational support for creativity was measured with only 4 items, so, consistent with the total disaggregation model (Bagozzi & Edwards, 1998) we used the item scores as the indicators for these constructs.

To test our conceptual model, we followed the procedure described by Bagozzi and Bergami (2000). Specifically, we compared a fully mediated model (i.e., Figure 1) to a number of alternative models. Though the chi-square test for this baseline model (Figure 1) was significant and thus indicated poor fit ( $\chi^2 = 312.14$ ,  $df = 96$ ,  $p < .05$ ), the other fit indices indicated that our model fitted our data well (NNFI = .93; CFI = .95; RMSEA = .06). The significant parameter estimates for this structural model are reported in Figure 1. As shown in Figure 1, the structural equation analyses support our previous findings that a cognitive style and perceived organizational support for creativity impact employees' feedback-seeking behaviors and that employees' inquiry (but not monitoring) is significantly related to creative performance.

In a next step, we compared this baseline model to a number of alternative models to determine whether our model was sufficiently parsimonious and comprehensive. Table 3 reports the results from these analyses. First, we compared the baseline model to our hypothesized model, i.e., a partially mediated model. Thus, we added two additional paths to the baseline model: a direct path from cognitive style to creative performance and a direct path from perceived organizational support for creativity to creative performance. This saturated model fitted our data significantly better ( $\chi^2 = 288.08$ ,  $df = 94$ ,  $p > .05$ ; NNFI = .94; CFI = .95; RMSEA = .06;  $\Delta \chi^2 (2) = 24.06$ ,  $p < .01$ ). Specifically, we found significant path coefficients from both cognitive style and perceived organizational support for creativity to creative performance ( $\beta = .25$ ,  $p < .05$  for cognitive style, and  $\beta = .20$ ,  $p < .05$  for perceived organizational support for creativity). Thus, the structural equation analyses support our previous findings that feedback inquiry partially mediates the impact of a cognitive style and perceived organizational support for creativity on creative performance.

Given that we found a non-significant path from monitoring to creative performance in both the baseline model and the hypothesized model, we also compared these models to a model in which we fixed the path coefficient from monitoring to creative performance to zero (i.e., alternative model 2 in Table 3). This model did not significantly change our chi-square statistic, bolstering our previous finding that hypothesis 4b was not consistent with our data ( $\chi^2 = 288.77$ ,  $df = 95$ ,  $p > .05$ ; NNFI = .94; CFI = .95; RMSEA = .06;  $\Delta \chi^2 (1) = .69$ , *ns*).

Next, to assess whether an even more parsimonious model would fit our data equally well, we also dropped the paths from the independent variables to monitoring. This model significantly worsened the fit of alternative model 2 ( $\chi^2 = 315.82$ ,  $df = 97$ ,  $p > .05$ ; NNFI = .93;

CFI = .94; RMSEA = .07;  $\Delta \chi^2 (2) = 27.74, p < .05$ ), indicating that this model was not sufficiently comprehensive. In summary, the results of our structural equation analysis confirm the results from the regression analyses that both cognitive style and perceived organizational support for creativity affect employees' creative performance and that these effects are partially mediated by employees' tendency to inquire for feedback.

*Exploratory analyses for the specific sources of feedback seeking.* Bagozzi and Edwards (1998) pointed out that global constructs (e.g., employees' general tendency to inquire feedback from various sources) may obscure the distinctiveness among sub-facets of the construct (e.g., the various sources of feedback seeking). For example, it may be that respondents discriminated between the various sources of feedback seeking and that these differences did not surface because we only considered employees' general feedback-seeking propensities. Because some studies have shown that individuals discriminate between the various feedback-seeking sources (Ashford & Tsui, 1991; De Stobbeleir, Ashford & Buyens, 2008; Vancouver et al., 1995), we redid our analyses for hypotheses 1a, 2a and 3a for each of the feedback sources separately. That is, in addition to assessing the impact of cognitive style and support for creativity on general inquiry, we assessed whether these factors differentially affected the extent to which individuals sought feedback from each of the sources. Results of this analysis showed that this was not the case, with one exception. Specifically, individuals' cognitive styles did not relate to supervisor feedback inquiry ( $\beta = .07, ns$ ). Further examination of the data showed that adaptors' (operationalized at 2 SD's under the mean of cognitive style) supervisory inquiry was not significantly different from innovators' (operationalized as 2 SD's above the mean of cognitive style) supervisor inquiry ( $t = 1.67$ ). In addition, individuals with an adaptive style tended to seek significantly more feedback from their supervisor than from the other feedback sources ( $t = 1.99, p < .05$ ), while innovators discriminated less between the various sources. Thus, it appears that adaptors did not have a general propensity to seek feedback from various sources, but did engage in supervisor feedback seeking. This finding is consistent with research showing that adaptors tend to value the opinion of individuals with formal reward power, while innovators tend to value the opinion of others in general (i.e., regardless of their reward power) (Houtz et al., 2003; Isaksen et al., 2003). However, in sum, these tests bolster our previous suggestions that in addition to discriminating among the feedback sources, individuals may also exhibit general propensities of inquiring feedback from the various sources.

## DISCUSSION

This study highlights that employee creativity may take more than selecting an employee with a creative predisposition or building a context that supports creativity. Rather, our results highlight that these factors may help individuals to develop the self-regulatory skills needed for achieving creative outcomes. Specifically, we found that an innovative cognitive style and perceived organizational support for creativity lead to creative success and that this relationship was partially mediated by the self-regulatory skill of inquiring feedback from various sources.

### *Contributions.*

Our findings extend previous research in at least four ways. First, our findings have implications for the literature on how creative performance is generated. Previous studies have tended to focus on how managers can foster and stimulate employee creativity by, for example, providing developmental feedback to employees (Zhou, 1998, 2008; Zhou et al., 2003). These models of employee creativity implicitly depict employees as relatively reactive agents in the creative process. Our findings suggest that employees also play a proactive role in the creative process by seeking feedback on their work from various feedback sources. Such results highlight the importance of studying employees' self-regulatory behaviors in relation to employee creativity.

Second, our study adds to the creativity literature by considering how dispositional, contextual and behavioral factors simultaneously contribute to creative performance. In our process focus on creative performance, we found that feedback-seeking behavior is an important intervening variable in the relationship between employees' cognitive style, perceived organizational support for creativity and creative performance. Whereas prior work has demonstrated the direct impact of these factors on creative performance (e.g., Baer et al., 2003; Oldham et al., 1996; Tierney & Farmer, 2002), our study was one of the first to identify a behavioral mechanism through which these factors impact employee creativity.

By showing that individuals not only engage in supervisor feedback seeking, but seek feedback from diverse sources, this study also provides indirect support for the social network perspective on employee creativity (e.g., Perry-Smith, 2006, 2008; Perry-Smith et al., 2003). Our results highlight that employees' informal social relationships influence employee creativity and that particularly the content of these informal encounters is an important dimension to consider.

Finally, our results also break exciting new ground in the literature on feedback-seeking behavior. This behavior has traditionally been depicted as a strategy that facilitates individual adaptation and increases person-environment fit (Ashford et al., 2003; Parker et al., in press). By relating creativity-relevant individual traits and context factors to feedback-seeking behavior and by linking individuals' overall propensity to inquire for feedback from various sources to creative performance, our study results highlight that feedback seeking is an individual resource that can help individuals to achieve creative outcomes and deviate in positive ways.

### **Practical implications**

Our study provides some important insights for management practice as well. First, for organizations interested in stimulating employee creativity, our results illustrate the importance of developing work contexts that support creativity. As discussed by Shalley (2008), such contexts may be developed by setting creativity goals, making creativity a job requirement, providing feedback and building reward systems that value employee creativity. Supportive contexts may also stimulate employees to seek feedback, a self-regulation tactic that proved to be a crucial self-regulation strategy for creative performance within our study. In order to stimulate feedback-seeking behavior and employee creativity, organizations may reduce or eliminate some of the image costs associated with the inquiry of feedback by developing a general feedback climate (Steelman, Levy, & Snell, 2004) that supports the spontaneous exchange of informal feedback throughout the organization.

Our results also underscore the importance of stimulating employees to seek feedback beyond their organization's boundaries. By developing a context that supports creativity, organizations may successfully encourage their employees to broaden their developmental networks and seek feedback from multiple sources, rather than limiting themselves to supervisor delivered feedback. To incorporate this valuable feedback from outside, organizations may stimulate their employees to participate in learning communities across organizational boundaries (Nonaka, 1994; Raelin, 1997).

From an individual perspective, our results highlight that individuals who want to achieve creative outcomes, may do so by seeking feedback from a wide variety of feedback sources. Feedback seeking may not only help individuals to refine their ideas and to obtain relevant new input, but may also be a way of promoting these ideas and making them visible to others (Ashford et al., 2003; Morrison & Bies, 1991).

### **Limitations and avenues for future research**

As with all studies, future research needs to address a number of limitations of this study. First, all data were collected using a survey methodology, so common-method biases may have confounded our results (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, as we collected measures of our predictor and outcome variables from different sources, we could reduce the effects of consistency motifs, implicit theories and social desirability (Podsakoff et al., 2003).

Second, though our main hypotheses were supported, we found some null results as well. For example, we found no interaction effect between employees' cognitive style and perceived organizational support for creativity on creative performance. Given that interactions are difficult to observe in field research (McClelland & Judd, 1993) our theory should be tested in the laboratory. We also found no statistically significant relationship between feedback monitoring and creative performance. Though unexpected, these results do not necessarily imply that monitoring is unimportant within the creative process. For example, one explanation for our null results could be that monitoring and feedback inquiry play important roles at different stages in the creative process. For example, when an idea is still premature, employees may monitor their environment for indirect feedback cues to obtain a first assessment of the viability of the idea. Based on this initial indirect feedback, employees may then decide whether or not to further pursue and refine the idea. When the employee decides to further develop the idea, he or she may then decide to directly ask others for their feedback. Hence, rather than contributing directly to creative performance, monitoring may help individuals to channel their energy toward ideas that are worth pursuing. Testing this process view of the role of feedback at different stages in the creative process using longitudinal research designs offers a fruitful avenue for future research.

We also wish to point out that it is not only important to assess how individuals' propensity to inquire for feedback from different individuals relates to creativity, but also how it affects other outcome variables such as employees' on-the-job-adaptability. It may be that employees' general tendency to seek feedback from various sources will differ depending on the outcome under investigation. For example, when employees use feedback seeking as a strategy to mold themselves to the prevailing view of what constitutes acceptable behavior within their immediate work context, they may be better off limiting themselves to feedback seeking from sources who endorse the prevalent standards within their work context (e.g. their supervisor). Seeking feedback from a wider variety of sources (e.g., peers in other organizations) might even have disruptive effects, because these sources might provide the seeker with ideas that are considered as deviant and inappropriate within their own work context. Thus, while our results highlight that individuals may achieve goals of distinction and positive deviance by seeking feedback from various sources, the effects of this seeking may take on a different pattern depending on the outcome under investigation.

In the same vein, Grant and Ashford (2008) recently suggested that when individuals seek feedback indiscriminately (e.g. from too many sources) this may be detrimental for their performance because of the energy lost on filtering out irrelevant information. This view, suggesting that only an optimal level of feedback seeking may result in positive employee outcomes, is consistent with the information processing literature, which posits that too much information may distract and overwhelm individuals and negatively affect the quality of their decisions (Eppler & Mengis, 2004). Though we found no indication of a nonlinear relationship between employees' feedback-seeking behaviors and their creative performance, this may be a fruitful avenue for future research.

Research should also identify the mechanisms that moderate the relationship between employees' feedback-seeking behaviors and creative performance. For example, Zhou (2008) developed an intriguing argument that much may depend on the consistency of the feedback provided by the various sources. Similarly, much of the outcomes of feedback seeking are likely to depend on how the seeker uses the feedback to improve his or her (creative) performance (Renn & Fedor, 2001).

Finally, future research should delineate other self-regulatory mechanisms used by employees to manage their creative performance. For example, VandeWalle and colleagues (1999) found that goal-setting, effort, and planning were important self-regulation tactics for sales performance. In the same vein, Porath and Bateman (2006) identified proactive behavior, emotional control and social competence as key self-regulatory skills for employees.

## **Conclusions**

In spite of the limitations of our research, our study breaks new ground in the creativity literature by highlighting individuals' proactive role in the creative process. The results indicate that individuals manage their own creative performance by actively seeking feedback on their work from various feedback sources. Such findings highlight the importance of studying employees' self-regulatory behaviors in the creative process and support the proposition that feedback seeking is not only a strategy that facilitates individual adaptation, but also an individual resource that can help individuals to achieve creative outcomes.

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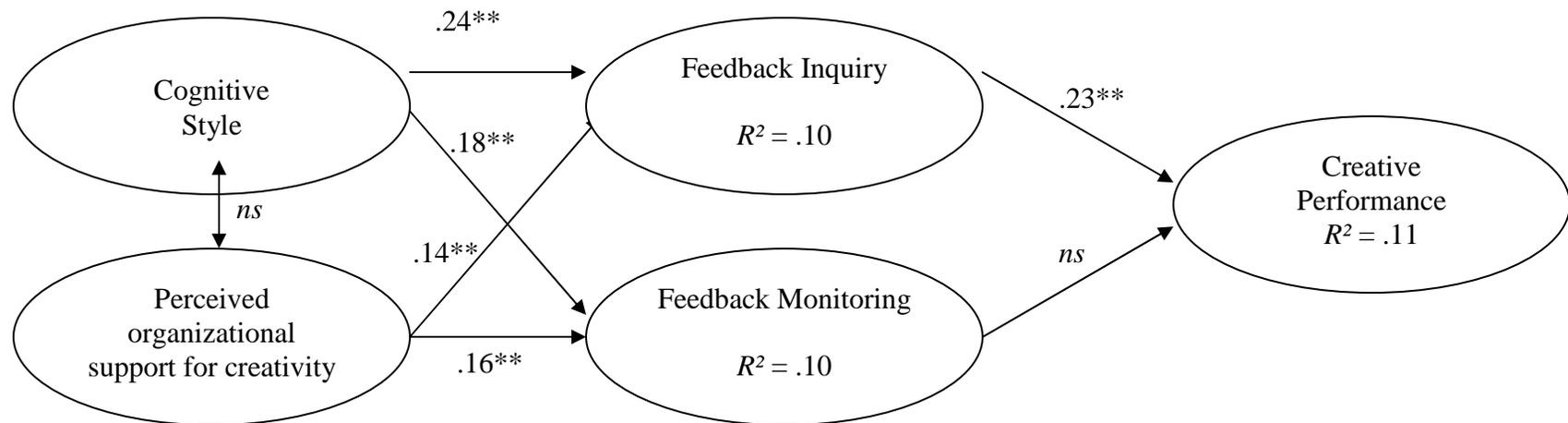
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**FIGURE 1**

**Conceptual Model. The path coefficients represent the standardized parameter estimates for the mediated structural model that we tested in SEM. The interaction path was not estimated using SEM.**



*Figure 1.* Conceptual Model. The path coefficients represent the standardized parameter estimates for the mediated structural model that we tested in SEM. The interaction path was not estimated using SEM.

**TABLE 1****Means, standard deviations, reliabilities and intercorrelations for hypothesis testing**

			1	2	3	4	5
	Mean	SD					
<u>Key variables</u>							
1. Cognitive style	3.82	.61	(.83)				
2. Perceived organizational support for creativity	3.44	.75	0.15**	(.85)			
3. Inquiry from feedback-seeking sources	2.71	.62	0.21**	0.20**	(.84)		
4. Monitoring	3.50	.64	0.12**	0.20**	0.35**	(.70)	
5. Creative performance	3.03	.84	0.23**	0.16**	0.23**	0.10*	(.84)

*Note:*

The diagonal values represent the alpha-reliability coefficients.

\*\* . Correlation is significant at the 0.01 level, two-tailed.

\* . Correlation is significant at the .05 level, two-tailed.

**TABLE 2 RESULTS OF THE HIERARCHICAL MULTIVARIATE REGRESSION FOR THE MODERATED MEDIATION MODEL FOR CREATIVE PERFORMANCE <sup>A</sup>.**

	Creative Performance		Inquiry from Various Sources		Monitoring		Creative Performance <sup>b</sup>	
	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>
<u>Control variables</u>								
Age	-.19	-3.81**	-.15	-3.00**	-.20	-4.17**	-.16	-3.39**
Gender	.12	2.49*	.08	1.57	-.08	-1.72	.10	2.14*
Role	-.05	-1.04	-.03	-.66	-.02	-.51	-.04	-.89
Tenure	-.08	-1.65	-.08	-1.77	-.04	-.88	-.07	-1.47
Dyad length	.03	.64	-.08	-1.73	-.03	-.69	.06	1.22
Company_dummy1	.00	.05	-.01	-.30	.03	.53	.00	.09
Company_dummy2	.01	.29	-.01	-.39	.02	.50	.00	.04
Company_dummy3	.00	.09	.00	.11	-.03	-.65	.00	.19
<u>Main effects</u>								
Cognitive Style	.21	4.63**	.17	3.19**	.11	2.22*	.19	4.09**
POS Creativity	.13	2.69**	.17	3.10**	.18	3.77**	.10	2.18*
$\Delta R^2$		.07**		.07**		.05**		.07**
<u>Interaction</u>								
POS Creativity x Cognitive Style	-.00	-.15	-.05	-.00	-.02	-.50	-.00	-.15
$\Delta R^2$		.00		.00		.00		.00
<u>Mediators</u>								
Inquiry from various sources							.15	3.16**
$\Delta R^2$							.03**	
Monitoring							.06	1.12
$\Delta R^2$							.00	

Note: n = 456 a. Gender (1: male; 2: female) POS Creativity = Perceived Organizational Support for Creativity; Cognitive Style: higher scores correspond to an innovative style; lower scores correspond to an adaptive style b. Beta weights for control variables are reported for the final step (i.e., including the mediator). \* p < .05 \*\* p < .01

**TABLE 3****Comparison of the baseline structural model to alternative models**

	$\chi^2$	df	$\Delta\chi^2$	Conclusion
Baseline model: mediated model (Figure 1)	312.14	96		
Alternative model 1: Hypothesized model POS creativity → creative performance relaxed Cognitive style → creative performance relaxed	288.08	94	24.06**	Significantly better fit than baseline model Both paths were significant
Alternative model 2: Alternative model 1 with monitoring → creative performance fixed to zero	288.77	95	.69	Most parsimonious model
Alternative model 3: Alternative model 2 with POS creativity → monitoring fixed to zero Cognitive style → monitoring fixed to zero	315.82	97	27.74**	Significantly worse fit than alternative model 2.

## Footnotes

1. Because univariate hierarchical regressions do not take into consideration the correlations among the dependent variables (i.e., monitoring and inquiry), we also analyzed our data using multivariate moderated regression in which we entered employees' feedback-seeking behaviors as the dependent variables and the control variables, hypothesized main effects (cognitive style and perceived organizational support for creativity) and interaction term as the independent variables (Tabachnick & Fidell, 2007). Because this additional analysis yielded similar results, we only report the results of the hierarchical regressions.
2. In another study, Tierney et al. (1999) found significant relations between context factors and a squared cognitive style term. They included this squared term because regression diagnostics of the residuals suggested nonlinearity between a cognitive style and supervisor ratings of creative performance. In our sample, however, regression diagnostics revealed linearity in the relationship between the independent variables and the outcome variables, so transformations were not needed.

As table 2 shows, employee's cognitive style and perceived organizational support for creativity did not interact in impacting variety in feedback-seeking sources. In keeping with prior creativity research, we also assessed the direct impact of the cognitive style x perceived organizational support for creativity interaction on creative performance ( $\beta = -.01, ns$ ). Given that our interaction term was neither related to variety in feedback-seeking sources, neither to our outcome variables, we could use the Baron and Kenny (1987) method. If the interaction would have been significant, Edwards and Lambert's (2007) approach for integrating moderation and mediation would have been more appropriate