

INTUITIVENESS AND CREATIVITY IN GROUPS: CROSS-LEVEL INTERACTIONS BETWEEN GROUP CONFLICT AND INDIVIDUAL COGNITIVE STYLES

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In this study, we introduced a multilevel perspective in order to identify a group contextual factor that moderates the relationship between cognitive style and creativity. Multilevel analyses of data collected from 306 employees from 50 organizational teams revealed that task conflict had beneficial effects on the creativity of intuitive individuals, but detrimental effects on the creativity of systematic individuals. In contrast, relationship conflict offered a positive context for the systematic cognitive style with regard to individual creativity, but it dissipated the positive effect of intuitive style on creativity. To date cognitive style and conflict literature has been focused on either individual or group-level analysis. In our study we have bridged this gap and our findings have highlighted the context-dependent nature of the cognitive style-creativity relationship.

Keywords: cognitive style, creativity, task conflict, relationship conflict, group context.

Creativity has become a key managerial imperative for businesses, owing to the need to trigger innovation (Amabile, 1996). An important determinant of creativity is personal cognitive style or individual preference in processing information about one's environment (Kozhevnikov, 2007). Often divided into two types (intuitive and systematic) cognitive style has significant functions in creative problem solving (Martinsen & Kaufmann, 1999). Individuals with intuitive cognitive style are disposed toward novelty seeking without being constrained by rules and standards, whereas individuals with systematic

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cognitive style tend to interpret new events in terms of existing knowledge, being more rule-bound in their problem-solving behavior (Sagiv, Arieli, Goldenberg, & Goldschmidt, 2010; Sung & Choi, 2012). Therefore, previous researchers have suggested that individuals with intuitive cognitive style are more creative than those with systematic cognitive style.

Although cognitive style prescribes a dominant mode of information processing, the effect on creativity may not be the same across different situations (Martinsen & Kaufmann, 1999; Sung & Choi, 2012). Workplace creativity is more often a product of social context and interpersonal interactions than a product of individual thought processes in isolation (Madjar, 2008); thus, the effects individual cognitive style has on creativity are significantly affected by situational factors that surround the individual. Set in a group context, in this study we explored group conflict as a significant contextual factor that may shape the way the cognitive style of individuals affects their creativity in a group setting. Conflict is an inevitable part of group processes, and thus conflict researchers should focus on ways to direct and utilize conflict to improve individual and group functioning (De Dreu & Van Vianen, 2001). Considering that cognitive style may significantly affect how individuals view and manage group conflict, individuals with differing cognitive styles may respond to group conflict in distinct ways, resulting in differences in their creative performance.

Previous researchers have suggested that intuitive cognitive style is a more positive predictor of creative performance than is systematic cognitive style (Scott & Bruce, 1995). Nevertheless, the group context, which is characterized by different types of conflict, such as task, relationship, may favor a particular cognitive style for members to be creative. For example, task conflict characterized by exchanges of diverse ideas and viewpoints may supply heterogeneous information needed for intuitive thinkers to thrive, whereas the same condition may confuse and disorient systematic thinkers who need strict rules and procedures to follow. In our exploration of the interaction between individual cognitive styles and group conflicts, we thus suggested that the match or fit between members' cognitive style and group conflict would have a significant impact on individual creativity. In the context of person-environment fit research, Chan (1996) introduced the concept of *cognitive misfit* to refer to *the degree of mismatch between an individual's cognitive style and the predominant style demands of the work context*. In this case, intuitive cognitive style may be an appropriate style that matches the situation characterized by task conflict, but systematic cognitive style may not be an appropriate style (Cools, Van den Broeck, & Bouckennooghe, 2009). In this study, we aimed to empirically validate matches between individual cognitive styles and different types of group conflict, with the expectation that these matching conditions might lead to improved individual creative performance.

In this study, we contributed to the growing body of research on workplace creativity, exploring how the effects of individual differences on creativity are context-dependent (Davis, 2009; George & Zhou, 2002) by examining the role of group conflict as a contextual moderator. Thus, a multilevel perspective was used to understand the interactive dynamics between individual cognitive style and group conflict (Kozlowski & Klein, 2000). The cognitive style-creativity relationship has been predominantly examined at the individual level; whereas, in most prior studies the conflict-creativity relationship has been examined at the group level (Chen, Sharma, Edinger, Shapiro, & Farh, 2011). By investigating the cross-level interaction between individual cognitive style and group-level conflict, we addressed the possibility that individual group members with dissimilar cognitive styles may respond differently to group conflicts in terms of creative performance, as depicted in Figure 1. Our theoretical propositions were empirically validated using a field sample of 306 employees (and their supervisors) from 50 organizational teams.

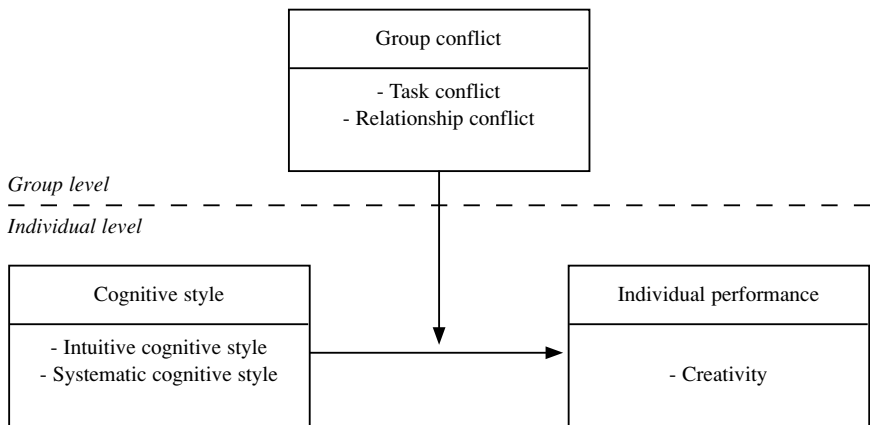


Figure 1. Multilevel framework of cognitive style-creativity relationships.

Individual-level Processes: Cognitive Style and Creativity

Cognitive style is widely recognized as an important determinant of individual creativity (Miron, Erez, & Naveh, 2004; Scott & Bruce, 1995; Sung & Choi, 2012). Intuitive cognitive style is characterized by undisciplined thinking as well as divergent approaches to tasks and problem solving that rely on a more global, holistic perspective, whereas systematic cognitive style is described as analytical, convergent, sequential, reflective, and deductive (Hutchinson & Skinner, 2007; Sadler-Smith, 1999). By shaping cognitive flexibility and risk taking, cognitive style affects individuals' creativity. Individuals with an intuitive style tend to be cognitively flexible and unconventional because they are not constrained by rules

and standards (Sagiv et al., 2010). On the contrary, individuals with a systematic style tend to be discouraged from exploring unconventional approaches or experimenting with new solutions because they are restricted by rules and boundaries (Monnavarrian, 2002; Scott & Bruce, 1995). Thus, prior researchers have found intuitive cognitive style to be positively related to creativity, whereas systematic cognitive style has been found to diminish creativity (Scott & Bruce, 1995).

Hypothesis 1a: Intuitive cognitive style will be positively related to individual creativity.

Hypothesis 1b: Systematic cognitive style will be negatively related to individual creativity.

Cross-level Interaction Between Cognitive Styles and Group Conflict

Managing group conflict is an important managerial issue because groups are a basic unit through which organizational competitiveness and innovation can be achieved (Miao, Tien, Chang, & Ko, 2010). Two general forms of conflict have been identified: task and relationship (Jehn, 1995, 1997). Cognitive at its core (Amason, 1996; Simons & Peterson, 2000), task conflict surfaces among group members when group members differ in views and ideas regarding the task. In contrast, relationship conflict has affective elements such as anxiety and discomfort arising from interpersonal tensions and personality clashes (Amason, 1996; Yang & Mossholder, 2004). In conflict literature, particularly in management contexts, the prevailing hypothesis, thus far, has been that task conflict may be productive and relationship conflict is dysfunctional (Behfar, Peterson, Mannix, & Trochim, 2008; De Dreu & Van Vianen, 2001). However, empirical findings vary and often contradict these prevailing beliefs. For example, in their meta-analysis De Dreu and Weingart (2003) conclude that both task conflict and relationship conflict are detrimental to performance. In contrast, a positive effect of relationship conflict has been reported in some recent studies (Greer & Jehn, 2005; Jehn & Rispens, 2008; Rispens, Greer, & Jehn, 2006).

The inconsistent perspectives on group conflict as a positive or negative force can be presented in either the constructive debate framework or the cognitive processing framework (Jehn & Rispens, 2008). In the first framework it is suggested that certain types of conflict may be potentially constructive under specific circumstances. Specifically, in the constructive debate perspective it is proposed that task conflict can enhance performance through discussions and debates that stimulate divergent thought processes and improve decision-making quality, whereas relationship conflict is detrimental to performance. In the second framework the main idea is that all conflict in groups is negative because it interferes with the effective processing of information. Those who hold the cognitive processing perspective suggest that any type of conflict tends to increase cognitive load, which, in turn, detracts from the cognitive capacity

available for complex thinking and information processing, thus having a negative effect on performance.

Previous researchers with both of the above perspectives have assumed that all group members in a conflict situation perceive and respond to the conflict situation in a similar manner (Jehn & Rispens, 2008). Conflict asymmetry researchers (e.g., Jehn & Chatman, 2000) examine the differences in perceptions of conflict among the group members involved in the conflict that may lead individuals within a group to react differently to group conflict. The inconsistent findings in prior studies may indicate a need for further research on the individual differences in conflict situations that may change the meaning, function, and implications of conflict with regard to various outcomes, including creativity.

Cognitive style can be an individual difference variable that leads individuals to react differently to conflict within groups, thus resulting in differing creative outcomes under the same conflict situation (De Dreu & Weingart, 2003). For example, in an individual-level analysis Miao et al. (2010) indicate that dissimilar cognitive styles have different effects on learning performance in the context of group relationship conflict because of individual variations in information processing (see also Hutchinson & Skinner, 2007; Simons & Peterson, 2000). Expanding the individual-level analysis used in the study by Miao et al. (2010) to multilevel dynamics and including creativity as the outcome, in this study we examined whether group-level conflict may moderate the relationship between individual cognitive styles and creative performance. Specifically, group conflict was considered as part of the work context for creativity, and the issue of whether or not individuals with differing cognitive styles exhibit different levels of creativity in groups characterized by distinct types of conflict (task and relationship conflict) was examined.

Task Conflict as a Cognitive Group Context

Task conflict may serve as a cognitive group context that presents challenging and conflicting views and stimulates divergent thought processes (Choi & Sy, 2010). However, individuals with different cognitive styles may react differently to task conflict. Under the task conflict situation, intuitive individuals are likely to produce more creative ideas and solutions than do their fellow group members through openly discussing critical evaluations of the task and opposing the ideas and opinions of their fellow group members. By enhancing understanding of various viewpoints stimulated by debate and preventing premature consensus (e.g., Amason, 1996; Jehn, 1995), task conflict may exert a positive effect on the creativity of individuals with an intuitive cognitive style, supporting the constructive debate hypothesis. However, the same task conflict may exert a negative effect on the creativity of those with a systematic cognitive style, in accordance with the prediction of cognitive processing. Under high task conflict circumstances, characterized by a wide array of views and alternatives, members

of a group who have a systematic cognitive style and who, thus, search for rules to follow and prefer a narrow perceptual field of input, are unlikely to be effective. Therefore, we proposed that task conflict would have beneficial effects on the creative performance of individuals with intuitive style, whereas it would have detrimental effects on the creative performance of individuals with systematic cognitive style. Thus, we advance the following hypotheses:

Hypothesis 2a: The relationship between intuitive cognitive style and creativity will be moderated by group task conflict, such that intuitive cognitive style will be positively related to creativity when group task conflict is high but not when it is low.

Hypothesis 2b: The relationship between systematic cognitive style and creativity will be moderated by group task conflict, such that systematic cognitive style will be negatively related to creativity when group task conflict is high but not when it is low.

Relationship Conflict as an Affective Group Context

Relationship conflict may serve as an affective group context because relationship conflict typically involves negative group affect and negative communications, revealing interpersonal strain and distrust among team members (Choi & Sy, 2010; Jehn, 1995; Jehn & Mannix, 2001). In the case of relationship conflict, avoiding interaction or downplaying the conflict issues is more effective than collaboration or active confrontation (De Dreu & Van Vianen, 2001). When relationship conflict is present, mutual satisfaction is difficult to attain, and, thus, open norms about relationship conflict distract group members from their tasks and often escalate the conflict rather than resolving it (Jehn, 1997). Under high levels of relationship conflict, offering an idea is often regarded as a personal attack, further intensifying both interpersonal friction and exchanges of emotionally harsh language (Amason, 1996). In this context, avoiding conflict allows group members to focus on the task, making the conflict less prominent and less distracting (Harinck, De Dreu, & Van Vianen, 2000). In terms of conflict management strategies, being open about conflict may, therefore, have detrimental effects on outcomes when group members encounter a relationship conflict (Choi & Sy, 2010).

When exposed to the negative group affect caused by relationship conflict, individuals with different cognitive styles may react differently to relationship conflict, thus producing different levels of creative performance. Examining the link between cognitive styles and regulatory focus, Förster and Higgins (2005) suggested that an intuitive cognitive style is linked to a promotion focus, whereas a systematic cognitive style is linked to a prevention focus. In other words, individuals with an intuitive cognitive style may discuss interpersonal incompatibility and friction more openly in an attempt to resolve them. In contrast,

individuals with a systematic cognitive style may avoid situations involving conflict in order to prevent the conflict from escalating. Therefore, intuitive individuals will be more distracted by the negative group affect associated with relationship conflict and their cognitive processes will be more highly taxed than will the cognitive processes of systematic individuals.

In contrast, the negative group affect caused by relationship conflict may boost the cognitive functions of systematic individuals, in that negative affect limits attention and channels individuals to focus on a limited set of core elements, providing systematic individuals with an accessible structured procedure that they prefer (Sagiv et al., 2010). The affectively laden situation of relationship conflict may lessen the creative superiority of intuitive individuals, whose natural tendency is to broaden the scope of attention. This tendency of intuitive members may worsen the interpersonal rubric of the group by uncovering sources of conflict and intensifying confrontation regarding a greater number of issues (De Dreu & Van Vianen, 2001). In sum, we proposed the following cross-level moderating hypotheses:

Hypothesis 3a. The relationship between intuitive cognitive style and creativity will be moderated by group relationship conflict, such that intuitive cognitive style will be negatively related to creativity when group relationship conflict is high but not when it is low.

Hypothesis 3b. The relationship between systematic cognitive style and creativity will be moderated by group relationship conflict, such that systematic cognitive style will be positively related to creativity when group relationship conflict is high but not when it is low.

Method

Participants and Procedure

Data were collected from 50 work teams in two Korean manufacturing companies. Contact persons within each firm were identified and asked to distribute survey packs to the appropriate respondents. The survey was prefaced by a cover letter explaining the purpose of the research and assuring confidentiality. We collected data from two sources. Employees completed a self-report questionnaire and survey that included measures of cognitive style, group conflict, and demographic information. Supervisors completed a separate survey that evaluated the creative performance of their subordinates.

We sent 58 supervisor surveys and 372 employee surveys. We received 54 supervisor surveys (93% response rate) and 338 employee surveys (91% response rate). After excluding incomplete forms and those failing to match supervisor ratings, the final analysis sample was composed of 306 employees from 50 work teams (82% response rate). For the employee sample, participants'

education levels were: two years at college (40.8%), bachelor's degree (37.6%), high school (16.3%), and graduate degree (4.2%). Their job positions were: staff (47.1%), assistant manager (25.2%), senior staff (15.0%), department manager (10.5%), and other (2.3%). Average organizational tenure of the subordinates was 4.57 years ($SD = 3.91$) with an average group tenure of 2.77 years ($SD = 3.10$). The average age was 31.47 years ($SD = 5.64$), and 11.8% of the employees were women. The average organizational tenure of the supervisor group was 9.03 years ($SD = 5.53$) with an average group tenure of 5.31 years ($SD = 4.77$). The average age was 38.96 years ($SD = 3.10$). Supervisor education levels were: bachelor's degree (47.9%), two years at college (27.1%), high school (14.6%), and graduate degree (10.4%). Their job positions were department manager (50%) and deputy general manager or higher (50%). All the managers were men.

Measures

Intuitive and systematic cognitive style. In order to measure the cognitive styles of employees, we adopted two scales developed by Jabri (1991). Three items were used to assess intuitive cognitive style ($\alpha = .76$): "I enjoy linking ideas stemming from more than one area of investigation", "I enjoy searching for novel approaches not required at the time", and "I enjoy making unusual connections about ideas even if they are trivial". Systematic cognitive style was also indexed using three items ($\alpha = .86$): "I am a person who adheres to the commonly established rules of my area of work", "I am a person who adheres to the well-known techniques, methods, and procedures of my area of work", and "I am a person who adheres carefully to the standards of my area of work". The response format was a 7-point Likert scale, ranging from 1 = *totally disagree* to 7 = *totally agree*.

Group conflict. Group conflict was measured using two scales developed by Jehn (1995). Task conflict was assessed using two items ($\alpha = .80$): "How frequently are there conflicts about ideas in your work unit?" and "How much conflict about the work is there in your unit?" Relationship conflict was measured using three items ($\alpha = .95$): "How much friction is there among members in your work unit?", "How much are personality conflicts evident in your work unit?", and "How much emotional conflict is there among members in your work unit?" Employees rated these items on a 7-point Likert scale, ranging from 1 = *totally disagree* to 7 = *totally agree*.

Employee creativity. Each employee's supervisor assessed their creativity. A 6-item measure of creativity adopted from previous studies (see e.g., Zhou & George, 2001) was used ($\alpha = .93$, e.g., "This employee suggests new ways to achieve our goals", "This employee often has a fresh approach to problems"). Supervisors rated these items on a 7-point Likert scale, ranging from 1 = *not at all* to 7 = *extremely*.

Data Aggregation

In order to justify the group-level aggregation of group conflict scales, we examined whether there was sufficient within-group agreement as well as between-group variation. To this end, we first assessed the interrater agreement index using rwg (James, Demaree, & Wolf, 1984). The mean rwg values for task and relationship conflict were .80 and .79, respectively, indicating sufficient levels of within-group agreement. Then, the group-level variation and group-level reliability of the scales were estimated using intraclass correlations: ICC1 and ICC2 (Bliese, 2000). ICC1 and ICC2 statistics were .19 and .59 ($F(49, 256) = 2.46, p < .001$) for task conflict and .16 and .54 ($F(49, 256) = 2.16, p < .001$) for relationship conflict. The ICC values were acceptable and statistically significant. All of these indices were in the acceptable range, and thus provided justification for their group-level aggregation.

Results

Before testing the hypotheses, we performed a confirmatory factor analysis (CFA) on a four-factor model of two cognitive styles and two group conflict variables in order to validate the empirical distinctiveness of the study variables and calculated root mean square error of approximation (RMSEA), comparative fit index (CFI) and Tucker-Lewis index (TLI). The results confirmed the four-factor structure ($\chi^2(df = 38) = 62.495, p < .01$; CFI = .99; TLI = .98; RMSEA = .05) fitted the data better than any alternative three-factor model (all $p < .01$). Tables 1 and 2 show the means, standard deviations, and intercorrelations of the individual- and group-level variables, respectively. We used hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992) to examine the hypotheses, given the multilevel nature of our theory and these data. To test our hypotheses, we conducted HLM in a stepwise manner. The results are presented in Table 3. We included demographic variables of age and organizational tenure, and the company dummy as control variables.

Table 1. Means, Standard Deviations, and Correlations: Individual Level

Individual-level variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Age	31.47	5.64	--					
2. Tenure	4.57	3.91	.46**	--				
3. Company	.25	.44	-.01	.32**	--			
4. Intuitive cognitive style	4.83	.93	.03	-.04	.09	--		
5. Systematic cognitive style	5.04	.86	.06	.07	.25**	.34**	--	
6. Creativity	4.61	1.09	.01	.05	.06	.18**	.07	--

Notes: $n = 306$. ** $p < .01$.

Table 2. Means, Standard Deviations, and Correlations: Group Level

Group-level variables	<i>M</i>	<i>SD</i>	1	2	3
1. Task conflict	3.03	.78	--		
2. Relationship conflict	2.87	.90	.76**	--	
3. Creativity	4.59	.70	-.27	-.21	--

Notes: $n = 50$. ** $p < .01$.

Table 3. Hierarchical Linear Models Predicting Creativity

Variables	M 1	M 2
Outcome: Creativity		
<i>Individual-level process</i>		
Age	.01	.01
Tenure	.01	.01
Company	.06	.03
Intuitive cognitive style (ICS)	.17**	.21***
Systematic cognitive style (SCS)	-.04	-.11*
<i>Cross-level process</i>		
ICS * TC		.29**
ICS * RC		-.22 ⁺
SCS * TC		-.20*
SCS * RC		.32**
<i>Group-level process</i>		
Task conflict (TC)		-.12
Relationship conflict (RC)		-.09
Pseudo R^2	.02	.04

Notes: ⁺ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Hypotheses Tests

In Hypotheses 1a and 1b, we examined the relationship between individual cognitive styles and individual creativity. We predicted that intuitive cognitive style would enhance creativity, whereas systematic cognitive style would diminish creativity. Model 1 in Table 3 shows that member creativity was significantly associated with intuitive cognitive style ($\beta = .17$, $p < .01$) but not with systematic cognitive style ($\beta = -.04$, *ns*). Thus, only Hypothesis 1a was supported.

We proposed that task conflict would moderate the individual-level relationship between cognitive style and creativity in Hypotheses 2a and 2b. To examine this cross-level moderation hypothesis, we estimated a slope-as-outcome model in HLM. The results are presented in Model 2 of Table 3. As initially hypothesized, task conflict had positive effects on creativity performance for intuitive individuals ($\gamma = .29$, $p < .01$), whereas it had negative effects on creativity for

systematic individuals ($\gamma = -.20, p < .05$). This significant interaction was further probed by comparing the slopes in groups with high versus low task conflict (Aiken & West, 1991). Figure 2 shows that group members' intuitive cognitive style was positively related to creative performance when task conflict was high ($\beta = .50, p < .001$) rather than when it was low ($\beta = -.07, ns$). On the other hand, as shown in Figure 3, group members' systematic cognitive style was negatively related to creativity when task conflict was high ($\beta = -.32, p < .001$) rather than when it was low ($\beta = .09, ns$).

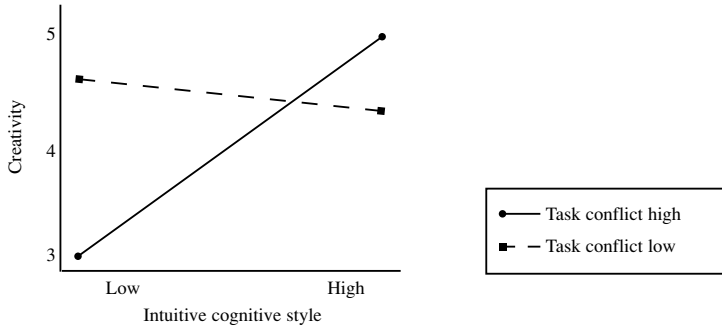


Figure 2. Cross-level moderation by task conflict.

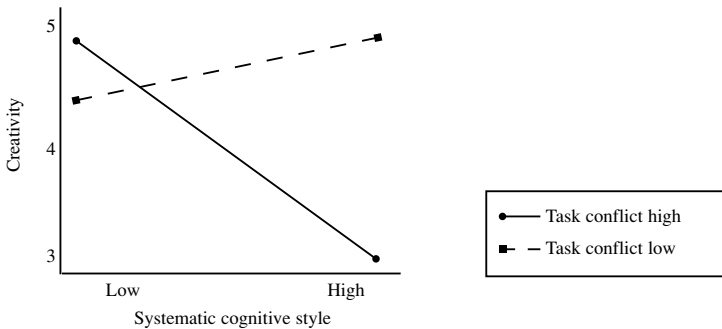


Figure 3. Cross-level moderation by task conflict.

Finally, the results reported in Model 2 in Table 3 show that individual cognitive style significantly interacted with relationship conflict to predict individual creativity, supporting this theoretical expectation. As proposed in Hypotheses 3a and 3b, relationship conflict had negative effects on the creative performance of intuitive individuals ($\gamma = -.22, p < .10$), whereas it had positive effects on the creativity of systematic individuals ($\gamma = .32, p < .01$). The results of a simple slope analysis (Aiken & West, 1991) show that group members' intuitive

cognitive style was positively related to creative performance when relationship conflict was low ($\beta = .44, p < .001$) but not when it was high ($\beta = -.01, ns.$) (see Figure 4). Figure 5 shows that group members' systematic cognitive style was negatively related to creative performance when relationship conflict was low ($\beta = -.44, p < .001$) but not when it was high ($\beta = .21, ns.$).

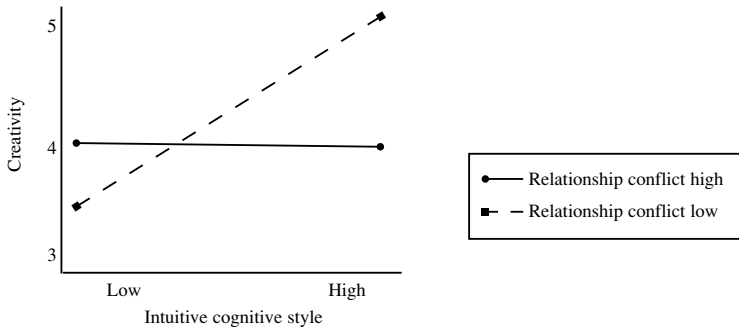


Figure 4. Cross-level moderation by relationship conflict.

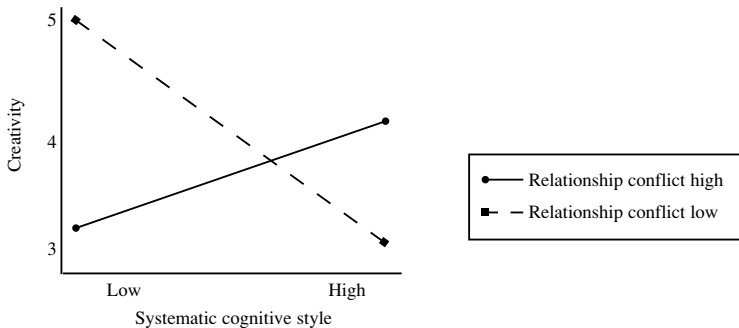


Figure 5. Cross-level moderation by relational conflict.

Discussion

The overall objective in this study was to expand upon previous research by employing the multilevel perspective (Kozlowski & Klein, 2000), considering the multilevel nature of group conflict in shaping individual-level processes such as the effect cognitive styles have on individual creativity. The multilevel perspective enabled us to investigate the cross-level interaction effects between individual cognitive style and group-level conflict, and to examine whether or not the distinct group stimuli (task and relationship conflict) exert differential influences on individual creativity depending on individual cognitive styles.

The controversy over the role of group conflict in creativity (Jehn & Rispens, 2008) may be partially resolved by identifying individual differences in conflict situations that moderate the link between group conflict and creativity. Therefore, in this study we examined the role an individual's cognitive style has in conflict situations, we assumed that an individual's cognitive style significantly affects their response toward different types of group conflict, leading to better or worse creative performance.

This analysis supports the concept that matching individual cognitive styles and different types of group conflict has meaningful implications for performance outcomes (Chan, 1996). For intuitive individuals, task conflict may serve as a cognitive group context that enhances creativity through stimulating divergent thinking, whereas relationship conflict may serve as an affective group context that distracts them from their tasks and restricts the scope of attention. On the contrary, an opposite pattern of interaction may be found for systematic individuals. In a task conflict situation, systematic individuals are more distracted and taxed by increased cognitive load; however, they are less susceptible to relationship conflict, being likely to downplay or ignore the conflict issues and instead channel their efforts to pursue their task goals (cf. Sung & Choi, 2012). An important implication of these results is that the cognitive fit between individual cognitive style and the conflict situation should be further studied in order to improve the creative performance of group members. Individuals are more creative and efficient when they can use their preferred mode of cognitive processing without being too strongly influenced or distracted by external forces such as group conflict (Martinsen & Kaufmann, 1999).

These findings, however, should be interpreted with caution considering the following limitations of this study. First, the data were collected at a single point in time and the direction of causation remains ambiguous. Second, our sample included teams from manufacturing companies in Korea, which might be a potential source of bias because of distinct industry-specific dynamics and national cultural orientations such as collectivism or Confucian values (Caloghirou, Protogerou, Spanos, & Papagiannakis, 2004). The interactive patterns observed in this setting should be validated using other industries and cultures. Finally, although our operationalization of creativity followed the widely used approach based on a validated scale of creativity rated by supervisors, future researchers may further validate these findings using alternative approaches such as objective indicators like number of suggestions or patents submitted.

Despite these limitations, some important theoretical and empirical implications can be drawn from this study. First, we have extended previous research in that cognitive style and conflict have been bridged by theoretically identifying and empirically testing the multilevel interactions between individual cognitive styles and group conflict. This multiple perspective provides a more comprehensive

account of individual creative performance in organizational and interpersonal situations. Second, this empirical analysis reveals the value of the congruence between individual trait (cognitive style) and social environment (group conflict). This provides future directions for research, such as plausible mediating or moderating processes involving additional member and leader traits as well as emergent processes of the group (Cools et al., 2009). Finally, with regard to managerial insights for promoting creativity in work teams, management personnel in organizations may reevaluate group conflict that arises during group processes and more constructively utilize differential effects of distinct types of conflict for individuals with either intuitive or systematic cognitive styles, thereby enhancing creativity in the workplace.

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