

國立交通大學

經營管理研究所

碩士論文

**Moderating Effects of Communication Media in the Conflict-  
Effectiveness Relationship**



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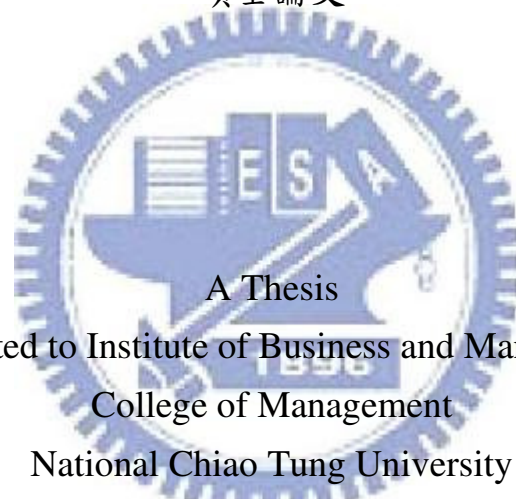
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# Moderating Effects of Communication Media in the Conflict- Effectiveness Relationship

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## **Abstract**

The present paper examines the moderating effect of communication media (face-to-face communication versus computer-mediated communication, specifically with online written messages) on the relationships between conflicts and performance, which rarely earns the attention it deserves. The research hypotheses are built under the framework of conflict as a communication process consisting of cognitive negotiation and emotional negotiation, so that a communication medium that differs in its efficiency regarding emotion delivery is very likely to have a different impact on performance. An experiment was designed to test our research hypotheses. As a result, we found that an individual negotiates with a positive attitude (in what is known as a ‘functional conflict’ situation), and the choice of communication medium did not matter; however, computer-mediated communication did produce better performance in negative attitudinal negotiation (known as ‘dysfunctional conflict’) by reducing the amount of negative emotion transmitted.

**Keywords:** communication; conflict management; face-to-face communication; computer-mediated communication; functional conflict; dysfunctional conflict; emotion delivery

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## Chapter 1 Introduction

Organizational conflict, simply defined as the perceived incompatibilities among members of an organization, is almost an everyday issue for every managerial practitioner, consuming working time up to a level of 20 percent (Song et al, 2006). In the majority of conflict management research, conflict is perceived as a negative factor that decreases organization performance (Zartman, 2000; Drolet & Morris, 2000), and increases negative outcomes such as distortion and withholding of information to the detriment of others within the organization, hostility, and distrust during interactions (Zillman, 1988; Thomas, 1996), broadened information gates (Jaworski & Kohli, 1993), obstacles to decision-making (Ruekert & Walker, 1987b), and decreased satisfaction with the relationships between organizational members and the organization itself (Mintzberg et al., 1976; Baron, 1984; Hickson et al., 1986; Frazier & Rody, 1991; Mohr et al., 1996; Womack, 1998; Vaaland & Hakansson, 2003; De Dreu & Weingart, 2003; Duarte & Davies, 2003; Margarida & Gary, 2003; Harolds & Wood, 2006). However, if conflict is managed properly, it could bring about positive consequences (Jehn, 1995; De Dreu & Weingart, 2003; Bradford et al., 2004). Opportunities to express grievance, introduce different perspectives, utilize appropriate methods of communication to produce innovative solutions (Brown, 1983; Amason & Schweiger, 1994; Amason & Sapienza, 1997; Coughlan et al., 2001; Kaushal & Kwantes, 2006), stimulate change, motivate problem-solving activity, and compel the group to focus on,



think through, and articulate a problem clearly and logically (Schweiger et al., 1986; Schwenk, 1990), becoming more creative and responsive to clients and experiencing higher employee job satisfaction (Jordan & Troth, 2002) are several of the positive outcomes of productive conflict resolution..

So far, numerous researchers have indicated that communication holds the key to successful conflict negotiation (Maynard, 1986, 1993; Yamada, 1989, 1992, 1997; Cook, 1990; Watanabe, 1990, 1993; Olson & Olson, 2001; Harold & Wood, 2006). In this way, communication refers to psychological and social interaction through which two or more persons exchange their current attitudes, feelings, meaning, opinions, social behavior, information, and knowledge and further create new ones throughout the whole interaction process to create a better mutual understanding (Simon, 1976; Souder, 1981; Ruckert & Walker, 1987a; Gudykunst, 1993; Menon et al., 1996; Maltz, 1997; Gergen, 1999; Varey et al., 2002). The traditional approaches of conflict management focus on the cognitive side of conflict negotiation. They tend to seek the simplistic in complex conflict processes and structures, where the rational and non-contextual attributes, i.e., the setting of meetings and collective projects where people must communicate together towards a common goal, are central concerns (Lewicki et al., 1992; Clark, 1996).

However, conflict is multidimensional (Pondy, 1969; Rahim, 1983; Wall & Nolan, 1987; Pinkley, 1990; Jehn, 1992; Slabbert, 2004). The emotional part of communication and conflict

negotiation is far underestimated (Arvey et al., 1998; Retzinger & Scheff, 2001). Maiese (2005) points out that the main factor provoking conflict is an individual ignoring others' feelings and emotions. The contemporary research attempts to adjust the emphasis on the emotional side of conflict negotiation to avoid the negative consequence of poor emotional negotiation, limiting the knowledge creation of conflict discipline (Retzinger & Scheff, 2001) and leading to resentment and the breakdown of agreements (Bjerknes & Paranica, 2002). Nevertheless, despite the recognized importance of emotional negotiation during conflict-solving, the relevant empirical research is still rare.

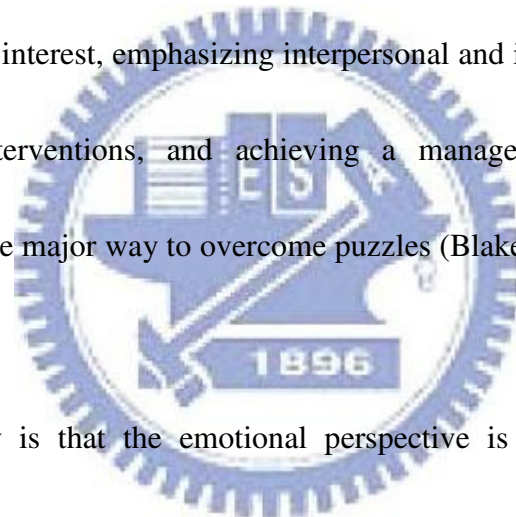
In the present paper, we initially explore the conflict negotiation process from the perspective of emotional negotiation. The moderating variable of communication media and its effect on emotional delivery, through either face-to-face communication or computer-mediated communication (as presented in the following section), is added to the current literatures to influence our view of emotional negotiation and consequently of conflict negotiation as a whole. An experimental research design is applied to allow us to examine our hypotheses.

## Chapter 2 Background

Conflict results from continuous inconsistencies of goals, opinions, motivations, concepts, perceptual responses, behavior, attitudes, beliefs, feelings, actions, or communication exchanges between two or more parties or by over-reflection or behaviors through parties pursue their self-interests and prevent others and thus always provoke negative emotions such as anxiety (Pondy, 1967; Raven & Kruglanski, 1970; Deutsch, 1973; Rex, 1981; Gaski, 1984; Stern & El-Ansary, 1992; Taylor & Moghaddam, 1994; Thomas, 1996; Robbins, 1998; Kim & Kitani, 1998; Maltz, 2000; Coughlan et al., 2001; Bradford et al., 2004; Worchel, 2005; Kaushal & Kwantes, 2006). The traditional viewpoint of cognitive negotiation demonstrates two famous concepts of conflict scenarios that predict consequent performance: those of functional and dysfunctional conflict (Pondy, 1967; Dawes, 1980; Amason, 1996; Massey & Dawes, 2004).

The functional conflict scenario illustrates a conflict between members of an organization with a constructive attitude toward challenging ideas and beliefs, respect for others' points of view even when the individuals disagree, and the willingness to undergo consultative interaction involving useful give and take (Tjosvold, 1985; Baron, 1991; Menon & Roy, 1996; Massey & Dawes, 2004). Researchers show that individuals engaged in functional conflict are usually task-oriented and focus on overcoming the differences between members to achieve the common objectives in the best way (Riecken, 1952; Tarrant, 1957;

Brehmer, 1976; Cosier & Rose, 1977; Priem & Price, 1991; Jehn, 1992). On the other hand, dysfunctional conflict refers to a conflict that includes personal attacks and undermines team effectiveness (Menon & Roy, 1996; Brockenn & Anthony, 2002), where personal attacks might possibly stimulate the organizations to re-examine their activities and improve performance, but the undermining behaviors bring nothing but a reduction in efficiency and an increase in organizational costs (Kotlyar & Karakowsky, 2006). To overcome the plight of dysfunctional conflict, empirical research suggests four major cognitive principles, as follows: clarifying the conflicts of interest, emphasizing interpersonal and intergroup levels of analysis, emphasizing process interventions, and achieving a managerial perspective in which collaboration is seen as the major way to overcome puzzles (Blake & Mouton, 1964; Thomas, 1996).



What is noteworthy is that the emotional perspective is overlooked in the current literature: in the functional conflict scenario, the individual's representative attitude toward conflict is positive, proactive and constructive, whereas the dysfunctional conflict scenario expresses an attitude that is negative, reserved and withdrawn. Conflict research indicates that negative emotions, including anxiety and perceived uncertainty, are the main factors that destroy the communication process and lead to even worse conflict than at the beginning of the negotiation (Gudykunst, 1988, 1993, 1995, 1998; Gudykunst et al., 1986; Gudykunst & Shapiro, 1996; Hubbert et al., 1999; Gudykunst & Nishida, 2000; Maiese, 2005). In the

present paper, based on the experimental research design, we attempt to explore the novel aspect, from the perspective of emotional delivery, of communication media as related to conflict performance. Our logic is that the communication media chosen for negotiation deliver not only numerous pieces of information necessary for bargaining but also the emotions brought in and developed during the process of negotiation. We suggest that the emotional nature in communication media is very likely to change the individual's initial attitude toward the conflict by increasing/decreasing positive and negative emotions over the course of communication and interrupts the efficiency of information exchange, thus significantly influencing the negotiation performance.

Face-to-face communication is the well-known, traditional style of human communication yet remains to be the media of best recommendation and non-substitution (Short et al., 1976; Kiesler et al., 1984; Rutter, 1987; Clark & Brennan, 1991; Nohria & Eccles, 1992; Chidambaram & Jones, 1993; Handy, 1995; Palmer, 1995; Warkentin et al, 1997; Hallowell, 1999; Olson & Olson, 2001). Face-to-face communication requires participants to communicate with each other directly and immediately at the same time and in the same place. It is an effective media that has the benefit of enhancing socio-emotional conversation, such as through identification, discussion, and commitment between participants (Dawes, 1980; Kiesler et al., 1984; Hollingshead et al., 1993; Straus & McGrath, 1994). Considering its advantage in terms of offering synchronized communication, there is

no doubt that face-to-face communication is a good media for emotional delivery. However, emotion delivery is not necessarily good for conflict negotiation in all cases.

In the case of the functional conflict scenario, the emergence and delivery of positive emotion can naturally result in a relaxing, open, understanding and attentive communication process that ends in a satisfactory conclusion for each participant (Ruekert & Walker, 1987b; Duck et al., 1991; Gudykunst & Shapiro, 1996; Pettit et al., 1997). But this positive reinforcement causal loop might lead to an opposite ending under different circumstances. In the case of dysfunctional conflict, the presence of anxiety or the impression that is a threat or is feeling threatened can be easily observed through facial expressions and body language; consequently, this can encourage others to express even more exaggerated negative emotions and responses in return (Stephan & Stephan, 1985, 1989, 2000; Stephan et al., 1999). Such unpleasant reinforcement loops can be frequently observed in situations where one is communicating with strangers, conceived of as external group members.

*Hypothesis 1:* In terms of the media's efficiency of emotion delivery, face-to-face communication functioned best in situations of functional conflict.

Mediated communication, in this context computer-mediated communication, functions better than face-to-face communication in certain occasions. Researchers indicate that compared to face-to-face communication, computer-mediated communication is good in that it saves organizations the relatively high cost of personnel, traveling in a global environment



and the pollution from member's interest interrelationship (Morley & Stephenson, 1969; DeSanctis & Gallupe, 1987; Hollan & Stornetta, 1992; Sproull & Kiesler 1992; Walther, 1994; Jarvenpaa & Leidner, 1999). Computer-mediated communication also allows more people to participate in important decisions and facilitates communication through the sharing of extra resources with everyone using just one click (Suh, 1999) or the exchange of private information with specific members of a group through private dialogue windows.

Among the various types of computer mediation, written text is the most significant one because it mixes the effects of hypertext (Orsinger, 1996), written and spoken discourse (Walther, 1992, 1994, 1996; Wellman et al., 1996; Wellman & Guila, 1999; Donath, 1999; Prabu & Kline, 2000; Postmes et al., 2001). Due to its lack of nonverbal cues, cues showing social differences, and concerns about social desirability (which are lessened if not eliminated), researchers usually consider written text as a cold, impersonal, and unsociable medium (Short et al., 1976; Adrianson & Hjelmquist, 1991) that can even create obstacles to successful communication (Short et al., 1976; Daft et al., 1987; Kahai & Coper, 2003) by encouraging participants to use stronger, more severe and more impulsive language to earn attention (Sproull & Kiesler, 1986), enhancing destructive forms of conflict (Walther, 1996) and increasing the extent of conflict (Filley, 1975; Sillars, 1980; Kiesler et al., 1984; Siegel et al., 1986; Sproull & Kiesler, 1986; Hiltz et al., 1989; Weisband, 1992). Nevertheless, the lack of nonverbal cues helps computer-mediated communication sets the negotiation free from

social conventions, people's orientation, empathy and feelings of guilt (Kiesler et al., 1984; Sproull & Kiesler, 1992). In other words, computer-mediated communication is a task-oriented medium (Short et al., 1976; Sherman, 2003). In terms of data, a lack of social and personal cues is found to be responsible for the inconsistent empirical results regarding agreement violations after negotiation (Howell et al., 1976; William & Rice, 1983; Sproull & Kiesler, 1986; Dubrovsky et al., 1991; Walther, 1992, Walther & D'Addario, 2001; Bicchieri & Lev-On, 2007). On the other hand, it decreases the power gap due to social differences such as age, gender, race, wealth, and status (Walther, 1993, 1996; White & Dorman, 2001; Fernandex & Martinez, 2002).

So does computer-mediated communication contribute anything besides cost savings? Mainstream communication researchers tend to evaluate media efficiency according to the information content it transmits. As a result of our review of the literature, five theories can be identified: the social presence theory (Short et al., 1976; Burgoon et al., 1984; Walther & Burgoon, 1992; Perse et al., 1992; Rice, 1993; Gunawardena, 1995; Papacharissi & Rubin, 2000; Richardson & Swan, 2003; Baskin & Barker, 2004), the media-richness theory (Short et al., 1976; Salancik & Pfeffer, 1978; Daft & Lengel, 1984; Daft & Lengel, 1986; Trevino et al., 1987; Markus, 1994), the task-media fitness theory (McGrath, 1984; McGrath & Hollingshead, 1993), the compensatory adaptation theory (Kock, 2001, 2004, 2005, 2007), and the reduced social cues model (Kiesler et al., 1984; Sproull & Kiesler, 1986; Siegel et al.,



1986; Peng, 2003). Although these five theories assess communication media in quite different ways, the conclusions are similar: given the same input level of materials necessary for decision-making, the predicted performance of face-to-face communication is better than that of computer-mediated communication because it provides the most rich and natural sources of information, including verbal expressions, facial expressions, body language, and social cues (Reid, 1977; Rice, 1984, 1993; Rice & Love, 1987; Valacich & Dennis, 1994; Straub & Karahanna, 1998; Tu, 2000; Tu & McIsaac, 2002; Richardson & Swan, 2003; Kock, 2007; Peng, 2003; Sherman, 2003).

In the context of the present research, we have no doubt about the content richness of face-to-face communication. Nevertheless, we wonder whether this richness of content is desirable in the negotiation process. According to the media-fitness perspective on conflict attitudes and communication media, we argue that dysfunctional conflict is a situation in which precise emotional delivery and feedback—where the emotion to be transmitted is negative and embedded in personal attack behaviors and attempts to undermine one's adversary—will indeed destroy the whole negotiation. Contrary the expectations of current researchers, computer-mediated communication, especially in the form of online written messages, are the optimal medium to employ in such a situation because this medium is less sensitive to human emotions, allowing the participants to focus their efforts on only dealing with cognitive conflict and reducing the probability of fatal emotional conflict.

*Hypothesis 2:* In terms of the media's efficiency of emotion delivery, computer-mediated communication functioned best in situations of dysfunctional conflict.



## Chapter 3 Method

### *3.1 Participants and research design*

The participants were 128 undergraduate students (85 males and 43 females) on a volunteer basis from a large university in northern Taiwan; they received a monetary reward after participating. Participants were asked to engage in a small-sized group discussion regarding the development of a forthcoming school policy. Two participants were randomly assigned to roles (either that of the parent representative or that of the dean of academic affairs) in each group. Group members were required to share their opinions regarding whether or not to include a student's part-time work experience as a part of their formal college assessment/grades.

Our research constructs (two opposite conflicts, functional and dysfunctional; two communication media, face-to-face and instant message) were randomly assigned to each group. Each participant in the discussion group was assigned to the same conflict and communication medium. The design of the different role-playing was an attempt to facilitate discussion from opposite points of view. The effect of the role-play was confirmed to be non-significant in statistics.

### *3.2 Procedure*

After random group assignments were made, the instructor then distributed role

descriptions according to the group assignments, with a similar answer sheet for each group, and then gave the following instructions:

You will now either act as a parent representative or a dean of academic affairs in a well-known university. You will attend a face-to-face/instant message discussion regarding a forthcoming school policy with your partner. This experiment is composed of three sections. You will first have three minutes to read the content of the role description; then, please answer the question on the sheet in your hand in two minutes in accordance with the instructions. After that, you will have twenty minutes to discuss with your partner. Note that irrelevant chatting is forbidden. After discussion, you must complete the same question using the instructions within five minutes. After you go through all the sections, the instructor will give you money as a reward for your participation.

To manipulate our conflict constructs, we demonstrated two different role scripts at the end of the description. For instance, for a functional conflict situation, the role of the parent representative was designed as follow:

*As a parent representative, your concerns about children's time management and the probability of meeting someone bad for your boy/girl in the workplace confuses you to sincerely support for this forthcoming policy.*

*Today, you are invited to attend an affectionate group discussion. Please feel free to open your mind and explore the best win-win strategy with the dean of*

*academy affairs for all students whom concerns to.*

On the other hand, the role description given to the individual designated as parent representative in the dysfunctional conflict context is designed as follows:

*As a parent representative, your concerns about children's time management and the probability of meeting someone bad for your boy/girl in workplace confuse you to sincerely support for this forthcoming policy. Besides, the educational philosophy of the dean of academic affairs whom you are meeting with is totally opposite to yours. It is easy to foresee that during the whole discussion, he/she will stand firm on his/her point of view. Although the conflict might not be avoidable, you and the dean of academic affairs still have to identify the optimal choice for all students whom concerns to.*

After the instructions are distributed, all participants started to read the role description carefully and answered the communication performance questions regarding self-rated policy agreement before the discussion. When the pre-discussion attitude assessment was completed, the participants then turned to discuss the issue with their partners and then fill out the final assessment of attitude change, which was measured using the same question they answered before the discussion. After collecting all the answer sheets, the instructor then distributed the monetary reward to each participant and closed the experiment.

### ***3.3 Measures***

Communication performance in the present paper was represented by the attitudinal change in participant's self-rated policy agreement after the group discussion. Communication performance is measured using the following single-item question: "To what extent do you agree with this policy right now?" The item was rated using an 11-point scale that ranged from 1 (disagree) to 11 (totally agree).



## Chapter 4 Results

### 4.1 Manipulation Checks

Prior to testing the hypothesis, we must make sure that our conflict manipulations are successful. An Independent Sample T Test is conducted to compare the group's means on policy agreement before discussion. We reveal the results in Table 1. Consistent with our manipulations, participants assigned a functional conflict reported higher agreement scores ( $M=6.84$ ) than did the dysfunctional conflict group ( $M=5.75$ ),  $t(126)=-2.181$ ,  $p<0.031$ ,  $d=0.502$ .

Table 1. Results of manipulation checks

Conflict	N	Communication Agreement	
		M	SD
Functional Conflict	64	6.84	2.82
Dysfunctional Conflict	64	5.75	2.86

### 4.2 Experiment Results

Detailed means for each conflict group are presented in Table 2, which primarily echo our research hypotheses 1 and 2. After the Two-Way ANOVA analysis, conflicts were found to have a very significant impact on communication performance ratings,  $t(126)=-5.413$ ,  $p<0.000$ ,  $d=0.51$ . Communication media were found to have an interaction effect on the

relationship between conflict and communication performance (see Table 3). Figure 1 displays the interaction effect. Although the main effect of communication media is not significant, our research hypotheses 1 and 2 are supported due to the interaction effect.

Additional Independent Sample T Test analysis is applied to compare the communication media's performance in different conflict scenarios. Under the situation of functional conflict, the performance score of the face-to-face group is higher than that of the instant message group but does not reach the statistically significant level,  $t(62)=1.646$ ,  $p=0.105$ ,  $d=0.722$ , *ns*. The performance of the face-to-face group is lower than that of the instant message group in the dysfunctional conflict situation,  $t(62)=-2.677$ ,  $p=0.009$ ,  $d=0.665$ .

Table 2. Means and standard deviations for communication media in each conflict

Conflict		N	Communication Performance	
			$\Delta M$	SD
Functional Conflict	FTF	32	3.81	3.19
	IM	32	2.63	2.55
Dysfunctional Conflict	FTF	32	-0.41	2.55
	IM	32	1.38	2.76

Note: FIF= Face to Face, IM= Instant Message



Table 3. Result of the interaction effect of conflicts and communication media on communication performance

Variance	SS	DF	MS	F Value
Conflict (C)	239.258	1	239.258	31.047***
Communication Media (M)	2.820	1	2.820	0.366
CxM	70.508	1	70.508	9.149**
Error	955.594	124	7.706	

Note: \*p<0.05 \*\*\* p<0.01

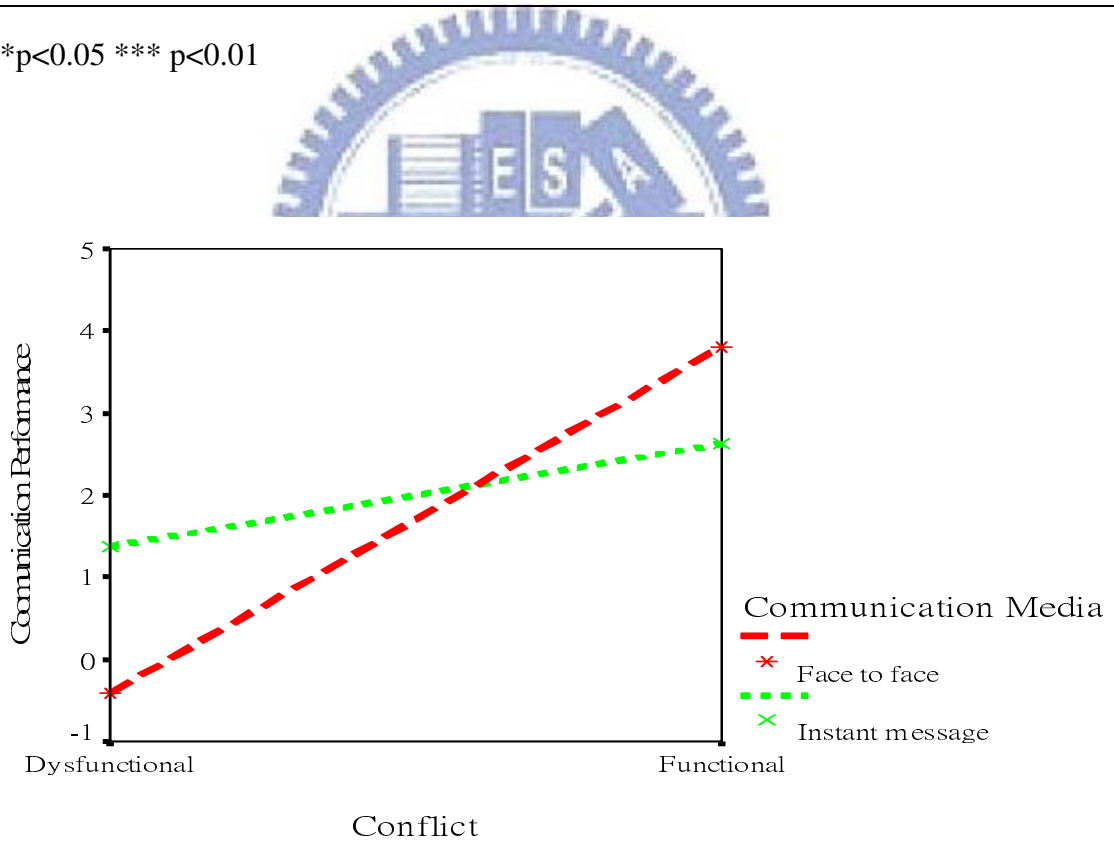


Figure 1. The interaction effect of conflict and communication media on communication performance

## Chapter 5 Discussion

The present paper proposes a novel framework to integrate the media's emotional delivery function into the field of current conflict management and communication research. The results of our laboratory study confirmed our hypotheses: in terms of the media's efficiency of emotion delivery, face-to-face communication functioned best in situations of functional conflict; likewise, computer-mediated communication fitted situations of dysfunctional conflict. Emotion is well-known as the essential factor in successful negotiation and communication. Despite encouraging communicators to develop higher emotional intelligence, little can be done to ensure improvement. By emphasizing different media's efficiencies in terms of emotion delivery and the fitness of conflicts, our research contributes to three aspects.

First, in terms of conflict management, our study extends managerial alternatives for emotional negotiation control from the human factors to the mediation factors. Switching to proper communication media should be easier than displacing an unqualified negotiator. Second, in terms of communication research, our research adds new attitudinal factors, (functional and dysfunctional conflict as considered in the present paper) that can moderate the relationship between media and communication performance. So far, the current communication literature continues dialogue on the assumption that 'more information input means better response output.' However, what if the cognitive information overloads the

communication (Kraut et al., 1987)? We argue that the current mainstream is based on a rationalist model where the negative emotion mechanism pre-set within human communicators is underestimated. In this paper, we initially explore emotional negotiation from the perspective of a reinforcement causal loop and confirm that the best way to get rid of the negative emotional feedback loop is to 'reduce the emotional input for more rational output.' Third, in terms of the research design, we ambitiously conduct a laboratory experiment to examine our hypotheses. The laboratory design has the advantage of showing a strict causal relationship. Compared to the major study design of a cross-sectional survey in face-to-face and computer-mediated communication literatures, our study provides a solid result that confirms all the theoretical hypotheses regarding the content richness of face-to-face communication, while denying the disadvantages of computer-mediated communication. Further research is expected to give further insight into this media competition lasting for decades.

In general, if we have accepted the assumption that the amount of human interaction depends on the strength of intention toward conflict (Riecken, 1952; Torrance, 1957; Brehmer, 1976; Cosier & Rose, 1977; Tjosvold, 1985; Baron, 1991; Priem & Price, 1991; Jehn, 1992; Menon & Roy, 1996; Massey & Dawes, 2004), then it is significant that our study provides solid empirical evidence supporting the well-known hypothesis claiming that face-to-face communication transmits more intense and rich verbal information and social cues than

computer-mediated communication does (Reid, 1977; Rice, 1984, 1993; Rice & Love, 1987; Valacich & Dennis, 1994; Straub & Karahanna, 1998; Tu, 2000; Tu & McIsaac, 2002; Richardson & Swan, 2003; Peng, 2003; Sherman, 2003; Kock, 2007). The upward slope of face-to-face communication is sharper than that of computer-mediated communication. Along with the shift in conflicts from negative/undermining to positive/friendly, the growth in human interaction is perfectly reflected in the radical performance improvement in face-to-face communication; in contrast, the change in computer-mediated communication is tender referring to a task-oriented and impersonal tool for mediating communication (Short et al., 1976; Sherman, 2003).



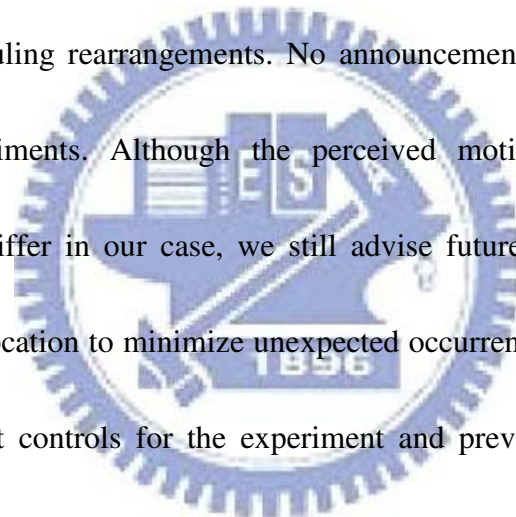
On the other hand, our sample counters the dominant viewpoint that suggests a face-to-face meeting where extremely detailed, unorganized and complex discussion and analysis are needed (Short et al., 1976; Daft & Lengel, 1984; Clark & Brennan, 1991; O’Conaill et al., 1993; Clark, 1996; Doherty-Sneddon et al., 1997; Suh, 1999). Computer-mediated communication becomes less recommended because it is supposed to have a negative effect on positive emotion (Short et al., 1976; Sherman, 2003). However, the expected effect of the transmission of positive emotion is indeed observed in our sample; yet it is not huge enough to make a significant difference from computer-mediated communication (Suh, 1999; Maltz, 2000). This paper presents the first trial that directly compares the overall performance of face-to-face communication and computer-mediated

communication. The existing theoretical and empirical literatures tend to identify and conduct complicated analysis upon every distinct factor that benefits communication performance. The evaluation of overall performance is therefore overlooked unintentionally.

Accordingly, our study here, based on our experimental results, proposes that further research efforts be devoted to investigating the influence of computer-mediated communication on positive emotion. Outside the mainstream, which highly values the content richness derived from face-to-face communication, many researchers have put tremendous efforts into considering the cognition improvement effect of computer-mediation communication: encouraging individuals to develop relational, socio-emotional abilities to compensate for weaknesses derived from a lack of nonverbal cues (Walther, 1992, 1994; Rezabek & Cochenour, 1998; Walther & D'Addario, 2001; Carter & Janes, 2002), feedback (Walther & Burgoon, 1992; Rice, 1993; Pellettieri, 2000; White & Dorman, 2001; Fernandex & Martinez, 2002) so as to improve mutual understanding and consensus-making. After all, studies argue that computer-mediated communication is capable of facilitating supportive communication (Walther, 1996; Preece, 1999; Wright, 1999, 2000, 2002; Walther & Parks, 2002; Wright & Bell, 2003), a comfortable environment for exchanging opposing ideas (Burleson & Goldsmith, 1998) and collaborative thinking (Rice & Love, 1987; Gallupe et al., 1991; Wellman et al., 1996; Ruberg et al., 1996; Wizelberg, 1997; Braithwaite et al., 1999; Finn, 1999; Wellman & Gulia, 1999; Finfgeld, 2000; Han & Belcher, 2001; White & Dorman,

2001; Barrera et al., 2002; McKenna et al., 2002; Wright, 2002; Caplan, 2003; Caplan & Turner, 2007) are increasing day by day.

Regardless of the endless efforts we devoted to making our study design immaculate, limitation is always present. Due to the approaching semester's end and consequent low rates of participation, one of our administrators asked for extra monetary incentives to encourage his participants to make adjustments in their holiday plans in order to participate in our experiment. The amount of extra fees was not too big; thus we treated this as a compensatory bonus for holiday scheduling rearrangements. No announcement about this bonus is made between the two experiments. Although the perceived motivation level between two experiments might not differ in our case, we still advise future researches to conduct the experiment at the same location to minimize unexpected occurrences that would interrupt the well-defined environment controls for the experiment and prevent any variation produced outside of the laboratory.



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