

## 신제품개발에서 마케팅-연구개발간 인지적 및 감정적 갈등\*

†조은성\*\* · 한민희\*\*\* · 현용진\*\*\*

### Cognitive and Affective Conflict between Marketing and R&D in New Product Development

† Eunseong Cho\*\* · Minhi Hahn\*\*\* · Yong J. Hyun\*\*\*

#### ■ Abstract ■

This study investigates how cognitive and affective conflict affect performance and social outcomes in the new product situation. We examine the corporate, project, and personal characteristics that determine the level of inter-functional conflict between marketing and R&D. From a survey of Korean high-tech companies, we found : (1) time pressure was positively related to cognitive and affective conflict, (2) joint reward systems, interdepartmental connectedness, and years of education were negatively associated to cognitive conflict, (3) while cognitive conflict was positively related to new product creativity and NPD performance, affective conflict was negatively associated to marketing-R&D integration and perceived effectiveness of the relationship, as well as new product creativity and NPD performance.

Keywords : Cognitive Conflict, Affective Conflict

논문접수일 : 2011년 03월 27일    논문수정일 : 2011년 05월 14일    논문게재확정일 : 2011년 05월 19일

\* 본 연구는 2011년도 광운대학교 교내연구비 지원에 의해 수행되었음.

\*\* 광운대학교 경영학부

\*\*\* KAIST 테크노경영대학원

† 교신저자

## 1. Introduction

Conflict is inherent in social interaction and common in organizational life. The importance of conflict has been well acknowledged in marketing literature. Conflict has long been a major research topic in several areas of marketing such as distribution channels [19], organizational buying [6] and marketing's relationship with other functions [71].

Despite considerable research efforts, there is relatively little consensus on whether conflict is functional or dysfunctional. Most research has focused on the negative or destructive effects of conflict on interpersonal or interorganizational relationships [17, 26]. Several conceptual research [44, 59], however, proposed beneficial roles of conflict, such as the enhancement of enhanced creativity and the rigorous examination of alternatives. An eclectic perspective, which admits both beneficial and harmful effects of conflict, suggests that there is an optimal level of conflict [80].

The equivocal effects of conflict may stem from the multifaceted nature of conflict itself. Conflict can arise from a variety of causes such as individual traits, communication problems, previous interactions, and issue characteristics [77]. Conflict involves at least two parties, and occurs at various levels of organizations such as intragroup, intergroup, interfunctional, and interorganizational relationships. It is a dynamic process that is often described as several separate states [56] and sometimes escalates along a variety of routes [77]. Despite the complexity, we witness in the marketing literature a predominant tendency to treat conflict as a monolithic construct. To properly understand and manage the effects of conflict, there is a clear

research need for the development of a comprehensive model that takes the multidimensional nature of conflict into consideration.

The purpose of this study is to resolve such issues as identified in the current literature. This paper focuses on marketing's interfunctional conflict with R&D in new product development. We propose a conceptual framework that considers two different types of conflict : cognitive and affective conflict. It concerns what are the antecedents to these two types of conflicts, and how they affect performance and social outcomes. We empirically test hypotheses derived from the framework in the context of Korean high tech firms.

## 2. Theoretical Backgrounds

### 2.1 Marketing's Conflict with Other Functions

In <Table 1>, we summarize studies on marketing's conflict with other functions. In their research on marketing's interaction with other functions, Ruekert and Walker [61] propose that interfunctional conflict would reduce the perceived effectiveness of the relationship and increase the difficulty of communication. In their article on market orientation, Jaworski and Kohli [37] found that interfunctional conflict tends to reduce market orientation. Menon et al. [45] found that functional conflict has positive effects on the quality of marketing strategy, while dysfunctional conflict has negative effects. Menon et al. [46] found that interfunctional conflict exerts detrimental effects on product quality. Morgan and Piercy [49] studied the relationship between marketing and quality units at the SBU level and found that interfunctional conflict have

<Table 1> Studies on Marketing's Conflict with Other Functions

	Dimension of Conflict	Performance	Social Outcomes	Suggested Relationship
Ruekert and Walker [61]	One	-	Communication difficulty, effectiveness of the relationship	Negative
Jaworski and Kohli [37]	One	-	Market orientation	Negative
Menon et al. [45]	Two (Functional/Dysfunctional)	Quality of strategy, market performance	-	Positive (Functional Conflict), Negative (Dysfunctional Conflict)
Menon et al. [46]	One	Quality of product	-	Negative
Morgan and Piercy [49]	One	Market performance, financial performance	-	Negative
Xie et al. [80]	One	New product success	-	Inverted-U curve
Dyer and Song [21]	One	Business performance	Quality of interfunctional relationship	Positive (Constructive conflict)
The current study	Two (Cognitive/Affective)	New product creativity, NPD performance	Marketing-R&D integration, perceived effectiveness of the relationship	Positive (between Cognitive Conflict and Performance) Negative (others)

negative associations with market performance and financial performance. Xie et al. [80] found that interfunctional conflict has an inverted-U shape relationship with new product development performance. Dyer and Song [21] showed that the level of constructive conflict has a positive correlation with new product success.

Although the existing studies have provided valuable insights into conflict management, they have several limitations. First, most research has considered interfunctional conflict as a monolithic construct that varies only in degree. In his review on channel conflict, implying that there could be various types of conflicts, Hunt [32] comments that the source of conflict will influence whether conflict will be functional or dysfunctional. However, very few studies in marketing adopt the multidimensional approach. Menon et al. [45], who examined the differential effects of functional and dysfunctional conflict,

provided insightful advice on future research directions, saying that “because our research focused exclusively on cognitive conflict, research is needed to elucidate and elaborate on the full range of conflict in terms of types, dimensions, and facets. For example, research should identify the characteristics of affective, behavioral, and emotional conflicts” (p.309)

Second, most research has considered either performance or social outcomes as the consequences of interfunctional conflict. Walker and Ruekert [76] discuss tradeoffs in three dimensions on which a business unit's performance can be measured, and declare, “good performance on one dimension often means sacrificing performance on another” (p.19). It is possible that conflict enhances one dimension of consequences while it harms another dimension. The tradeoff was acknowledged in organizational behavior literature by Jehn [38] who found that

task conflict has a negative relationship with sociocultural outcomes such as satisfaction, liking and commitment to the group, but an inverted-U shape relationship with performance.

Third, there has been much emphasis on finding detrimental effects of interfunctional conflict while little attention has been paid to its constructive roles. Much conceptual work on conflict has proposed that conflict is pervasive and inevitable, having both functional and dysfunctional effects [32, 58]. However, the main focus of empirical studies has been on identifying conflict as a disrupting force within distribution channels or marketing organizations. The managerial implication of the dysfunctional perspective is that conflict should be minimized, resolved or even eliminated [32]. However, whether the absence of conflict is desirable is open to further discussion. It can be said that the opposite of love is indifference rather than hatred. An irony of conflict lies in the fact that conflict arises between close and interdependent people rather than between strangers [77]. The absence of conflict often indicates the lack of interest in the relationship [15], complacency [58] or lethargy [33] rather than harmony or peace.

## 2.2 Cognitive and Affective Conflict

In contrast to marketing literature, organizational behavior pays vigorous attention to multi-dimensional approaches on conflict. Guetzkow and Gyr [28] are among the first researchers who differentiated between substantive conflict based on the task being performed and affective conflict based on the interpersonal relations. Pinkley [55]'s multidimensional scaling analysis of disputants' interpretation of conflict, found that people distinguish task conflict from rela-

tionship conflict. Jehn [39] employed a qualitative data analysis, which identified three types of conflict—task, relationship, and process conflict.

Cognitive conflict is an awareness of differences in viewpoints and opinions pertaining to a group task, and affective conflict means an awareness of interpersonal incompatibilities, including affective components such as feeling tension and friction [41]. Researchers have attached various labels on the dimensions such as substantive vs. affective conflict [28, 52], task vs. relationship conflict [38, 39] and substantive vs. interpersonal conflict [22]. However, these studies employed similar definitions for the two dimensions, basically describing the identical constructs [54].

Research in organizational behavior has shown that cognitive and affective conflict have impact on group outcomes in a different manner. Jehn [38] showed that the functionality of conflict depends on the type of conflict and the type of conflict and the structure of the group in terms of task type, task interdependence, and group norms. While task conflict was detrimental in groups performing routine tasks, it was actually beneficial in groups performing nonroutine tasks. Amason [2] found in his survey on 48 top management teams that cognitive conflict enhances understanding and affective acceptance of decision making, while affective conflict has detrimental effects on the quality and affective acceptance of decision making. Jehn [39] also observed that low-performance groups are characterized by a higher level of affective conflict and a lower level of cognitive conflict, as compared to high-performance groups.

However, it is not yet clear whether the findings of organizational behavior, which are based on intragroup settings, can be directly applied

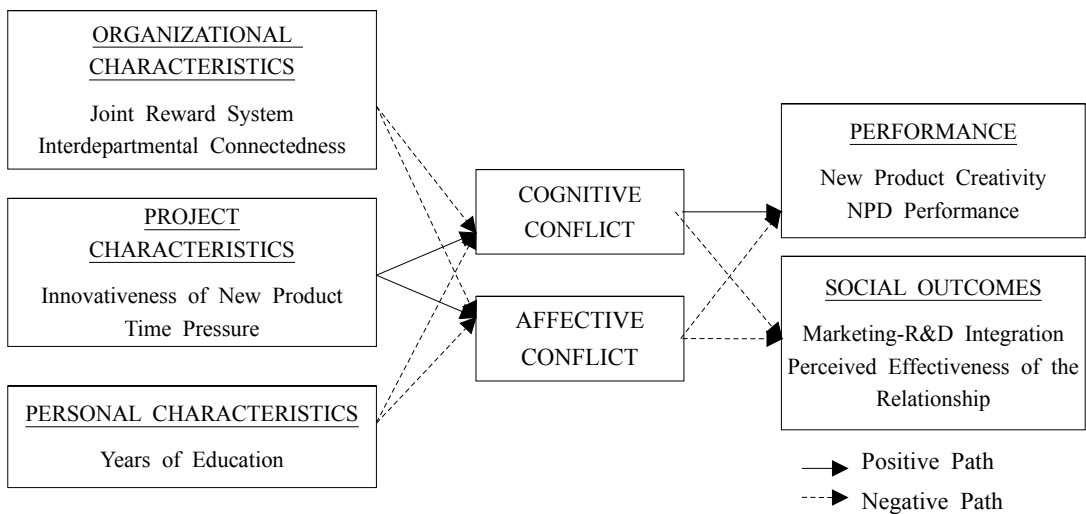
to the interfunctional conflict between marketing and R&D in new product development. First, the effects of intragroup and interfunctional conflict might differ to a considerable degree. A marketing manager would have much less frequent contact with those who work in different functional department than those who work in the same group. People in different functions are expected to have greater variety in educational background, work responsibility [27] and socio-cultural traits [69] than members in the same group. Second, the existing research has been conducted in general work settings, not in a specific situation such as new product development.

This study aims to resolve the issues by investigating interfunctional conflict between marketing and R&D in new product development. We selected the R&D function among various functional departments for the following reasons. First, the literature suggests that marketing and R&D are most important functions in the NPD process [5]. Second, marketing's interaction with R&D has drawn much research attention and is almost unanimously suggested as

one of the most important determinants of new product success [27, 29, 47]. Third, researchers have frequently suggested that various types of teamwork barriers hinder harmonious relationships between marketing and R&D. Marketing and R&D professionals have language barriers, in that they say the same thing using different jargon [27]. Moreover, it is suggested that they have different sociocultural traits [30, 69]. For example, marketing managers prefer safe and sure-bet projects, while R&D managers want to be involved in high-risk, high-return projects. Successful management of the NPD process, therefore, requires proper understanding of interfunctional conflict between marketing and R&D. We will discuss hypotheses with the rationale in the following section.

### 3. Hypotheses

As discussed above, we apply a multidimensional approach on interfunctional conflict by investigating differential effects of cognitive and affective conflict. <Figure 1> shows the re-



<Figure 1> Antecedents and Consequences of Cognitive and Affective Conflict

search model of this study. The consequences of interfunctional conflict are considered in two dimensions. One is the performance dimension, which includes NPD performance and new product creativity. The other is the social dimension. Regarding the first, NPD performance refers to the overall NPD project success including NPD objectives met, cycle time, and product quality. New product creativity is defined as “the degree to which a new product is novel and has generative capacity (i.e., the potential to change thinking and practice)” (Moorman and Miner [48], p.94).

The second one, as mentioned, is the social outcome dimension, which is comprised of marketing-R&D integration and perceived effectiveness of the relationship. Marketing-R&D integration denotes the level of interfunctional interaction, coordination of activities, and collaboration [42, 36]. Perceived effectiveness of the relationship refers to effective and productive working relationships between functional departments [61].

As antecedents of interfunctional conflict, we examine organizational (joint reward system, interdepartmental connectedness), project (innovativeness of new product, time pressure) and personal (years of education) characteristics.

### 3.1 The Antecedents of Interfunctional Conflict

The reward structure influences the perceptions of organizational members about what is important in their work [53]. A joint reward system provides an incentive for both marketing and R&D people to concentrate more on the goals at the company level rather than those at the functional level. Such alignment of market-

ing and R&D goals may motivate both sides to spend more time and effort interacting with each other [31]. Interdepartmental conflict increases when the evaluation and rewards of higher management focus on local performance of each department rather than their combined global performance [6, 78]. Thus, we may hypothesize as follows :

H1a : A joint reward system is negatively related to cognitive conflict between marketing and R&D.

H1b : A joint reward system is negatively related to affective conflict between marketing and R&D.

Interdepartmental connectedness refers to the degree of direct communications between people of different departments [37]. Interdepartmental connectedness enhances marketing-R&D integration and promotes the exchange and utilization of information [37]. Increased communications between the two functions facilitated by interdepartmental connectedness will provide an opportunity for marketing and R&D managers to be familiar with each other’s language and to understand the ‘funds of knowledge’ [19] of other functions. Frequent informal contacts will reduce their stereotypes [53] and the tendency to consider each other as an outgroup [4]. The reduced communication barriers and friendly recognition will reduce interfunctional conflict between marketing and R&D. Thus, we may hypothesize as follows :

H2a : Interdepartmental connectedness is negatively related to cognitive conflict between marketing and R&D.

H2b : Interdepartmental connectedness is neg-

atively related to affective conflict between marketing and R&D.

While there has been little consensus on exactly what product innovativeness means [25, 16]. Product innovativeness is frequently used to indicate the newness of a new product to the firm or to the market. The newness can be seen as lack of relevant experience and knowledge a firm's personnel can utilize to accomplish their own tasks. Development of a "really new" product will require more difficult, complex, uncertain and unfamiliar tasks to be performed [50]. Complex issues are more likely to produce misunderstanding and to uncover divergent interests or dissimilar goals [77]. Walton and Dutton [78] suggested that when a task is nonroutine and the means-to-goal relationship is uncertain, the likelihood of interdepartmental conflict increases. Thus, we may hypothesize as follows :

H3a : Innovativeness of new product is positively related to cognitive conflict between marketing and R&D.

H3b : Innovativeness of new product is positively related to affective conflict between marketing and R&D.

Karau and Kelly [43] found that people pay less attention to relevant information when they feel high time pressure. High time pressure can make it difficult for the parties involved to find a common understanding and to think deeply about various ways to develop collaborative or integrative methods to settle conflicting positions or interests [64].

H4a : Time pressure is positively related to co-

gnitive conflict between marketing and R&D.

H4b : Time pressure is positively related to affective conflict between marketing and R&D.

Those with more education will find it easier to cope with conflicting task situations in more constructive and collaborative ways [6]. Corwin [14] found that experience within school systems reduced interpersonal conflict. Thus, we may hypothesize as follows :

H5a : Years of education are negatively related to cognitive conflict between marketing and R&D.

H5b : Years of education are negatively related to affective conflict between marketing and R&D.

### 3.2 The Consequences of Interfunctional Conflict

The positive effects of cognitive conflict on performance can be considered in terms of the harmful effects of avoiding or suppressing conflict and the beneficial effects of facilitating conflict [18]. Suppressing or avoiding candid discussions about task-related conflict often leads to groupthink, an extreme concurrence-seeking tendency that impedes collective decision-making processes and decision quality [13, 40, 35]. An attempt to suppress cognitive conflict at all costs may foster ostensible consensus and cohesion at the sacrifice of the identification of possible problems and the evaluation of different alternatives [74].

The positive effects of cognitive conflict on

performance can be explained in terms of cognitive processing and motivation. First, cognitive conflict enhances the cognitive processing of the individuals and the groups involved [66]. A number of researchers [8, 57, 63] have found that cognitive conflict encourages people to better understand the issues involved and to develop new ideas and approaches. Different interpretations of task content issues may furnish the group with increased learning and more accurate assessment of the situation [23, 38]. Second, cognitive conflict serves as a motivator by inducing intergroup competition. Cognitive conflict between different functions may promote cohesion and reinforce collaboration within each function [78]. Intragroup competition may provide people with increased energy and motivation, depending on the personalities of the participants [9, 12]. Thus, we may hypothesize as follows :

H6a : Cognitive conflict between marketing and R&D is positively related to new product creativity.

H6b : Cognitive conflict between marketing and R&D is positively related to NPD performance.

Despite its potential benefits to performance, cognitive conflict may hurt the emotional well-being of the parties involved. The similarity-attraction paradigm (e.g., [11]), which predicts that similarity increases interpersonal attraction and liking, would support the proposition. When an individual can freely interact with any of a number of people, he/she tends to select a person who shares similar opinions [79]. Ross [60] proposed that a person's normal reaction to any

form of disagreement involves negative emotions, however advantageous the outcomes may be. Researchers [3, 7, 63] have found that even task-related conflicts can carry dissatisfaction, frustration, and unwillingness to stay in the group [38]. Such negative feelings will hurt the willingness to cooperate and the perceived effectiveness of the relationship. Thus, we may hypothesize as follows :

H7a : Cognitive conflict between marketing and R&D is negatively related to marketing-R&D integration.

H7b : Cognitive conflict between marketing and R&D is negatively related to the perceived effectiveness of the relationship.

Affective conflict, interpersonal problems that are not directly related to task, may have negative effects on performance in three related ways [38, 52, 66]. First, affective conflict limits the individual's cognitive processing ability. Increased anxiety and stress restrict the ability of the group members to process new or complex information [73]. Second, relationship conflict makes the parties involved resistant to the ideas provided by other functional departments. Third, valuable resources such as time and energy that should be devoted to new product development are wasted to resolve the affective conflict [80]. Thus, we may hypothesize as follows :

H8a : Affective conflict between marketing and R&D is negatively related to new product creativity.

H8b : Affective conflict between marketing and R&D is negatively related to NPD performance.



Affective conflict is characterized by friction, frustration and personality clashes between functional departments. Affective issues are more threatening to the self-identity and involve more negative emotions such as dissatisfaction and animosity than cognitive ones [18]. Such negative emotions often lead to negative norms of reciprocity, escalation of conflict, and attributing hostile motives to the other department's behavior [66]. It seems reasonable therefore to expect that affective conflict may increase communication barriers between functional departments and reduce the intention to cooperate with each other [61]. Thus, we may hypothesize as follows :

H9a : Affective conflict between marketing and R&D is negatively related to marketing-R&D integration.

H9b : Affective conflict between marketing and R&D is negatively related to the perceived effectiveness of the relationship.

## 4. Methodology

To test the hypotheses, we collected data from high technology companies in Korea. By telephone contacts, we identified key managers from marketing and R&D areas who have been involved in new product development efforts within two years. Also, we relied on them to identify the counterpart managers in R&D or marketing areas. Those in both marketing and R&D areas responded to questionnaires by mail or by person. They specified their most recent NPD project and answered to questions related to the selected project. After excluding inappropriate responses, we collected usable responses of 97 marketing managers and 102 R&D managers from 92 companies. The responding firms

were mainly from electronics, telecommunications, information processing, internet, and chemistry industries. The average annual sales of the responding firms was 933 billion won (778 million U.S. \$) and the average number of employees was 1983. The average age of the respondents was 34.7 and 87.4% of the respondents was male.

We used seven point Likert-type scales and the same measurement items already applied in previous empirical studies. The Korean version of the questionnaire was prepared using the double translation and parallel translation method [71]. The joint reward system was measured with four Likert scale items adapted from the Barclay's [6] sub-optimizing incentive scale. Interdepartmental connectedness was measured by the four items developed by Jaworski and Kohli [37] and revised by Sethi [64]. Seven items developed by Song and Xie [70] were used to measure the innovativeness of a new product and three items developed by Sethi [64] were utilized to measure time pressure. We asked education level by four categories of below bachelor, bachelor, master and doctor degrees, and transformed the responses to years of education.

We measured cognitive and affective conflict by the measurement items that were developed by Jehn [38]. Specifically, cognitive conflict was measured by asking (1) How much do marketing and R&D managers disagree about opinions regarding the work being done? (2) How frequently are there conflicts about ideas between marketing and R&D managers? (3) How much conflict about the work you do is there between marketing and R&D managers? (4) To what extent are there differences of opinions between marketing and R&D managers? Affective conflict was measured by asking the level of friction, personality conflicts, tension, and emotional

conflict.

The measure of new product creativity was comprised of four items drawn from Moorman and Miner [48]. The items include whether their new product was creative, challenged existing ideas for the category, offered new ideas to the category, and spawned ideas for other products. The measure of marketing-R&D integration was comprised of four items adapted from Souder et al. [72]. The items assess the level of contact, amount of information flow, and participation and interactions between R&D and marketing parties. We measured perceive effectiveness of the relationship by five items developed by Ruekert and Walker [6] and modified by Fisher et al. [24]. The four items developed by Song et al. [68] were adapted to measure NPD perfor-

mance. Both marketing and R&D managers answered all of the items.

## 5. Results

<Table 2> shows the descriptive statistics and correlation matrix of the variables. To test hypotheses H1 to H5, we estimated two regression equations, one with cognitive conflict as the dependent variable and the other with affective conflict as the dependent variable. <Table 3> shows the results. Joint reward system was predicted to be negatively related to cognitive conflict (H1a) and affective conflict (H1b). The coefficient was significant only in affective conflict (-0.18,  $p < 0.05$ ). Therefore, H1a was not supported, while H1b was supported.

<Table 2> Correlation Matrix and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. New product creativity	(0.87)												
2. NPD performance	0.25	(0.80)											
3. Integration	0.20	0.28	(0.91)										
4. Relationship quality	0.08	0.27	0.52	(0.93)									
5. Cognitive conflict	0.09	0.10	-0.07	-0.09	(0.91)								
6. Affective conflict	-0.12	-0.05	-0.27	-0.26	0.61	(0.91)							
7. Joint reward system	0.11	0.30	0.39	0.34	-0.10	-0.21	(0.75)						
8. Interdep. connectedness	0.00	0.21	0.16	0.27	-0.09	-0.18	0.49	(0.89)					
9. Innovativeness	0.29	0.18	0.23	0.32	-0.02	-0.03	0.26	0.21	(0.90)				
10. Time pressure	0.34	0.27	0.16	0.19	0.27	0.16	0.13	0.15	0.32	(0.92)			
11. Year of education	0.22	0.25	0.06	0.06	-0.01	-0.14	-0.09	-0.17	0.09	0.05	N.A.		
12. Market turbulence	0.15	0.07	0.06	0.05	0.13	0.14	0.13	-0.04	0.18	0.29	-0.04	(0.69)	
13. Tech. turbulence	-0.06	0.09	-0.01	0.03	0.10	0.12	0.01	0.06	0.06	0.09	-0.12	0.15	(0.81)
Average	4.76	5.28	4.49	4.81	3.76	3.33	4.03	4.57	4.49	4.93	17.78	4.34	4.93
Standard Deviation	1.12	0.94	1.05	1.08	1.10	1.11	1.09	1.11	1.15	1.13	2.70	0.93	1.00

Note) Correlation coefficients that are over 0.15 or below -0.15 are significant at 0.05 Values of Cronbach's alpha appear in diagonals embraced within parentheses.

<Table 3> Regression Coefficients with Cognitive and Affective Conflict as Dependent Variables

Dependent Variables	Cognitive Conflict	Affective Conflict
Joint reward system	-0.07	-0.18*
Interdepartmental Connectedness	-0.09	-0.15 <sup>+</sup>
Innovativeness of new product	-0.07	0.00
Time pressure	0.31**	0.21**
Year of education	-0.04	-0.19**
R <sup>2</sup>	0.10**	0.12**

Note) Standardized regression coefficients, \*\* p < 0.01, \* p < 0.05, <sup>+</sup> p < 0.10 (n = 199).

Interdepartmental connectedness was predicted to be negatively related to cognitive conflict (H2a) and affective conflict (H2b). The coefficient was marginally significant in affective conflict (-0.15, p < 0.10) and not significant in cognitive conflict. Therefore, H2a was not supported and H2b was marginally supported.

Innovativeness of new product was predicted to be positively related to cognitive conflict (H3a) and affective conflict (H3b). Because both of the coefficients were not significant, H3a and H3b were not supported.

Time pressure was predicted to be positively related to cognitive conflict (H4a) and affective conflict (H4b). The coefficients were significant for both of cognitive conflict (0.31, p < 0.01) and affective conflict (0.21, p < 0.01). Therefore, H4a

and H4b were supported.

Years of education were predicted to be negatively related to cognitive conflict (H5a) and affective conflict (H5b). The coefficient was significant only for affective conflict (-0.19, p < 0.01). Therefore, H5a was not supported and H5b was supported.

To test hypotheses H6 to H9, we estimated four regression equations with performance variables (NPD performance, new product creativity) and social variables (Marketing-R&D integration, perceived effectiveness of the relationship) as dependent variables, and market and technological turbulence as control variables. <Table 4> shows the results.

Cognitive conflict was predicted to be positively related to new product creativity (H6a)

<Table 4> Regression Coefficients with Performance and Social Outcomes as Dependent Variables

	Performance		Social outcomes	
	New product creativity	NPD performance	Marketing-R&D integration	Perceived effectiveness of the relationship
Cognitive conflict	0.23**	0.20*	0.13	0.09
Affective conflict	-0.27**	-0.19*	-0.36**	-0.33**
(Control variable) Market turbulence	0.17*	0.05	0.09	0.08
(Control variable) Technological turbulence	-0.08	0.08	0.00	0.04
R <sup>2</sup>	0.08*	0.04 <sup>+</sup>	0.09**	0.08**

Note) Standardized regression coefficients, \*\* p < 0.01, \* p < 0.05, <sup>+</sup> p < 0.10 (n = 199).

and NPD performance (H6b). The coefficients were significant for both of new product creativity (0.23,  $p < 0.01$ ) and NPD performance (0.20,  $p < 0.05$ ). Therefore, H6a and H6b were supported.

Cognitive conflict was predicted to be negatively related to marketing-R&D integration (H7a) and perceived effectiveness of the relationship (H7b). The coefficients were not significant for both. Therefore, H7a and H7b were not supported.

Affective conflict was predicted to be negatively related to new product creativity (H8a) and NPD performance (H8b). The coefficients were significant for both of new product creativity (-0.27,  $p < 0.01$ ) and NPD performance (-0.19,  $p < 0.05$ ). Therefore, H8a and H8b were supported.

Affective conflict was predicted to be negatively related to marketing-R&D integration (H9a) and perceived effectiveness of the relationship (H9b). The coefficients were significant for both of marketing-R&D integration (-0.36,  $p < 0.01$ ) and perceived effectiveness of the relationship (-0.33,  $p < 0.01$ ). Therefore, H9a and H9b were supported.

## 6. Discussion and Conclusion

### 6.1 Academic Implications

Findings of this study have several academic implications. First, they reveal that conflict has some beneficial effects; cognitive conflict is positively related with new product creativity and NPD performance. They also suggest that simply avoiding or suppressing marketing's conflict with other functions may not be a good strategy

for developing successful and creative new products.

Second, this study presents that affective conflict has negative impacts on performance and social outcomes, while cognitive conflict is beneficial to performance. In much previous research, conflict has been conceptualized as a single-dimension construct. This approach has presumably contributed to plausible but contradictory predictions of the effects of conflict. As Amason ([2], p.143) indicated, "the first step to resolving this conundrum is to recognize that conflict comes in at least two distinct but related forms." Our results suggest that the type of conflict, cognitive or affective, determines the functionality. Marketing managers should not avoid or suppress conflict when it is about opinion differences on the task being performed, while paying close attention to affective conflict that undermines both the interfunctional relationship and NPD performance.

Third, our results showed that cognitive conflict has positive effects on new product creativity and NPD performance. Let's return to the business adage that appeared at the front, "when two people in business always agree, one of them is unnecessary." While a few studies have addressed the issue of interfunctional differences between marketing and other departments, little attention has been paid to beneficial roles of such differences. Researchers have attached a variety of terms that imply negative meaning to interfunctional differences, such as 'interpretive barriers [19]', 'teamwork barriers [69]', 'barriers to collaboration and cooperation' [27]. Disagreements on NPD tasks can supply valuable resources that are utilized to understand each other's perspective and to discover more crea-

tive alternatives. A recent study [65] also found that the presence of members with different ideas and perspectives is one of the key conditions of innovative new product development.

## 6.2 Managerial Implications

This study shows that only affective conflict is negatively associated with a joint reward system, interdepartmental connectedness, and years of education. Marketing managers might reduce the detrimental effects of affective conflict while maintaining the helpful effects of cognitive conflict by introducing a joint reward system or facilitating interdepartmental connectedness.

In many companies marketing and R&D managers are often evaluated and rewarded according to their local functional performance [27, 51]. For example, while marketing personnel often receive incentives based on their marketing accomplishments such as market share increase, R&D managers get their bonuses based on technical achievements such as patents and publications [27]. Collectivistic cultures of Asian firms might promote the effectiveness of a joint reward system in reducing affective conflict between R&D and marketing functions while keeping cognitive conflict intact.

Interdepartmental connectedness might be more important in East Asian countries than in North America or Western Europe. In low-context cultures such as the United States and Great Britain, much meaning of a given communication comes from the spoken word *per se*. By contrast, in high-context cultures such as Korea and Japan, the external environment and non-verbal behaviors are important for understanding communication [10, 81]. The same literal

words can convey various subtle nuances according to the timing, facial expression in high-context cultures. Face-to-face conversations provide tacit information and immediate feedback that can be utilized to increase the accuracy of communication [47]. We might therefore expect that interdepartmental connectedness, the degree of direct communication between different departments, is more effective for reducing affective conflict in high-context cultures such as Korea.

Years of education might be important in Confucian cultures, which place high value on education [34]. A higher level of education provides knowledge and skills that can be used to avoid unnecessary affective conflict. To many Koreans, their schooldays also offer an important opportunity to be affiliated with the alumni associations. Alumni networks play a critical role in Koreans' social life, providing social connections of mutual interests and benefits [75]. Personal relations, instead of formal authority or written contracts, often maintain guiding principles of management in East Asian countries such as Korea, China and Japan [1].

## 6.3 Limitations

The cross-sectional nature of our data limits us to an analysis of correlations among contemporaneous variables. Developing a time-series database and testing the antecedents and consequences of interfunctional conflict in a longitudinal framework would provide more insight into probable causation. This research is vulnerable to criticism because of the limited research context, i.e., that the survey covers small sample and only in Korea. Therefore, the results

of our survey are limited in enabling us to ascertain generalizability far outside the current context.

## Reference

- [1] Alston, J.P., "Wa, Guanxi, and Inhwa : Managerial principles in Japan, China, and Korea," *Business Horizons*, (1989), pp.26-31.
- [2] Amason, A.C., "Distinguishing the effects of functional and dysfunctional conflict on strategic decision making : Resolving a paradox for top management teams," *Academy of Management Journal*, Vol.39, No.1(1996), pp.123-148.
- [3] Amason, A.C. and D.M. Schweiger, "Resolving the paradox of conflict, strategic decision making, and organizational performance," *International Journal of Conflict Management*, Vol.5(1994), pp.239-253.
- [4] Ashforth, B.E. and F. Mael, "Social identity theory and the organization," *Academy of Management Review*, Vol.14, No.1(1989), pp.20-39.
- [5] Atuahene-Gima, K. and H. Li, "Marketing's influence tactics in new product development : A study of high technology firms in China," *Journal of Product Innovation Management*, Vol.17(2000), pp.451-470.
- [6] Barclay, D.W., "Interdepartmental conflict in organizational buying : The impact of the organizational context," *Journal of Marketing*, Vol.28(1991), pp.145-159.
- [7] Baron, R.A., "Countering the effects of destructive criticism : The relative efficacy of four interventions," *Journal of Applied Psychology*, Vol.75(1990), pp.235-245.
- [8] Baron, R.A., "Positive effects of conflict : A cognitive perspective," *Employee Responsibilities and Rights Journal*, Vol.4(1991), pp.25-36.
- [9] Bornstein, G. and I. Erev, "The enhancing effect of intergroup competition on group performance," In : *Using conflict in organizations*, De Dreu, C.K.W. and E. Van de Vliert (eds), London : SAGE, (1997), pp.116-128.
- [10] Boyacigiller, N.A. and N.J. Adler, "The parochial dinosaur : Organizational science in a global context," *Academy of Management Review*, Vol.16, No.2(1991), pp.262-290.
- [11] Byrne, D., *The attraction paradigm*. New York : Academic Press, 1971.
- [12] Carnevale, P.J. and T.M. Probst, "Good news about competitive people," In : *Using conflict in organizations*, De Dreu, C.K.W. and E. Van de Vliert (eds). London : SAGE, (1997), pp.129-146.
- [13] Choi, J.N. and M.U. Kim, "The organizational application of groupthink and its limitations in organizations," *Journal of Applied Psychology*, Vol.84, No.2(1999), pp.297-306.
- [14] Corwin, R.G., "Patterns of organizational conflict," *Administrative Science Quarterly*, Vol.14(1969), pp.507-522.
- [15] Coughlan, A.T., E. Anderson, L.W. Stern, and A.I. El-Ansary, *Marketing channels*, 6th ed., Prentice-Hall Inc, 2001.
- [16] Danneels, E. and E.J. Kleinschmidt, "Product innovativeness from the firm's perspective : Its dimensions and their relation with project selection and performance," *Journal of Product Innovation Management*, Vol.18(2001), pp.357-373.
- [17] Dant, R.P. and P.L. Schul, "Conflict resolution processes in contractual channels of

- distribution," *Journal of Marketing*, Vol.56, No.1(1992), pp.38-54.
- [18] De Dreu, C.K.W., "Productive conflict : The importance of conflict management and conflict issue," In : *Using conflict in organizations*, De Dreu, C.K.W. and E. Van de Vliert (eds.). London : SAGE, (1997), pp.9-22.
- [19] Dougherty, D., "Interpretive barriers to successful product innovation in large firms," *Organization Science*, Vol.3, No.2(1992), pp.179-202.
- [20] Duarte, M. and G. Davies, "Testing the conflict-performance assumption in business-to-business relationships," *Industrial Marketing Management*, Vol.32(2003), pp. 91-99.
- [21] Dyer, B. and X.M. Song, "Innovation strategy and sanctioned conflict : A new edge in innovation?," *Journal of Product Innovation Management*, Vol.15(1998), pp.505-519.
- [22] Eisenhardt, K.M., J.L. Kahwajy, and L.J. Bourgeois, "Conflict and strategic choice : How top management teams disagree," *California Management Review*, Vol.39, No.2 (1997), pp.42-62.
- [23] Fiol, C.M., "Consensus, diversity, and learning in organizations," *Organization Science*, Vol.5(1994), pp.403-420.
- [24] Fisher, R.J., E. Maltz, and B.J. Jaworski, "Enhancing communication between marketing and engineering : The moderating role of relative functional identification," *Journal of Marketing*, Vol.61(1997), pp.54-70.
- [25] Garcia, R. and R. Calantone, "A critical look at technological innovation typology and innovativeness terminology : A literature review," *Journal of Product Innovation Management*, Vol.19(2002), pp.110-132.
- [26] Geyskens, I., J.E.M. Steenkamp, and N. Kumar, "A meta-analysis of satisfaction in marketing channel relationships," *Journal of Marketing Research*, Vol.36(1999), pp. 223-238.
- [27] Griffin, A. and J.R. Hauser, "Integrating R&D and marketing : A review and analysis of the literature," *Journal of Product Innovation Management*, Vol.13(1996), pp. 191-215.
- [28] Guetzkow, H. and J. Gyr, "An analysis of conflict in decision-making groups," *Human Relations*, Vol.7(1954), pp.367-381.
- [29] Gupta, A.K., S.P. Raj, and D. Wilemon, "A model for studying R&D-marketing interface in the product innovation process," *Journal of Marketing*, Vol.50(1986a), pp.7-17.
- [30] Gupta, A.K., S.P. Raj, and D. Wilemon, "R&D and marketing managers in high-tech companies : Are they different?" *IEEE Transactions on Engineering Management*, Vol.33, No.1(1986b), pp.25-32.
- [31] Harrison, D.A., K.H. Price, J.H. Gavin, and A.T. Florey, "Time, teams, and task performance : Changing effects of surface-level and deep-level diversity on group functioning," *Academy of Management Journal*, Vol.45, No.5(2002), pp.1029-1045.
- [32] Hunt, K.A., "The relationship between channel conflict and information processing," *Journal of Retailing*, Vol.71, No.4(1995), pp.417-436.
- [33] Ivancevich, J.M. and M.T. Matteson, *Organizational behavior and management*,

- 4th ed., Chicago, Irwin, 1996.
- [34] Jacobs, L., G. Guopei, and P. Herbig, "Confucian roots in China : A force for today's business," *Management Decision*, Vol.33, No.10(1995), pp.29-34.
- [35] Janis, I.L., *Victims of groupthink*, Boston : Houghton Mifflin, 1972.
- [36] Jassawalla, A.R. and H.C. Sashittal, "An examination of collaboration in high-technology new product development processes," *Journal of Product Innovation Management*, Vol.15(1998), pp.237-254.
- [37] Jaworski, B.J. and A.K. Kohli, "Market orientation : Antecedents and consequences," *Journal of Marketing*, Vol.57(1993), pp.53-70.
- [38] Jehn, K.A., "A multimethod examination of the benefits and detriments of intragroup conflict," *Administrative Science Quarterly*, Vol.40(1995), pp.256-282.
- [39] Jehn, K.A., "A qualitative analysis of conflict types and dimensions in organizational groups," *Administrative Science Quarterly*, Vol.42(1997), pp.530-557.
- [40] Jehn, K.A. and J.A. Chatman, "The influence of proportional and perceptual conflict composition on team performance," *International Journal of Conflict Management*, Vol.11, No.1(2000), pp.56-73.
- [41] Jehn, K.A. and E.A. Mannix, "The dynamic nature of conflict : A longitudinal study of intragroup conflict and group performance," *Academy of Management Journal*, Vol.44, No.2(2001), pp.238-251.
- [42] Kahn, K.B., "Interdepartmental integration : A definition with implications for product development performance," *Journal of Product Innovation Management*, Vol.13 (1996), pp.137-151.
- [43] Karau, S.J. and J.R. Kelly, "The effects of time scarcity and time abundance on group performance on group performance quality and interaction process," *Journal of Experimental Social Psychology*, Vol.28(1992), pp. 542-571.
- [44] Lusch, R.F., "Channel conflict : Its impact on retailer operating performance," *Journal of Retailing*, Vol.52, No.2(1976), pp.3-12.
- [45] Menon, A., S.G. Bharadwaj, and R. Howell, "The quality and effectiveness of marketing strategy : Effects of functional and dysfunctional conflict in intraorganizational relationships," *Journal of the Academy of Marketing Science*, Vol.24, No.4(1996), pp.299-313.
- [46] Menon, A., B.J. Jaworski, and A.K. Kohli, "Product quality : Impact of interdepartmental interactions," *Journal of the Academy of Marketing Science*, Vol.25, No.3(1997), pp.187-200.
- [47] Moenaert, R.K. and W.E. Souder, "Context and antecedents of information utility at the R&D/Marketing interface," *Management Science*, Vol.42, No.11(1996), pp.1592-1610.
- [48] Moorman, C. and A.S. Miner, "The impact of organizational memory on new product performance and creativity," *Journal of Marketing Research*, Vol.34, No.1(1997), pp.91-106.
- [49] Morgan, N.A. and N.F. Piercy, "Interactions between marketing and quality at the SBU level : Influences and outcomes," *Journal of the Academy of Marketing Science*, Vol.26, No.3(1998), pp.190-208.
- [50] Olson, E.M., O.C. Walker, Jr., and R.W. Ruekert, "Organizing for effective new pro-



- duct development : The moderating role of product innovativeness," *Journal of Marketing*, Vol.59, No.1(1995), pp.48-62.
- [51] Page, A.L., "Assessing new product development practices and performance : Establishing crucial norms," *Journal of Product Innovation Management*, Vol.11(1993), pp. 183-200.
- [52] Pelled, L.H., "Demographic diversity, conflict, and work group outcomes : An intervening process theory," *Organization Science*, Vol.17(1996), pp.615-631.
- [53] Pelled, L.H. and P.S. Adler, "Antecedents of intergroup conflict in multifunctional product development teams : A conceptual model," *IEEE Transactions on Engineering Management*, Vol.41, No.1(1994), pp.21-28.
- [54] Pelled, L.H., K.M. Eisenhardt, and K.R. Xin, "Exploring the black box : An analysis of work group diversity, conflict, and performance," *Administrative Science Quarterly*, Vol.44(1999), pp.1-28.
- [55] Pinkley, R.L., "Dimensions of conflict frame : Disputant interpretation of conflict," *Journal of Applied Psychology*, Vol.75(1990), pp.117-126.
- [56] Pondy, L.R., "Organizational conflict : Concepts and models," *Administrative Science Quarterly*, Vol.12(1967), pp.296-320.
- [57] Putnam, L.L., "Productive conflict : Negotiation as implicit coordination," *International Journal of Conflict Management*, Vol.5 (1994), pp.285-299.
- [58] Rosenberg, L.J. and L.W. Stern, "Toward the analysis of conflict in distribution channels : A descriptive model," *Journal of Marketing*, Vol.34(1970), pp.40-46.
- [59] Rosenbloom, B., "Conflict and channel efficiency : Some conceptual models for the decision maker," *Journal of Marketing*, Vol. 37(1973), pp.26-30.
- [60] Ross, R.S., "Conflict," In R. Ross and J. Ross (eds). *Research in Organizational Behavior*, Greenwich, CT : JAI Press, Vol.7(1989), pp. 1-37.
- [61] Ruekert, R.W. and O.C. Jr. Walker, "Marketing's interaction with other functional units : A conceptual framework and empirical evidence," *Journal of Marketing*, Vol.51, No.1(1987), pp.1-19.
- [62] Schweiger, D., W. Sandberg, and J.W. Ragan, "Group approaches for improving strategic decisions : A comparative analysis of dialectical inquiry, devil's advocacy, and consensus," *Academy of Management Journal*, Vol.29(1986), pp.51-71.
- [63] Schweiger, D., W. Sandberg, and P. Rechner, "Experiential effects of dialectical inquiry, devil's advocacy, and consensus approaches to strategic decision making," *Academy of Management Journal*, Vol.32 (1989), pp.745-772.
- [64] Sethi, R., "New product quality and product development teams," *Journal of Marketing*, Vol.64(2000), pp.1-14.
- [65] Sethi, R., D.C. Smith, and C. Park, "Cross-functional product development teams, creativity, and the innovativeness of new consumer products," *Journal of Marketing Research*, Vol.38, No.1(2001), pp.73-85.
- [66] Simons, T.L. and R.S. Peterson, "Task conflict and relationship conflict in top management teams : The pivotal role of intra-group trust," *Journal of Applied Psychology*, Vol.85, No.1(2000), pp.102-111.
- [67] Song, M.X., M.M. Montoya-Weiss, and J.B.

- Schmidt, "The role of marketing in developing successful new products in South Korea and Taiwan," *Journal of International Marketing*, Vol.5, No.3(1997a), pp. 47-69.
- [68] Song, M.X., M.M. Montoya-Weiss, and J.B. Schmidt, "Antecedents and consequences of cross-functional cooperation : A comparison of R&D, manufacturing, and marketing perspectives," *Journal of Product Innovation Management*, Vol.14(1997b), pp. 35-47.
- [69] Song, M.X. and M.E. Parry, "Teamwork barriers in Japanese high-technology firms : The sociocultural differences between R&D and marketing managers," *Journal of Product Innovation Management*, Vol.14(1997), pp.356-367.
- [70] Song, M.X. and J. Xie, "Does innovativeness moderate the relationship between cross-functional integration and product performance?," *Journal of International Marketing*, Vol.8, No.4(2000), pp.61-89.
- [71] Song, M.X., J. Xie, and B. Dyer, "Antecedents and consequences of marketing managers' conflict-handling behaviors," *Journal of Marketing*, Vol.64(2000), pp.50-66.
- [72] Souder, W.E., J.D. Sherman, and R. Davies-Cooper, "Environmental uncertainty, organizational integration, and new product development effectiveness : A test of contingency theory," *Journal of Product Innovation Management*, Vol.15(1998), pp.520-533.
- [73] Staw, B.M., L.E. Sanderlands, and J.E. Dutton, "Threat-rigidity effects in organizational behavior : A multilevel analysis," *Administrative Science Quarterly*, Vol.26 (1981), pp.501-524.
- [74] Turner, M.E. and A.R. Pratkanis, "Mitigating groupthink by stimulating constructive conflict," In : *Using conflict in organizations*, De Dreu, C.K.W. and E. Van de Vliert (eds). London : SAGE, (1997), pp.101-115.
- [75] UK Trade and Investment, [http://www.tradepartners.gov.uk/education/south\\_korea/profile/overview.shtml](http://www.tradepartners.gov.uk/education/south_korea/profile/overview.shtml), 2003.
- [76] Walker, Jr. O.C. and R.W. Ruekert, "Marketing's role in the implementation of business strategies : A critical review and conceptual framework," *Journal of Marketing*, Vol.51(1987), pp.15-33.
- [77] Wall, Jr. J.A. and R.R. Callister, "Conflict and its management," *Journal of Management*, Vol.21, No.3(1995), pp.515-558.
- [78] Walton, R.E. and J.M. Dutton, "The management of interdepartmental conflict : A model and review," *Administrative Science Quarterly*, Vol.14, No.1(1969), pp.73-84.
- [79] Williams, K.Y. and C.A. O'Reilly, "Demography and diversity in organizations : A review of 40 years of research," In B. M. Staw and L.L. Cummings (Eds.), *Research in Organizational Behavior*, Greenwich, CT : JAI Press, Vol.20(1998), pp.77-140.
- [80] Xie, J., M.X. Song, and A. Stringfellow, "Interfunctional conflict, conflict resolution styles, and new product success : A four-culture comparison," *Management Science*, Vol.44, No.12(1998), pp.S192-S206.
- [81] Xie, J., M.X. Song, and A. Stringfellow, "Antecedents and consequences of goal incongruity on new product development in five countries : A marketing view," *Journal of Product Innovation Management*, Vol.20 (2003), pp.233-250.