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Employee incremental and radical creativity

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CHAPTER 2

TO BE (CREATIVE), OR NOT TO BE (CREATIVE)? A SENSEMAKING PERSPECTIVE TO INCREMENTAL AND RADICAL CREATIVITY

Abstract

By combining organizational role theory with core features of sensemaking perspective on creativity, we propose a conditional indirect relationship between creative role expectations and employee incremental and radical creativity that is mediated by creative self-expectations and moderated by perceived necessity for performance improvement and creative cognitive style. Using data collected from 325 supervisor-employee dyads in an academic institution in China, we find that creative role expectations are positively related to creative self-expectations, and that perceived necessity for performance improvement strengthens this positive relationship. Furthermore, we find that creative self-expectations directly relate to incremental creativity, but that creative cognitive style is a necessary boundary condition under which such self-expectations relate to radical creativity. Theoretical and practical implications are discussed.

INTRODUCTION

It is undeniable that employee creativity – that is, the development of novel and useful ideas about products, services, processes, and procedures (e.g., Woodman, Sawyer, & Griffin, 1993; Shalley et al., 2004) – has become a key contributor to organizational performance, growth, and competitiveness (Gilson, 2008; Gong, Zhou, & Chang, 2013). Never before have organizations stressed the importance of employee creativity as much as they do today (Barsh, Capozzi, & Davidson, 2008). Stressed so strongly, in fact, that creative roles are created, set, or established across a wide spectrum of jobs, including those that may traditionally not have required creative activities (Shalley, 2008; Shalley, Gilson, & Blum, 2000, 2009). Consistent with this trend in organizations to include creative roles in jobs, the impact of creative role expectations on employee creative and innovative behavior has received increasing research attention and empirical support (Gilson et al., 2012; Gilson & Shalley, 2004; Unsworth & Clegg, 2010; Unsworth et al., 2005; Yuan & Woodman, 2010), above and beyond other work environment characteristics (Scott & Bruce, 1994; Zhang & Zhou, 2014).

Despite evidence about the effectiveness of creative role expectations in increasing engagement in creative actions, more recent research suggests that the effect of creative role expectations on actual creative performance depends on specific characteristics of the actor and the context in which the actor is embedded (Kim, Hon, & Lee, 2010; Robinson-Morrall, Reiter-Palmon, & Kaufman, 2013; Shin et al., 2017). Compelling questions of why, when, and how the relationship between creative role expectations and employee creativity is present have not yet been fully explored. First, it remains unclear *why* creative role expectations relate to employee creativity. Previous research (e.g., Yuan & Woodman, 2010) has predominantly taken an instrumentality approach to creative role expectations in which creative role enactment is

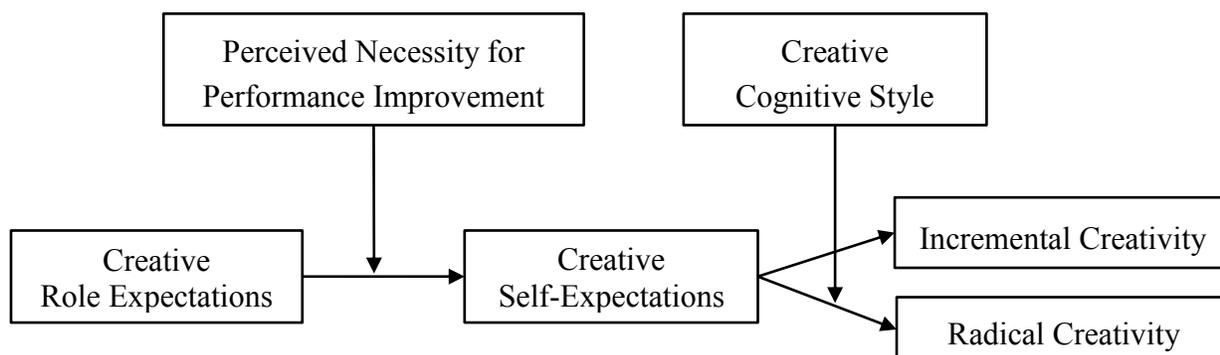
explained by employees' calculation of prospective benefits and costs. Such a calculative view toward in-role creative behavior, however, overlooks the fact that employees tend to actively interpret the meaning of facing creative role expectations and assimilate that meaning into their integrated sense of self at work (Weick, 1995; Weick, Sutcliffe, & Obstfeld, 2005). This is unfortunate because performing creatively at work requires some internal, sustaining force that can drive employees to persist through the various stages of the creative process. Combining insights from organizational role theory (Ilgen & Hollenbeck, 1991; Katz & Kahn, 1978) with a sensemaking perspective, we propose that creative role expectations cue employees to internalize creativity as a standard for the self (i.e., creative self-expectations) by assigning personal meaning to the occupation of creative roles. In turn, these creative self-expectations result in enhanced creative performance by setting in motion self-fulfilling prophecy effect (McNatt & Judge, 2004).

Second, it remains unclear *when* creative role expectations relate to employee creativity. Although creative role expectations in and of themselves can carry certain weight in influencing the sensemaking of creative actions (Tett & Burnett, 2003), their influence may be augmented by situationally specific cues (Weick, 1995; Weick et al., 2005). The plausibility feature of sensemaking suggests that employees are more likely to see the importance of creative role expectations when other contextual cues provide consistent data that justify that importance. Specifically, we argue that when employees perceive that the current performance condition of their work unit or organization calls for improvement, they can envision how the expected creative behavior will contribute to a higher cause, and thus expect a great deal from themselves to fulfill these role expectations and perform creatively. Therefore, the normative role expectations for creativity externally imposed by the organization may be especially likely to

elicit creative self-expectations when they act in concert with perceived necessity for performance improvement.

Third, it remains unclear *how* individuals personally enact creative roles. Although previous studies have demonstrated that creative role expectations can motivate general employee creativity (e.g., Robinson-Morrall et al., 2013; Kim et al., 2010; Yuan & Woodman, 2010; Unsworth et al., 2005), they have not considered potential differential effects on incremental and radical creativity. Incremental creativity refers to the generation of novel and useful ideas that imply only few and minor changes in existing products and processes, whereas radical creativity reflects breakthrough ideas that substantially alter existing products and processes (Madjar et al., 2011; Mumford & Gustafson, 1988). Previous research has shown that the generation of radical creative ideas requires more unconventional thinking and extensive cognitive processing than incremental creativity (Gilson et al., 2012; Gilson & Madjar, 2011; Jaussi & Randel, 2014; Madjar et al., 2011), which suggests that the motivational resource of creative self-expectations in and of themselves might be insufficient for employees to develop radically creative ideas. Due to such higher cognitive demands of radical creativity, an individual's creative cognitive style – that is, a preference for original and unusual approach to problem solving (Kirton, 1976; Miron-Spektor, Erez, & Naveh, 2004) – may be especially crucial to facilitate employees' radically creative efforts. Thus, we propose that self-expectations for creativity may be sufficient to elicit incremental creativity, but that a creative cognitive style may be necessary for employees to turn their creative self-expectations into radical creativity.

Figure 2.1 provides an overview of our conceptual model.

Figure 2.1 Overview of the hypothesized model

Through our investigation, we aim to contribute to creativity literature in several ways. First, building on organizational role theory and the sensemaking perspective on creativity, we posit that employees' self-expectations for creativity serve as a possible explanatory mechanism through which employees internalize role-based expectations for creativity and take action in the context of creative roles. By doing so, we highlight that creative role expectations can be a powerful extracted cue from the context that activates employees to make sense of their occupancy in creative roles (Drazin et al., 1999; Ford, 1996). Second, our study adds to the interactionist approach to creativity by showing that the interaction between two contextual characteristics may augment employees' intrinsic motivation to engage in creative activities via a sensemaking process (Shalley et al., 2004). That is, we examine whether perceived necessity for performance improvement may function as a contingent condition under which creative role expectations are interpreted as worthwhile to fulfill and hence facilitate the internalization of these role expectations. Third, we not only build on but also extend the self-fulfilling prophecy at work model by investigating how self-set expectations for creativity result in different levels of creative behavior (Carmeli & Schaubroeck, 2007). Specifically, we propose that self-expectations for creativity may have a direct effect on incremental creativity, and that its effect on radical creativity may be further qualified by employees' creative cognitive style. Our fourth

contribution is to the growing body of work focusing on differential effects of personal and contextual factors on incremental and radical creativity (e.g., Madajar et al., 2011). We theorize and test if the successful development of radical ideas, compared to incremental ideas, requires a higher cognitive threshold and thus critically depends on the cognitive tendency to think out of the currently guiding paradigm. Taken together, this research aims to identify the psychological mechanism and boundary conditions in the relationships between creative role expectations and employee incremental and radical creativity. Such an approach aligns with the notion that “creativity is best conceptualized [...] as a behavior resulting from particular constellations of personal characteristics, cognitive abilities, and social environments” (Amabile, 1983: 358).

THEORY AND HYPOTHESES DEVELOPMENT

Creative role expectations and creative self-expectations

Organizational role theory describes organizations as role systems consisting of “patterned activities of a number of individuals” (Katz & Kahn, 1978: 17) and contends that role expectations are “main elements in maintaining the role system and inducing the required role behavior” (Katz & Kahn, 1978: 189). Role expectations refer to one’s beliefs about what an organizational role entails, which represent an individual’s construal of what is necessary or required for successful role performance (Dierdorff & Morgeson, 2007; Ilgen & Hollenbeck, 1991). Even though expectations and requirements associated with work roles may serve as a structural activating force for role enactment, it is often positioned as distal to actual behavior. The sensemaking perspective suggests an important way through which role expectations are internalized as individuals strive to make sense of their role occupancy to make it meaningful (Weick, 1995; Weick et al, 2005), and this helps to explain the link between role expectations and role-related behavior.

To shed light on how employees draw on their personal selves to assume creative roles, it is important to note that perceptions of externally set role expectations for creativity are conceptually different from the internal creativity expectations that employees attribute to themselves. Creative role expectations, as an extracted cue from the organizational context, finely convey normative expectations that part of employees' outputs should be creative but leave processes and procedures to achieve creativity unspecified. Such role-based expectations confer employees the responsibilities to pursue new and improved ways of performing work tasks and allow them to decide when and how to respond creatively to the tasks (Kanter, 1988; Shalley, 2008). In contrast, self-expectations for creativity reflect the willingness to commit oneself to display creative behavior at work (Carmeli & Schaubroeck, 2007; Qu, Janssen, & Shi, 2017), which is sustained by the accessibility of personal resources (i.e., mental attention, emotional connections, and energetic activities) to achieve creative accomplishments (Eden & Ravid, 1982).

From a sensemaking perspective, employees tend to establish a connection between their sense of self and the occupation of certain roles for which their personal competencies and potentialities seem particularly required (i.e., person-in-role) (Kahn, 1992). Work roles that require creativity tend to be challenging (Tierney & Farmer, 2004; Unsworth et al., 2005) and call for substantial investments of personal resources such as domain-related knowledge, creative-thinking skills, and motivation (Amabile, 1983). The agents setting creative role expectations for employees usually do so based on their belief that those employees are able to meet and fulfill the creative requirements. Consequently, assignment to creative work roles may be interpreted by employees as a signal of others' confidence in one's ability to add creativity to the job (Tierney & Farmer, 2004). Such external confidence in their creative capacities enables

and motivates employees to rely on their personal qualities and set creativity expectations for themselves. They would feel efficacious and can satisfy their intrinsic need for competence (Ryan & Deci, 2000) if they succeed in fulfilling the role expectations for creativity. Moreover, jobs that require creativity entail discretion and autonomy for finding, exploring, and defining problems and generating new and useful ideas for problem solutions (Tierney & Farmer, 2004; Unsworth et al., 2005). This autonomy embedded in creative work roles is likely to induce feelings of self-determination that may intrinsically motivate employees to set creativity expectations for themselves (Amabile, Hill, Hennessey, & Tighe, 1994; Ryan & Deci, 2000). Thus, creative role expectations are meaningful for employees because creative work provides employees with prospects for satisfying their intrinsic needs for competence and autonomy. Such derived meanings and sensemaking may then lead to internalization of creative role expectations such that they will emanate from their sense of self. Accordingly, we propose that employees tend to transform role-based expectations for creativity into self-set expectations for creativity. Hence, our first hypothesis is:

Hypothesis 1: Creative role expectations are positively related to creative self-expectations.

Perceived necessity for performance improvement as a moderator

As the nature of work has become more flexible and enriched, holding a particular job or position in organizations is increasingly tasked with multiple behavioral expectations (Campbell, 1988), including expectations for task-specific behavior, creative behavior, safety behavior, helping colleagues, communication. The theoretical framework of contextual sensemaking (Weick, 1995; Weick et al., 2005) has suggested that the challenge for all employees is to discern the favorability of the context for taking certain type of action and decide if and when to act. As

such, employees are active to interpret the meaning of organizational cues and their implications for role enactment (Dutton, Ashford, Lawrence, & Miner-Rubino, 2002). Thus, when relevant contextual cues further signal the favorability and desirability of fulfilling a specific role, employees become more likely to internalize that role as their own.

We propose that perceived necessity for performance improvement can facilitate the internalization of role obligations for creativity because it helps employees to appreciate the value of introducing new ideas and thus develop a broader sense of significance in working on jobs with creativity expectations. Perceived necessity for performance improvement is defined as the extent to which an employee perceives that the current functioning and performance of his/her work unit or organization need to be improved (e.g., Yuan & Woodman, 2010). A suboptimal performance condition signals a problematic state of affairs and a need for change, which implies that it is worthwhile to search for new and better ways of doing things to improve the status quo (Yuan & Woodman, 2010; Zhou & George, 2001). As such, when employees perceive the necessity to improve the current situation, they are better able to envision how creative ideas about products, services, processes, or procedures would contribute to the performance of their work unit or organization, thereby leading to greater self-expectations to embody the expected creative behavior. In contrast, employees who perceive the current state of affairs as operating rather well may attach less psychological importance to creativity expectations among various in-role expectations subsumed within a position because it is difficult for them to see the urgency of performing creatively.

Empirical indications can be inferred from a recent study which examined how perceived innovation value for the organization would further moderate the two-way interaction of perceived innovation job requirement and intrinsic interest on innovative behavior (Shin et al.,

2017). In this study, the authors argued that perceived value of innovation for the organization helps low-intrinsic-interest employees understand the reason why innovation is required. Indeed, results showed that perceived innovation job requirement increases the actual engagement in innovative behavior when employees with low intrinsic interest in innovation interpret such a requirement as valuable to organizational effectiveness. Therefore, based on both theoretical reasoning and empirical indications, we predict the following:

Hypothesis 2: Perceived necessity for performance improvement moderates the positive relationship between creative role expectations and creative self-expectations, such that the relationship is stronger when perceived necessity for performance improvement is high rather than low.

Creative self-expectations and incremental and radical creativity

Self-expectations for particular role behavior reflect employees' internal standards they set for themselves, which are based on the personal meaning associated with that role. According to the self-fulfilling prophecy at work model labeled as the Galatea Effect (Eden, 1992), self-set expectations motivate employees to take actions consistent with their expectations, and those actions will increase the likelihood that expectations will be realized. As such, self-expectations for role performance represent a type of work motivation that can mobilize employees to exert greater amount of effort and persistence to fulfill role behavior (Eden, 1992). Thus, employees' self-standards for the role behavior they should exhibit at work will result in enhanced role performance (McNatt & Judge, 2004).

To examine how the Galatea Effect unfolds in the form of creative behavior, we differentiate incremental and radical creativity. While most people may associate creativity with dramatic breakthroughs, ideas that reflect continuity with the current paradigm can also be new

and useful (i.e. creative) and probably represent the most common type of creative contributions (Unsworth, 2001). Incremental creativity introduces few changes in existing frameworks and minor modifications to established practices and products (Madjar et al., 2011). The generation of incremental creative ideas is thought to occur through extensions or applications of existing cognitive structure within the existing framework (Dane, 2010; Mumford & Gustafson, 1988).

We use two lines of argumentation to suggest that creative self-expectations are positively related to incremental creativity. First, the creative dimension of the self seeks expression in the enactment of creative work roles (Kahn, 1992). Employees who add creativity as expectations for themselves are likely to view creativity as attractive and desirable and acquire a strong sense of accomplishment and personal satisfaction through creative role actualization, thereby showing greater behavioral persistence in creative courses of action. Second, based on the notion that individuals selectively notice, encode, and retain information that is consistent with their internal desires (Kunda, 1990), employees in a state of heightened creative self-expectations should be more motivated to attend to, explore, and analyze task-related information for creative purposes. Consequently, self-expectations for creativity mobilize individuals' cognitive resources to identify potential problems, figure out what's wrong, and think of new ways to approach work tasks (Zhang & Bartol, 2010). In line with our reasoning, some studies demonstrate that employees' personal expectations for creativity are positively related to creative involvement at work (Carmeli & Schaubroeck, 2007; Tierney & Farmer, 2004). Based on the key premise that creative potential is pervasive and can be capitalized through increased cognitive processing (cf. Kaufman & Beghetto, 2009; Runco, 2004), we propose that a strong sense of creative role self-expectations would be directly related to incremental creativity.

Hypothesis 3: Creative self-expectations are positively related to incremental creativity.

Creative cognitive style as a moderator

Although both incremental and radical creative outcomes can be recognized as novel and useful, only radical creative ideas for problem solutions meets the additional criterion of altering the very paradigm from which problems originated, which can be labeled as paradigm shift. Radical creativity offers ideas that differ substantially from the existing framework of practices and routines within an organization (Madjar et al., 2011), and often makes existing knowledge about products, services or procedures obsolete. To derive brand new ideas, individuals have to be able to flexibly reframe problems and to integrate seemingly unrelated perspectives and information (Dane, 2010; Madjar, et al., 2011; Mumford & Gustafson, 1988). Such higher cognitive threshold that radical creativity requires implies that creative cognitive style is integral to set-breaking ideation and the production of radical creativity. While the self-expectations for being creative at work drive creative role enactment, creative cognitive style may determine whether or not employees are able to turn their creative self-expectations into radical creativity.

We expect that creative cognitive style is particularly valuable for reaching dramatic breakthroughs because it facilitates the cognitive processing underlying creative idea generation. A cognitive style is an individual's preferred way of processing and organizing information (Carnabuci & Diószegi, 2015: 883), which influences how the individual deals with critical cognitive activities involved in the creative process, such as problem definition and representation, information gathering and the generation of alternative solutions. A creative cognitive style refers to the tendency to approach problems from original and unusual perspectives (Kirton, 1976, 1994). Employees with a creative cognitive style solve problems by redefining problems from different perspectives, integrating diverse information, and generating

unconventional solutions that deviate from the currently guiding paradigm (Kirton, 1976, 1994). They do things differently, prefer to propose breakthrough solutions over improving existing ones, while being less attentive to these solutions' feasibility and implementation within a given context (Miron-Spektor, Erez, & Naveh, 2011). These cognitive characteristics allow them to live up to creative self-expectations in the form of radical creativity.

In contrast, employees scoring low on creative cognitive style tend to find problem solutions by referring to precedents, using available information and adjusting their ideas to the expectations of others and the commonly accepted ways of doing things (Kirton, 1976, 1994). They are more adept at doing things better and generally suggest solutions that fit within the established framework. However, this approach often inhibits them from breaking away from the current paradigm, limiting the likelihood of generating truly novel ideas no matter how a great deal they expect themselves to be creative. Hence, creative cognitive style qualifies the nature of the relationship between creative self-expectations and radical creativity such that radical creativity can be a behavioral manifestation of creative self-expectations only for those high on creative cognitive style. Based on these lines of reasoning, we hypothesize the following:

Hypothesis 4: Creative cognitive style moderates the positive relationship between creative self-expectations and radical creativity, such that the relationship is stronger when creative cognitive style is high rather than low.

Integrated models for incremental and radical creativity

Taken together, the aforementioned hypotheses (Hypotheses 1, 2, 3, and 4) suggest that creative role expectations externally imposed by the organization have an indirect effect on employee incremental and radical creativity through creative self-expectations. The boundary conditions from creative role expectations to employee incremental and radical creativity,

however, are different, with perceived necessity for performance improvement acting as a first-path moderator for both forms of creativity and creative cognitive style as a second-stage moderator for radical creativity. In sum, we propose a first-stage moderated mediation model to clarify why creative role expectations can facilitate employee incremental creativity (through creative self-expectations) and under what condition (when employees perceive the necessity to improve the performance of their work units or organizations) the mediated relationship is more pronounced. Meanwhile, we propose a dual-stage moderated mediation model to clarify why creative role expectations can facilitate employee radical creativity (through creative self-expectations) and under what conditions (when employees have high levels of perceived necessity for performance improvement and have a creative cognitive style) the mediated relationship is more pronounced. Accordingly, we formulate two additional hypotheses to test moderated mediation models for incremental and radical creativity.

Hypothesis 5: Perceived necessity for performance improvement moderates the indirect relationship between creative role expectations and incremental creativity as mediated by creative self-expectations, such that the indirect relationship is stronger when perceived necessity for performance improvement is high rather than low.

Hypothesis 6: Perceived necessity for performance improvement (as first-path moderator) and creative cognitive style (as second-path moderator) moderate the indirect relationship between creative role expectations and radical creativity as mediated by creative self-expectations, such that the indirect relationship is stronger when perceived necessity for performance improvement and creative cognitive style are high rather than low.

METHOD

Participants and procedure

We collected field data in a large Chinese academic institute specialized in scientific research. In this organization, employees possess very different areas of expertise such as biology, chemistry, computer science, electrical engineering, and geography, and their work primarily involves the creation or application of knowledge. Hence, this setting is appropriate to test our hypotheses because it provides a real illustration of in-role creative performance.

We contacted 493 leader-employee dyads from 80 scientific groups to participate in the study. Respondents (leaders and their respective employees separately) were briefed on the purposes and procedures of the survey, including issues of confidentiality (e.g., directly returning questionnaires to the researcher using sealed envelopes). Employees provided their perceptions of creative role expectations, perceived necessity for performance improvement, creative self-expectations and creative cognitive style. Additionally, these employees' direct leaders provided performance appraisals for incremental and radical creativity. We assigned an identification code to each questionnaire to link employees' responses with their leaders' evaluations. Eventually, we obtained 325 usable leader-employee dyads out of 493 possible dyads, yielding an effective response rate of 65.92%. The 325 employees were nested within 69 leaders.

Whereas there were 47 employees who did not complete their demographic information, they did fill out items measuring independent, mediating, and moderating variables used in present study. To fully utilize all information available in the sample, we used multiple imputation to replace missing values on gender, age, education, and job tenure with plausible values. All models were rerun excluding the cases with missing values. The pattern of findings

on the substantive relationships in our model remains unchanged when the cases with missing values were excluded.

The sample consisted of 169 male and 143 female employees (13 employees did not report their gender), with an average age of 30.87 years. The participants reported one of three educational levels (8 employees did not report their educational level): bachelor degree (3.15%), master degree (35.02%), and doctoral degree (61.83%). The average job tenure was 5.18 years.

Measures

The English survey items were translated into Chinese and then back-translated into English by two independent bilingual experts (Brislin, 1980). This process was repeated until agreement among the translations was achieved.

Creative role expectations. We slightly adapted Yuan and Woodman's (2010) innovativeness as a job requirement scale to measure the extent to which employees perceive role expectations for creativity as part of their jobs. This scale comprises five items, which are rated on a seven-point scale ranging from 1 (very inaccurate) to 7 (very accurate). A sample item is "Suggesting new ideas is part of my job duties" ($\alpha = .91$).

Perceived necessity for performance improvement. A three-item instrument developed by Yuan and Woodman (2010) was used to measure employees' perceptions of the necessity to improve the performance of their work unit or organization. On a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), participants indicated the extent to which they agreed or disagreed with statements including "The performance of my organization needs to be improved" ($\alpha = .87$).

Creative self-expectations. We measured employees' self-expectations for creativity with a three-item scale developed by Carmeli and Schaubroeck (2007). The response options again

ranged from 1 (not at all) to 7 (to a very great extent). A sample item is “I expect myself to be creative at work” ($\alpha = .79$).

Creative cognitive style. To assess creative cognitive style, Miron-Spektor et al.’s (2004) four-item creativity subscale of personal cognitive style was used. The rating scale for items anchored at 1 (strongly disagree) and 7 (strongly agree). A sample item is “I prefer tasks that enable me to think creatively” ($\alpha = .81$).

Employee incremental and radical creativity. Leaders’ ratings of incremental and radical creativity were based on Madjar et al.’s (2011) measures with three items each. The items, rated from 1 (never) to 7 (always), captured the frequency that employees suggested incremental and radical creative ideas to their supervisors. A sample item for incremental creativity scale is “This employee suggests small adaptations to the existing ways of doing things” ($\alpha = .92$). A sample item for radical creativity scale is “This employee suggests radically new ways for doing work” ($\alpha = .94$).

Control variables. We collected data on employee demographic characteristics that were shown to be associated with creativity. Prior research has shown potential gender differences in creative achievements (cf. Baer & Kaufman, 2008), creative self-expectations (e.g., Karwowski, Lebuda, Wisniewska, & Gralewski, 2013), and creative behavior (e.g., Zhang & Bartol, 2010), we therefore controlled for gender. Other research has demonstrated that the frequency and radicalness of scientific creativity vary substantially over age (cf. Lehman, 1960; Jones & Weinberg, 2011), we therefore controlled for age (in years). Education and job tenure reflect domain-relevant expertise, which is essential to creativity (Amabile, 1983; Tierney & Farmer, 2002, 2004). We originally collected educational level with five categories ranging from 1 for “high school” to 5 for “Ph.D.”. Responses predominantly fell into two of the five categories:

master's degree (34.15%) and Ph.D. (60.31%). Thus, we recoded education into a dichotomous variable with 0 for "master's degree or less" and 1 for "Ph.D.". We believe this dichotomization is meaningful because postgraduate education provides additional domain-relevant knowledge, further development of cognitive enhancement, and opportunities to practice problem-solving skills (Tierney & Farmer, 2002). Job tenure was the length of work experience (in years).

Analytical strategy

We conceptualized all variables and hypotheses at the individual level of analysis. Because each group leader rated incremental and radical creativity for multiple employees, our observations may violate the assumption of independence. The corresponding values of intra-class correlation coefficient (ICC_1) for incremental and radical creativity were .43 and .44, indicating the multiple evaluations per leader were substantially correlated. Therefore, we conducted multilevel analyses to examine the effects of individual level predictors on creative performance while taking into account the possible leader effects. We analyzed our data in Mplus 7.4 (Muthén & Muthén, 1998-2012) to conduct an integrative test of the first-stage moderated mediation model for incremental creativity and the dual-stage moderated mediation model for radical creativity. Because the bootstrapping method of resampling cannot be applied to multilevel analyses, we used the Monte Carlo approach of resampling to construct confidence intervals for the indirect and conditional indirect effects attributable to creative self-expectations (Preacher, Zyphur, & Zhang, 2010). Specifically, we implemented an online interactive program (Selig & Preacher, 2008) by using the parameter estimates and their associated asymptotic covariance matrix which can be found by requesting TECH3 output in Mplus 7.4. In addition, we standardized all predictors to examine first-stage and second-stage interaction effects.

RESULTS

Confirmatory factor analyses

We conducted confirmatory factor analyses (CFAs) in Mplus 7.4 (Muthén & Muthén, 1998-2012) to check the convergent and discriminant validity of our main study variables. We used comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the root-mean-square error of approximation (RMSEA) and the standardized root mean square residual (SRMR) to assess model fit. Table 2.1 reports a series of CFAs to compare our intended factor structure to other alternative measurement models. As Table 2.1 demonstrates, our focal six-factor structure achieved quite good fit with the data ($\chi^2[174] = 276.90$, CFI = .98, TLI = .97, RMSEA = .04, SRMR = .04) and provided a significantly better fit than other alternative models, supporting the distinctiveness of these six constructs. We hence proceeded to test the overall model with path analyses.

Descriptive statistics and correlations

Means, standard deviations, internal consistency reliabilities, and bivariate correlations for all variables are presented in Table 2.2. The correlation table shows that employee gender, age, job tenure, and educational level are all correlated with one or more of the study variables. We therefore retained them as controls in our analyses (cf. Becker, 2005). Notably, the pattern of results remained unchanged when analyzed without these control variables.

Hypotheses testing

Table 2.3 presents the results of the hypotheses testing. Hypothesis 1 proposed a positive relationship between creative role expectations and creative self-expectations. As shown in Table 2.3, creative role expectations were found to be positively related to creative self-expectations ($\gamma = .59$, $p < .001$), providing support to Hypothesis 1.

Table 2.1 Model fit results for confirmatory factor analyses

Model	χ^2	<i>df</i>	$\Delta\chi^2(\Delta df)$	CFI	TLI	RMSEA	SRMR
1. Hypothesized six-factor model	276.90	174		.98	.97	.04	.04
2. Five-factor model (creative role expectations and creative self-expectations on one factor)	493.52	179	216.62(5) ^{***}	.93	.92	.07	.05
3. Four-factor model (creative role expectations, creative self-expectations and creative cognitive style on one factor)	783.37	183	506.47(9) ^{***}	.86	.84	.10	.07
4. Three-factor model (employee-rated measures on one factor, incremental and radical creativity)	1294.76	186	1017.86(12) ^{***}	.75	.72	.14	.10
5. Two-factor model (employee-rated measures on one factor, leader-rated measures on one factor)	1881.88	188	1604.98(14) ^{***}	.61	.57	.17	.12
6. One-factor model	2938.44	189	2661.54(15) ^{***}	.37	.30	.21	.17

Note. $N = 325$. All alternative models were compared with the hypothesized six-factor model. All $\Delta\chi^2$ are significant at $p < .001$.

Table 2.2 Means, standard deviations, and correlations

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Gender	0.46	0.50										
2. Age	30.87	5.51	.05									
3. Education	0.62	0.49	-.11*	.20**								
4. Job tenure	5.18	5.92	.15*	.84**	-.02							
5. Creative role expectations	5.32	1.02	-.07	.06	.18**	.04	(.91)					
6. Perceived necessity for performance improvement	4.87	1.13	-.01	.12*	.02	.10†	.13*	(.87)				
7. Creative self-expectations	5.49	0.93	-.05	.02	.18**	-.00	.62**	.13*	(.79)			
8. Creative cognitive style	4.82	0.99	-.19**	.07	.01	.02	.42**	.12*	.47**	(.81)		
9. Incremental creativity	5.08	1.05	.06	.12*	.14*	.13*	.10†	.02	.17**	.03	(.92)	
10. Radical creativity	4.65	1.27	-.17**	.04	.35**	-.01	.21**	-.01	.23**	.16**	.48**	(.94)

Note. $N = 325$. Values in parentheses are Cronbach's alpha coefficients. For gender, 0 = "male", 1 = "female".

† $p < .1$. * $p < .05$. ** $p < .01$.

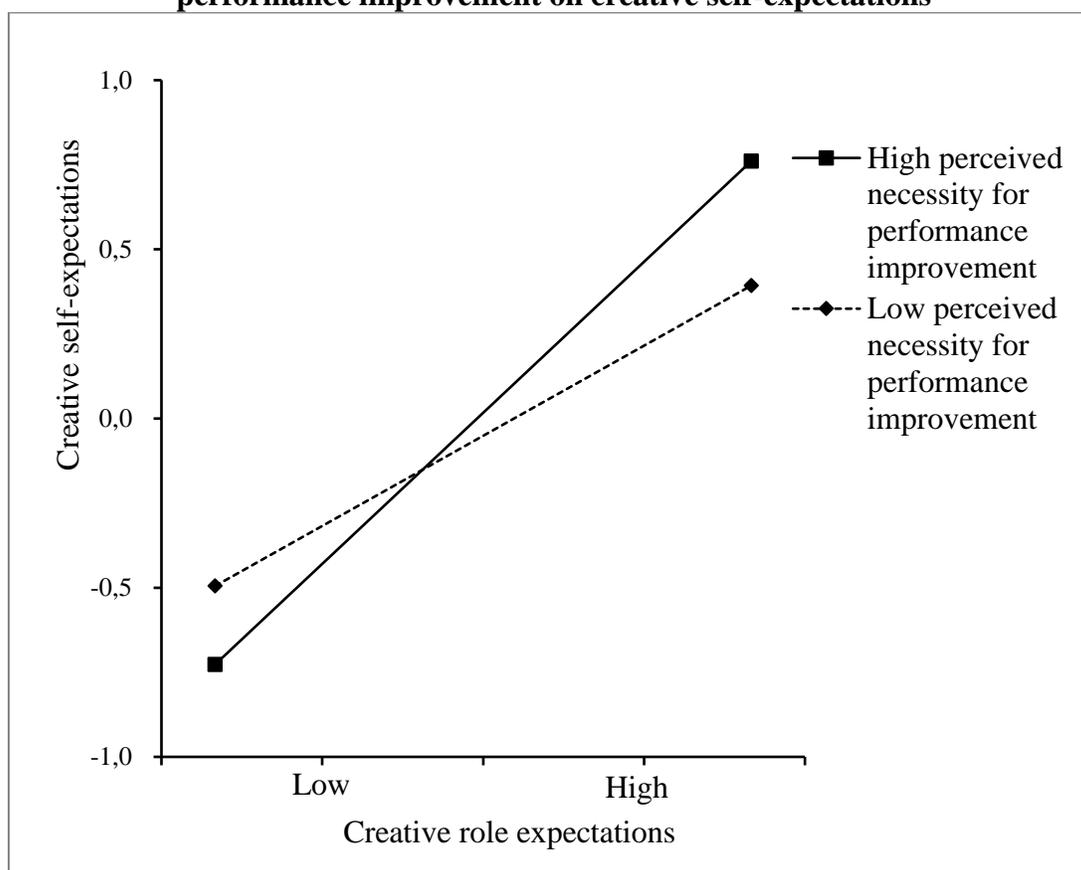
Table 2.3 Results of moderated mediation analyses

Predictor	Creative self-expectations		Employee incremental creativity		Employee radical creativity	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Gender	.01	.05	.01	.04	-.11*	.05
Age	-.07	.10	.01	.11	-.04	.05
Education	.09*	.04	.15*	.06	.30***	.07
Job tenure	.03	.09	.14	.10	-.04	.13
Creative role expectations	.59***	.08	-.05	.07	.02	.08
Perceived necessity for performance improvement	.03	.05				
Creative role expectations × Perceived necessity for performance improvement	.15**	.05				
Creative self-expectations			.17*	.08	.14†	.08
Creative cognitive style			.01	.06	.09	.07
Creative self-expectations × Creative cognitive style			.03	.04	.09*	.04

Note. $N = 325$. † $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Hypothesis 2 stated that perceived necessity for performance improvement augments the positive relationship between creative role expectations and creative self-expectations. Indeed, the interaction effect of creative role expectations and perceived necessity for performance improvement on creative self-expectations was significant and positive ($\gamma = .15, p < .01$). Simple slopes test demonstrated that creative role expectations were more positively related to creative self-expectations when employees perceived higher ($\gamma = .74, p < .001; M + 1SD$) rather than lower ($\gamma = .44, p < .001; M - 1SD$) necessity for performance improvement (See Figure 2.2 for illustration). Hence, Hypothesis 2 was supported.

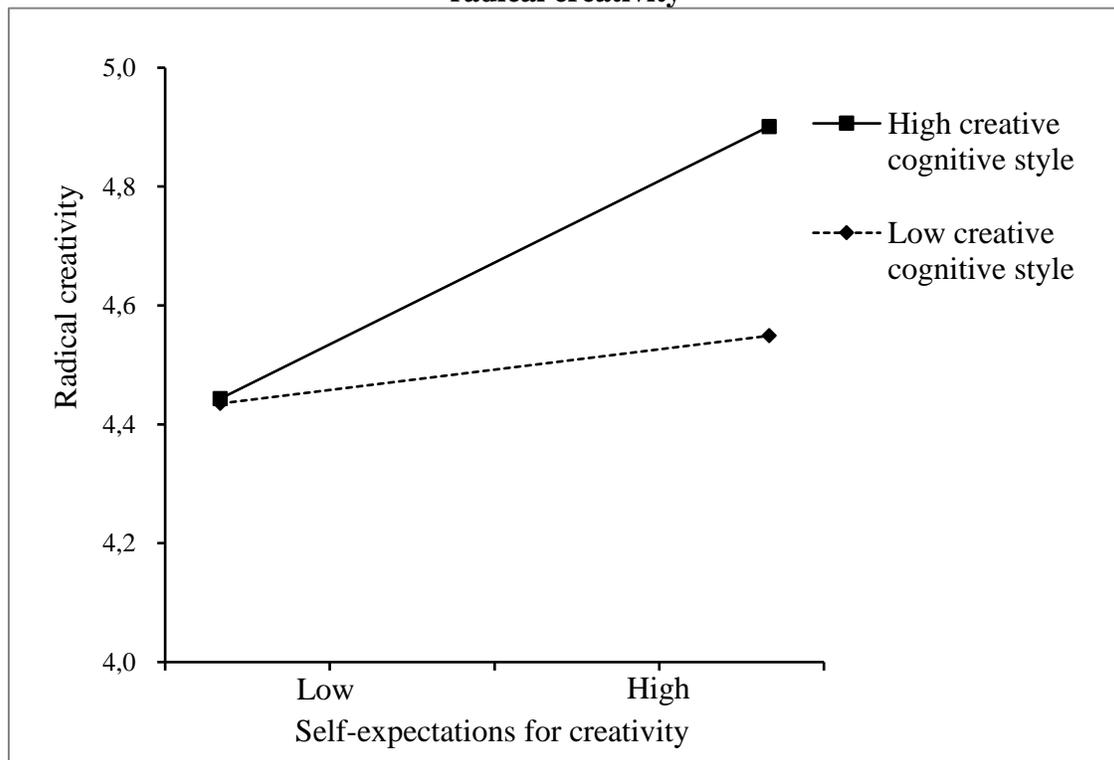
Figure 2.2 The interaction effect of creative role expectations and perceived necessity for performance improvement on creative self-expectations



Hypothesis 3 suggested that creative self-expectations are positively related to incremental creativity. As indicated in Table 2.3, creative self-expectations had a significant positive relationship with incremental creativity ($\gamma = .17, p < .05$), supporting Hypothesis 3.

Hypothesis 4 suggested that the relationship between creative self-expectations and radical creativity depends on creative cognitive style such that creative self-expectations are more positively related to radical creativity when creative cognitive style is high rather than low. Table 2.3 shows that creative self-expectations interacted with creative cognitive style to predict radical creativity ($\gamma = .09, p < .05$). The pattern of this interaction was illustrated in Figure 2.3. Specifically, creative self-expectations were significantly and positively related to radical creativity ($\gamma = .23, p < .05$) for employees with a high creative cognitive style ($M + 1SD$), whereas this relationship ($\gamma = .06, ns$) was nonsignificant for those with a low creative cognitive style ($M - 1SD$). As such, these results supported Hypothesis 4.

Figure 2.3 The interaction effect of creative self-expectations and creative cognitive style on radical creativity



Hypothesis 5 stated that the indirect effects of creative role expectations on incremental creativity through creative self-expectations is contingent upon perceived necessity for performance improvement. To test the first-stage moderated mediation model for incremental creativity, we adopted Monte Carlo approach to construct confidence intervals for indirect relationships between creative role expectations, creative self-expectations, and incremental creativity at higher ($M + 1$ SD) and lower levels ($M - 1$ SD) of perceived necessity for performance improvement. With 20,000 Monte Carlo replications, we found that the indirect effect of creative role expectations on incremental creativity through creative self-expectations was stronger when perceived necessity for performance improvement was high (indirect effect = .13; CI = .021 to .242, see Table 2.4) as compared to when perceived necessity for performance improvement was low (indirect effect = .08; CI = .012 to .156, see Table 2.4). Thus, Hypothesis 5 was supported.

Hypotheses 6 suggested that the indirect effect of creative role expectations on radical creativity through creative self-expectations depends on both perceived necessity for performance improvement and creative cognitive style. To test the hypothesized dual-stage moderated mediation model for radical creativity, we estimated how the indirect effect of creative role expectations on radical creativity through creative self-expectations varied at higher ($M + 1$ SD) and/or lower ($M - 1$ SD) levels of perceived necessity for performance improvement and higher ($M + 1$ SD) and/or lower ($M - 1$ SD) levels of creative cognitive style. Table 2.4 shows that creative self-expectations mediated the effect of creative role expectations on radical creativity when both perceived necessity for performance improvement and creative cognitive style were high (indirect effect = .17; CI = .033 to .318) and when perceived necessity for performance improvement was low and creative cognitive style was high (indirect effect = .10

Table 2.4 Summary of indirect effects of creative role expectations on incremental and radical creativity through creative self-expectations

Conditions	Indirect effects	95% confidence interval	
		Lower limit	Upper limit
Incremental Creativity			
Low perceived necessity for performance improvement	.08	.012	.156
Average perceived necessity for performance improvement	.10	.017	.195
High perceived necessity for performance improvement	.13	.021	.242
Radical Creativity			
Low perceived necessity for performance improvement, low creative cognitive style	.03	-.040	.113
Low perceived necessity for performance improvement, average creative cognitive style	.06	-.005	.155
Low perceived necessity for performance improvement, high creative cognitive style	.10	.019	.208
Average perceived necessity for performance improvement, low creative cognitive style	.03	-.054	.144
Average perceived necessity for performance improvement, average creative cognitive style	.08	-.007	.194
Average perceived necessity for performance improvement, high creative cognitive style	.14	.027	.257
High perceived necessity for performance improvement, low creative cognitive style	.04	-.070	.178
High perceived necessity for performance improvement, average creative cognitive style	.11	-.009	.238
High perceived necessity for performance improvement, high creative cognitive style	.17	.033	.318

Note. $N = 325$. Based on 20,000 Monte Carlo samples.

CI = .019 to .208). In the other two combinations of perceived necessity for performance improvement and creative cognitive style (high-low, low-low), the indirect effects of creative role expectations on radical creativity through creative self-expectations were nonsignificant (see table 2.4). Hence, these results confirmed Hypothesis 6.

Supplementary analyses

Because prior research has mainly focused on the instrumentality-based reason to account for the fulfillment of creative role expectations, we conducted additional analyses to evaluate creative self-expectations' unique ability to mediate the effect of creative role expectations on creative behavior above and beyond employees' cognitive appraisal of personal consequences. By including expected positive performance outcomes and expected image gains as simultaneous mediators in our hypothesized model (Preacher & Hayes, 2008), we were able to determine the relative magnitudes of the different mediating mechanisms that linked creative role expectations to employee incremental and radical creativity.

Specifically, we included expected positive performance outcomes and expected image gains together with self-expectations for creativity as mediators within a single integrated model. Expected positive performance outcomes were measured by Yuan and Woodman's (2010) three-item scale ($\alpha = .85$). Expected image gains were measured by four items (Yuan & Woodman, 2010; $\alpha = .92$). Results showed that including instrumentality-based considerations as mediators in the analyses did not affect the direction of results reported above, albeit that the path from creative self-expectations to incremental creativity dropped to marginal significance ($\gamma = .15, p < .10$). This is likely due to the suppressing effect of expected positive performance outcomes and expected image gains and the attendant loss of statistical power. We also found that creative role expectations were positively related to expected positive performance outcomes ($\gamma = .55, p <$

.001) and expected image gains ($\gamma = .31, p < .001$). However, neither expected positive performance outcomes ($\gamma = -.03, ns$) nor expected image gains ($\gamma = .07, ns$) had a significant effect on radical creativity, and expected image gains only had a marginally significant effect on incremental creativity ($\gamma = .11, p < .10$). Overall, these findings demonstrate the robustness of the mediating role of creative self-expectations in explaining the effects of creative role expectations on employee incremental and radical creativity.

DISCUSSION

We examined why, when, and how creative role expectations result in incremental and radical creativity. Combining organizational role theory with the sensemaking perspective on creativity, we proposed and found that creative role expectations externally imposed by the organization do positively relate to creative self-expectations in employees, and that perceived necessity for performance improvement strengthens this positive relationship. Furthermore, we suggested and demonstrated that creative self-expectations are positively related to incremental creativity, and that creative cognitive style acts as a boundary condition for turning such self-expectations into the generation of radical creative ideas. Finally, we found empirical evidence for our first-stage moderated mediation model for incremental creativity whereby the indirect effect of creative role expectations on incremental creativity via self-expectations for creativity is more pronounced when employees perceive there is necessity to improve the current performance of their work unit or organization. Our survey results also provided support for the dual-stage moderated mediation model for radical creativity such that the indirect effect of creative role expectations on radical creativity via creative self-expectations is stronger when both perceived necessity for performance improvement and creative cognitive style are high as opposed to low.

Theoretical implications

Our theorizing and empirical findings have implications for various streams of literature, particularly for the literature on organizational role theory and the sensemaking perspective on creativity and the more specific literature on creative role expectations, incremental and radical creativity, and creative cognitive style.

First, we contribute to organizational role theory (Ilgen & Hollenbeck, 1991; Katz & Kahn, 1978) and the sensemaking perspective on creativity (Drazin et al., 1999; Ford, 1996) by identifying self-expectations for creativity as a process mechanism to explain how employees make sense of role expectations for creativity and how their sensemaking efforts affect subsequent role enactment. Our findings suggest that creative role expectations trigger a sensemaking process through which employees infuse personal selves into the creative roles and transform the role-based expectations for creativity into self-set expectations for creativity, which in turn are enacted behaviorally. Prior research has mainly focused on an instrumental view to interpret the effect of innovation job requirement on required innovative behavior (e.g., Yuan & Woodman, 2010). Our sensemaking approach highlights the meaning of creative role expectations to the self in the sense that employees can thrive and fulfill their creative potentials in the form of in-role creative performance.

Second, as an extension of our first contribution, this study contributes to research on contextual sensemaking in organizations (e.g., Dutton et al., 2002) by revealing how the interaction between multiple contextual cues provides sufficient sense to affect employees' intrinsic motivation to undertake creative actions. In particular, we identify perceived necessity for performance improvement as a contingency condition shaping the relation between external role expectations for creativity, creative self-expectations, and creative behavior. Our results

suggest that employees are more likely to realize the urgency of expected creative behavior when they perceive that the performance of their work unit or organization needs to be improved.

While creative role expectations serve as the institutional, normative cue to instigate employees' self-expectations for creativity, perceived necessity for performance improvement gives diagnostic, specific information to interpret how performing the expected creative behavior will contribute to organizational survival and development. Our theoretical logic is in line with a recent study conducted by Shin and colleagues (2017), who also employed a sensemaking perspective to demonstrate that employees with low intrinsic interest in innovation are likely to comply with innovation job requirement when they endorse the value of innovation requirement for the organization. Moreover, this study also contributes to the interactionist perspective on creativity by showing how contextual characteristics interact with one another to influence employee creativity via the sensemaking process (Shalley et al., 2004; Woodman et al., 1993).

Further, it is worth noting that even in case of a low perceived necessity for performance improvement, employees internalize a great deal of creative role expectations. This seems to suggest that creative role expectations in and of themselves carry substantial weight to facilitate the internalization and integration of work roles. This finding provides empirical evidence for the assertion that “the dominant defining property of human organizations is the recurrence of expected behavior patterns, and that recurrence reflects individual compliance with the expectations of organizational roles” (Katz & Kahn, 1978: 194). One possible explanation for substantial acceptance of creative role expectations may lie in the fact that the source (i.e., the occupancy of positions in organizations) of expected activities is legitimate and its form (i.e., role expectations) and substantive content (i.e., creativity) are appropriate to the source. As such, creative role expectations may generate harmonious passion (Vallerand et al., 2003), a state of

autonomous internalization in which individuals fully accept a role activity as important for themselves and experience a sense of personal enjoyment to do so. This internalization process seems to be rooted in endorsement of the values of the creative activity and thus sustains role-related action even in situations in which the perceived necessity for performance improvement is not very high.

Third, our study contributes to an increasing body of research that examines differential effects of certain antecedents on incremental and radical creativity (Gilson et al., 2012; Gilson & Madjar, 2011; Jaussi & Randel, 2014; Madjar et al., 2011). More specifically, we find that self-expectations for creativity function as a motivational force that directly drives employees to generate ideas that incrementally improve existing products and processes and that creative cognitive style is crucially needed for turning such self-expectations into ideas that radically alter the status quo. Creativity researchers have noted that the fundamental difference in the nature of the two types of creativity is that incremental creativity tends to operate within the established paradigms whereas radical creativity attempts to steer outside the accepted modes of thought and action (Dane, 2010; Mumford & Gustafson, 1988). Hence, our results support the conceptual distinction between incremental and radical creativity and particularly highlight the higher cognitive threshold for developing radical breakthrough ideas. Previous studies have established the advantages of creative thinking style for general creativity (e.g., Tierney, Farmer, & Graen, 1999) and investigated individual differences in problem-solving style as a key boundary condition regulating the effects of contextual factors on employee creativity or innovation (e.g., Baer, Oldham, & Cummings, 2003; Carnabuci & Diószegi, 2015), but remain silent on how creative thinking tendency plays a moderating role for radical creativity. Thus, our results also add to the literature on creative cognitive style by showing that highly creative ways of thinking

offer important and unique benefits in facilitating employee radical creativity (Kirton, 1976, 1994; Miron-Spektor et al., 2004, 2011).

Practical implications

Our research has several implications for managers and practitioners about how to enhance employee incremental and radical creativity. First, a core message from the present study is that setting role expectations for creativity can be an effective strategy for organizations to encourage employees to perform creatively at work. These role expectations can be set in various ways, for example, by explicitly incorporating creativity into job descriptions or by clearly communicating that part of employees' outputs should be creative (Shalley 2008; Yuan & Woodman, 2010). Moreover, our results indicate that perceived necessity for performance improvement is especially useful in facilitating employees to draw on themselves to assume creative roles because employees who seek to improve the current performance of their work unit or organization are more likely to recognize the value of fulfilling creative role expectations. Hence, if an organization has a particularly strong mission for creativity, managers should not only formalize creativity expectations into a position but also sensitize employees about the potential room for improvement. Managers can also directly explain the rationale behind setting creative role expectations so that employees can understand that finding new and better ways of doing things in the conduct of daily work tasks will ultimately contribute to the performance of their work unit or organization.

Second, our findings indicate that while self-expectations for creativity motivate employees to initiate and sustain efforts to engage in creative actions, creative cognitive style qualifies whether the ideas generated are more incremental or radical. While self-expectations for creativity is sufficient for employees to generate incrementally creative ideas, the successful

development of radical creative ideas requires employees to be high on creative cognitive style. These results highlight that managers need to collect data on employees' cognitive style through the use of assessment instruments. These data would help managers to improve personnel placement so as to achieve the desired form of creative ideas, depending on the needs of the project at hand. For example, if a manager wants to introduce major breakthroughs to refresh the company's product lines, they need to recruit or arrange employees who have a cognitive preference for original and unusual problem solving. In addition, although problem-solving style seems not to be readily altered during a short period of time (Kirton, 1994), creative cognitive style essentially reflects the ingredients of creativity-relevant skills (Amabile, 1983), which could be enhanced through training and development programs. Managers can consider investing in skill development programs specific for creativity, which would be helpful for employees to enhance cognitive fluency and originality, obtain flexible ideational skills, and develop their own strategies for creative thinking (Clapham, 2003).

Limitations and future directions

Although the present study has clear practical and theoretical implications, there are also several methodological and theoretical limitations that warrant careful interpretations of our results. In terms of methodological issues, we have employed a cross-sectional design within one specific population in which all but the incremental and radical creativity variables were measured among employees, which bears several limitations. First, the correlational nature of our study precludes a clear justification of the direction of causality. While the hypothesized causal relations among our variables accord well with the principles of organizational role theory and the sensemaking perspective on creativity, it is possible that employees' creative accomplishments might affect their perceptions of role expectations, judgements toward current

performance condition in their work unit or organization, and self-expectations for creativity. To rule out such an alternative explanation, future research could employ longitudinal field investigations or controlled field experiments to substantiate the assumed causal links. Second, there is a potential that the common method variance in our study (25.10%) has inflated the magnitude of the linear effects. However, common method variance tend to attenuate the strength of interaction effects, making it more difficult to be detected in regression estimates (cf. Siemsen, Roth, & Oliveira, 2010). Given that we have found two significant interaction effects, and that we have employed supervisor ratings for creativity, we are confident that common method variance is unlikely to have a large statistical impact on our primary conclusions. Third, the fact that we collected data in a single job family in one organization has merits but also limitations. Although this allows us to rule out potentially confounding job-related explanations (e.g., job complexity) for the observed findings, it is possible that the occupation we studied may have influenced our findings. As participants in our sample work in the field of academia, the strong occupational identity in this sample might have promoted the integrative processes of persons in creative roles. Future research conducted in other occupations would strengthen the generalization of the present findings. Taken together, these methodological issues have the potential to bias our results. Although we are confident that they are unlikely to severely inflate our results, future research could employ a longitudinal design in different work samples to tackle these issues.

In terms of theoretical issues, we have made several conceptual decisions that serve as both strengths and limitations of our research. First, while we specifically focused on the sensemaking and self-fulfilling process to clarify the relationship between creative role expectations and employee creativity, self-expectations are not the sole psychological

mechanism driving in-role creative performance. Our study and the previous one conducted by Yuan and Woodman (2010) have suggested that internalization and calculation of personal consequences are two differential motivational mechanisms driving role behavior in organizations. One avenue for future research is to articulate alternative motivational, or cognitive and affective mechanisms to account for the compliance with role expectations.

Second, we limited our study to focus on perceived necessity for performance improvement as a contingent factor in facilitating the internalization of creative role expectations. More future work needs to be done to identify other moderators that may influence employees' responses to external role expectations for creativity. Individual characteristics such as proactive personality (Crant, 2000), work promotion focus (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008), and growth need strength (Shalley et al., 2009) essentially capture the motivational readiness to embrace creative roles and therefore may influence the extent to which employees invest their psychological resources into creative roles. Additionally, research has shown that the complementarity between supportive work environment and creativity job requirement of is crucial to employee job satisfaction and intentions to leave (Shalley et al., 2000). Thus, contextual conditions that facilitate fulfilling creative role expectations are also possible moderators in the relationship between creative role expectations and employee creativity.

Third, we have shown that creative cognitive style is especially important for turning creative self-expectations into radical creativity, but how to enhance incremental creativity still awaits further exploration. For example, systematic cognitive style might be needed to develop incremental ideas for problem solution because it involves the tendency to rely on consistent rules and disciplinary boundaries, and logically evaluate various alternatives (Sagiv, Arieli,

Goldenberg, & Goldschmidt, 2010). Moreover, as cognitive persistence is characterized by effortful and in-depth exploration of only a few categories or perspectives (Nijstad, De Dreu, Rietzschel, & Baas, 2010), it could be the case that cognitive persistence serves as a boundary condition that facilitates the production of incremental creative ideas. It is also possible that creativity is context-specific (Ford & Gioia, 2000) and that incremental creativity may reflect employees' adaptations to relatively stable business environments.

Another future direction is to examine the extent to which employees see creative aspect as central to themselves relative to various other role activities and how creative role centrality relates to creative behavior. An employee's conceptualization of his or her work roles can be described as a set of concentric circles (Morrison, 1994), which represent a systemic organizing structure for multiple role expectations. The importance of certain role ranges from low to high within the overall work identity (Farmer & Van Dyne, 2010). Given that role centrality reflects priorities that guiding actions across situations and over time, it is possible that employees may base on the level of psychological importance of a particular role to gauge the extent to which they identify with that role. Thus far, research efforts have roughly differentiated creative behavior as in-role or extra-role. However, a finer-grained analysis is needed to address the centrality of creative role relative to other job duties and responsibilities.

Last but not the least, while we framed creative role expectations as conducive to the occurrence of in-role creative behavior, the highly demanding nature of facing role expectations for creativity may also lead to stress reactions, relationship tensions, and other unintended consequences for role occupants (Janssen et al., 2004). In order to capitalize on the benefits of setting creativity as in-role expectations while minimizing its costs, we need to gain a more comprehensive understanding of its bright and dark sides. Future research is much needed to

consider a broader range of individual outcomes that role-based creativity expectations may bring about for employees who face such expectations. It would be valuable if future research could explore the process mechanisms and boundary conditions that elicit the positive or negative outcomes of creative role expectations.

Conclusion

This study contributes to a growing literature on the distinction between incremental and radical creativity and provides empirical evidence for differential nurturing conditions needed for incremental and radical creativity. Building on organizational role theory and the sensemaking perspective on creativity, the current study takes one step towards a better understanding of how employees make sense of role expectations for creativity and enact creative roles. Specifically, we identify creative self-expectations as a mediator to explain why creative role expectations promote employee incremental and radical creativity. Perceived necessity of performance improvement further facilitates the integration of role expectations for creativity into the sense of self. In turn, self-expectations for creativity directly lead to the generation of incremental creative ideas. However, the cognitive threshold for radical creativity is higher, requiring employees to be high on creative cognitive style in order to turn their creative self-expectations into radical breakthrough ideas. We hope these findings will stimulate future research to explore more antecedents, process mechanisms and boundary conditions for incremental and radical creativity. As this exploration occurs, practitioners may be better able to align their work factors with the desired level of creativity.

