Face-to-face communication versus memo communication to announce mergers and acquisitions: the importance of media richness

Janell Marie Hopeck

Follow this and additional works at: https://scholarworks.lib.csusb.edu/etd-project

Part of the Organizational Communication Commons

Recommended Citation
Hopeck, Janell Marie, "Face-to-face communication versus memo communication to announce mergers and acquisitions: the importance of media richness" (2011). Theses Digitization Project. 140.
https://scholarworks.lib.csusb.edu/etd-project/140

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
FACE-TO-FACE COMMUNICATION VERSUS MEMO COMMUNICATION TO ANNOUNCE MERGERS AND ACQUSITIONS: THE IMPORTANCE OF MEDIA RICHNESS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology:
Industrial/Organizational

by
Janell Marie Hopeck
June 2011
FACE-TO-FACE COMMUNICATION VERSUS MEMO COMMUNICATION TO ANNOUNCE MERGERS AND ACQUISITIONS: THE IMPORTANCE OF MEDIA RICHNESS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

by
Janell Marie Hopeck
June 2011

Approved by:

Dr. Mark Agars, Chair
Psychology

Dr. Janelle Gilbert

Dr. Michael Lewin

5-18-11
ABSTRACT

With today's declining economy and government's new economic policies (e.g. federal stimulus package), mergers and acquisitions (M&A) could become a solution to jumpstart organizations' financial crises. Although current research on M&As includes organizational factors, such as communication processes, and their impact on employee reactions, there has been no examination of these elements within the critical announcement phase of an M&A. More specifically, extant research does not depict which communication mediums are the most effective for the announcement. The present study addresses this issue through a simulated M&A announcement laboratory experiment with 156 CSUSB undergraduate students. Results indicated that face-to-face communication positively impacted task performance during the announcement phase of an M&A. After hypotheses testing, exploratory analyses were conducted to explore relationships among the three scales (Anxiety Scale, Richness Scale, Fairness Scale) and the Time 2 Task Performance variable. These weak to moderate correlations are discussed. In conclusion, the practical and theoretical implications are presented, as well as the study's limitations.
ACKNOWLEDGMENTS

I would like to extend great appreciation to my Graduate Thesis Advisor and Graduate Thesis Committee, as well as everyone who supported and encouraged me throughout my academic journey. Each of you provided me with strength and a positive mindset to make significant advancements in my life, both personally and professionally. Thank you for helping me to attain one of the most challenging and most rewarding goals in my academic career. With God’s strength, I will embark on the following successful chapters in my life, all while I keep studying and keep smiling!
# TABLE OF CONTENTS

ABSTRACT ...................................................... iii

ACKNOWLEDGMENTS .............................................. iv

LIST OF TABLES ................................................... viii

LIST OF FIGURES ................................................ ix

CHAPTER ONE: INTRODUCTION .................................... 1

CHAPTER TWO: MERGERS AND ACQUISITIONS ....................... 4

Outcomes of Organizational Change ......................... 6

Anxiety ......................................................... 7

Fairness Perceptions ........................................ 8

Performance .................................................... 9

Merger Communication .................................... 11

CHAPTER THREE: ORGANIZATION COMMUNICATION LITERATURE

Organization Communication Channels .................. 14

Theories of Organization Communication ................ 16

Media Richness Theory .................................... 16

Channel Expansion Theory ................................ 18

CHAPTER FOUR: INTEGRATION OF MERGERS AND ACQUISITIONS AND ORGANIZATION COMMUNICATION LITERATURES

The Role of Communication in the Announcement Phase ........... 21

CHAPTER FIVE: PRESENT STUDY .................................. 24

CHAPTER SIX: METHODS ............................................ 26

Participants .................................................. 26

Procedure .................................................... 26
LIST OF TABLES

Table 1. Frequency Distribution for Medium and Gender (N = 156) .................................................. 40

Table 2. Means and Standard Deviations for All Variables (N = 156) .................................................. 43

Table 3. Regression Analyses for Perceived Richness as a Mediator Between Medium and Anxiety .................................................. 46

Table 4. Regression Analyses for Perceived Richness as a Mediator Between Medium and Performance_Time 2 .................................................. 48

Table 5. Regression Analyses for Perceived Richness as a Mediator Between Medium and Fairness Perceptions .................................................. 52

Table 6. Correlations for All Variables within the Face-to-Face Condition .................................................. 54

Table 7. Correlations for All Variables within the Memo Condition .................................................. 54
LIST OF FIGURES

Figure 1. Results of the Hypothesized Mediational Model Indicating no Mediating Effects of Richness Perceptions in the Relationship between Medium and Task Performance (Unstandardized Regression Coefficients Presented on Top with Standardized Errors of Unstandardized Coefficients in Parentheses; *p < .05) ......................... 49
CHAPTER ONE
INTRODUCTION

Change and growth are constant in the organizational realm. The impact of today’s economy on U.S. organizations is astonishing, evident in the approximate 11,000 businesses who filed for bankruptcy in 2008, a drastic increase from 7,100 in 2007 during the same fiscal third quarter (American Bankruptcy Institute- online, 2008). In 2007, the United States expended $602 billion dollars globally in M&As, constituting a 57% increase from 2006 (Bain & Company, 2007). With today’s drastically declining economy and government’s new economic policies (e.g. federal stimulus package), mergers and acquisitions (M&A) could become a solution to jumpstart organizations’ financial crises (Ernst & Young, 2009). Even with these organizational changes becoming more popular, failure rates remain high (Roach, 2007). A study by Booz-Allen & Hamilton Inc., a company that conducts M&A research, revealed that over 50% of M&As worldwide fail to produce successful results (Hutchison, 2002).

In efforts to gain a clear understanding of M&As, researchers continue to delve into the critical processes, such as merger communication, which may make or break a
merger or acquisition. According to Carey, Ogden, and Roland (2004), companies pursue these change processes to acquire talent, develop company status and brand, reduce operating expenses, acquire new products, attain new business partners and industries, decrease amount of competitors, and expand new technologies. Unsuccessful organizations may not realize that communication is an integral piece to achieve success in these pursuits.

Organization development facets such as employee motivation, organizational culture, employee retention, and leadership development are important pieces to manage for M&A success (Bastien, 1987; Giffords & Dina, 2003; Roach, 2007; Speight & Goodman, 1998; Weber, Shenkar, & Raveh, 1996). Unfortunately, the human element, intertwined in these facets, is often the most overlooked and under-appreciated facet (Blake & Mouton, 1985; Carey et al., 2004; Giffords & Dina, 2003; Hutchison, 2002). One specific human element, communication, consistently ranks among the top priorities for M&A success (Hutchison, 2002; Roach, 2007).

Among the human elements, organizations must focus heavily on outcomes experienced by employees, particularly stress, anxiety, performance, fairness perceptions, uncertainty, and acceptance/rejection of this
organizational change process. Using these outcomes when making organizational decisions throughout M&A phases permits employees' needs to be met, (e.g. communication needs). Following a review of the M&A and communication literatures, the present study attempts to examine the impact of communication channels on specific outcomes (i.e. anxiety, task performance, fairness perceptions).
CHAPTER TWO

MERGERS AND ACQUISITIONS

Mergers are agreements among owners of two companies to unite as one unit (Fischer, Greitemeyer, Omay, & Frey, 2007). Acquisitions can be viewed as the act of one company purchasing another company (Fischer et al., 2007). Essentially, an agreement is formed between two companies to converge into one unified organization with the same goals, visions, and organizational values. Every M&A is distinct, which means different strategies are implemented (Ivancevich, Schweiger, & Power, 1987).

Studying this particular organizational change initiative is a difficult task due to their complexity and the wide range of organizational processes needed for success. Mergers and acquisitions change the structure, culture, and employment in both companies. Undoubtedly, this often generates stress, hostile feelings, disorientation, and confusion among employees (Buono & Nurick, 1992). Therefore, communication is critical.

Hutchison (2002), a change communication specialist, throughout her many years studying change communication in M&As, illustrates a connection between unsuccessful M&As and ineffective internal communication. This linkage is
attributed to insufficient finances, communication professionals not being involved in the planning and decision-making processes of M&As, and inadequate resources allocated toward communication strategies. Hutchison (2002) clarified this linkage by pinpointing three internal factors that often hinder an effective communication strategy, including communication not being legally required, communication requiring significant time from employees, and communication involving tough messages to relay to employees. To the extent that these internal factors are present in organizations, ineffective communication plans will transpire, thus producing negative employee outcomes.

Empirical evidence pertaining to human factors (e.g. acceptance/rejection, employee anxiety, uncertainty, stress) in M&As is lacking. Instead, research has predominantly focused on the legal, strategic, and operational aspects (Fischer et al., 2007). Even though occurrences are frequent, success rates are not high (Roach, 2007). Some reasons for failure include organizational-level issues such as misaligning organizational goals and objectives, focusing too much on legal and financial issues, and failing to manage the post-merger process appropriately (Fischer et al., 2007;
Marks, 1997). These broader-level reasons for failure are common and heavily pinpointed in extant literature.

Other reasons for M&A failure, more pertinent to this study and less evident in extant literature, include ignoring human factors during mergers, discounting the role of professional communicators, over-using formal communication and under-using informal communication, and not tailoring communication to meet employees' needs (Whalen, 2004). The role of communication is evident in all of the previous reasons, but, unfortunately, is sometimes misunderstood or overlooked, which can lead to M&A failure. Consequently, researchers must provide M&A practitioners with empirical evidence of why and how communication efforts fail. The current study is such an attempt.

Outcomes of Organizational Change

The broader scope of organizational change initiatives can include hierarchical changes, mergers, acquisitions, new program implementation, and performance management system changes. Such efforts produce distinctive reactions, dependent on individual differences (i.e. coping mechanisms) and organizational strategies (i.e. communication techniques). To the extent that
organizations account for these reactions, employees will exhibit positive outcomes to change processes. During periods of mass organizational changes, as in mergers and acquisitions, employee outcomes must be taken into consideration for successful change to occur.

Anxiety

Employee stress is a major concern for organizations undergoing organizational change, especially during a merger or acquisition (Weisenfeld & Brockner, 2001). Change efforts, specifically mergers and acquisitions, create trauma and stress resulting in psychological, behavioral, physiological, performance, and organizational survival concerns for employees (e.g. job loss, survival of organizational change) (Ivancevich et al., 1987; Weisenfeld & Brockner, 2001). Ivancevich et al. (1987) noted that merger stress may be exacerbated by M&A natural processes and by employees' individual differences (e.g. ineffective coping skills). Regardless, merger stress will always be evident to some degree, and, consequently, organizations must engage in efforts to mitigate the negative consequences. One approach is to focus on effective communication initiatives. Astrachan (2004) identifies uncertainty and insecurity as two crucial antecedents of merger stress and anxiety, as evident in
the announcement phase and in many organizational change processes. Employees experience uncertainty and insecurity due to common M&A processes and results (e.g., job restructuring and job loss), thus increasing anxiety. 

Fairness Perceptions

Fairness perceptions formed during organizational change processes are linked to employee outcomes (i.e. performance, commitment, absenteeism) (Simons & Roberson, 2003). Employees form negative perspectives of the M&A in response to processes and experiences throughout the phases. For instance, employees form fairness perceptions when plans and procedures are implemented, which can create anxiety if, perhaps, communication needs are not sufficiently met (i.e. insufficient M&A information) (Astrachan, 1990; Dix & Eaton, 2007). As Weisenfeld and Brockner (2001) found, unfair communication processes about change efforts result in negative affective reactions (i.e. decreased self-integrity and increased anxiety).

Much of the fairness literature focuses on procedural, distributive, and interactional fairness of organizational change (Brockner, 2002; Herold, Fedor, & Caldwell, 2007; Spreitzer & Mishra, 2002). Research has shown that individuals react negatively (i.e. less
commitment) when organizations do not implement fair processes during change efforts (Brockner, Tyler, Cooper-Schneider, 1992).

Performance

Performance is also affected throughout organizational change efforts, as well as during all M&A phases (Burke & Litwin, 1992). A great deal of research examines individuals’ performance after organizational change efforts (Brockner, Davy, & Carter, 1985), instead of performance during change processes, as the current study examines. However, Weisenfeld and Brockner (2001) conclude that negative reactions during organizational change efforts include changes in behavior (e.g. performance and commitment), in addition to cognitive and affective reactions. Furthermore, evidence exists of the linkage between motivation and performance (Burke & Litwin, 1992). As an example, to the extent that an organization provides opportunities for success and communicates specific job requirements to motivate individuals, then these motivational practices can promote higher performance during change efforts.

Pertinent to this study, extant M&A literature predominantly focuses on post-merger performance, such as an organization’s economic post-performance (e.g.
organizational profit or loss) (Choi & Harmatuck, 2006; Hagedoorn & Duysters, 2002). Also in extant literature is the clear linkage between merger outcomes (e.g. anxiety, uncertainty, stress) and organizational behavioral consequences, (e.g. absenteeism, tardiness, turnover), which negatively affect job performance (Ivancevich et al., 1987; Sinetar, 1981). Unfortunately, task performance has not been clearly studied in how it is affected during M&As. This study will attempt to determine the effects of two merger announcement mediums (face-to-face and memo) on task performance.

In response to these negative outcomes (i.e. anxiety, fairness perceptions, task performance), employees usually partake in strategic communication endeavors (Casey, Miller, & Johnson, 1997). A great deal of research demonstrates the criticality of effective communication processes during any large-scale organizational change (Ackerman, 1982; Argote, Goodman, & Schkade, 1983; Baronas & Louis, 1988; Covin & Kilmann, 1990; Lewis, 1999). When effective communication is not implemented during organizational change, negative outcomes transpire. However, effective communication to supply sufficient information permits employees to become connected to the changes and experience positive reactions.
Employees seek to gain information about the change (i.e. goals and progress of change processes), which makes it critical for organizations to relay the details succinctly and effectively (Covin & Kilmann, 1990). Therefore, communication mediums are integral. Building from the M&A communication and organization communication literatures, this study proposes to experimentally test two communication channels, face-to-face and memo, for their impact on these M&A employee outcomes.

Merger Communication

Communication between management and employees during M&As is generally referred to as merger communication. Effective merger communication is often defined and understood according to specific phases incurred. Such communication efforts should be timely, detailed, useful, and accurate, especially during the announcement phase (Allen, Jimmieson, Bordia, & Irmer, 2007). Effective M&A communication increases employees' focus, initiates trust between all parties involved, and heightens employee commitment to M&A activities (Hutchison, 2002).

Speight and Goodman (1998) propose that merger communication consists of three phases, including "planning; completion and integration including
announcement, pre-completion, early post-completion, integration; and transformation" (p. 2). The second phase, completion and integration, including the announcement, is the focus of the present study. In addition, phase one is also important in this study because of the criticality of choosing effective communication mediums which can lower anxiety, increase performance, and create fair perceptions.

During the planning phase, internal and external communication efforts become aligned to effectively plan the announcement and to develop strategies to dissipate unforeseen circumstances (i.e. communication barriers). To implement these communication strategies, communication teams are utilized. The teams use consistent language and mediums that are aligned with communication strategies to disseminate M&A information throughout the organization, thereby reducing anxiety and increasing employee performance (Speight & Goodman, 1998).

Most importantly, communication channels and strategies for the announcement are determined in this phase (Speight & Goodman, 1998). The goal is to utilize mediums that are applicable and easily implemented, yet also effective (Speight & Goodman, 1998). Indeed, managing resistance, establishing consistent and motivating
messages, communicating goals and vision through effective language, and creating communication strategies in the first phase of M&As are essential communication elements (Palmer & Dunford, 2008; Taylor, 1998).

The introduction of a change initiative is a critical phase for organizations to produce positive employee perceptions and outcomes. This second merger communication phase consists of the announcement, the in-between phase between the initial planning and the beginning of the M&A integration. The announcement plans created in phase one are implemented, including the use of strategized channels, which are the focus of this study. During this phase, employees often ponder who will stay or leave the organization, causing anxiety, stress, and uncertainty (Carey et al., 2004). Despite the importance of this phase, relatively little research has been done to experimentally test which communication channels are most effective during the announcement phase.
CHAPTER THREE

ORGANIZATION COMMUNICATION LITERATURE

Organization Communication Channels

Communication mediums researched in the organizational communication literature consist of face-to-face, e-mail, speeches from top management/CEO, company intranet, company magazine, team briefing, memo, employee grapevine, telephone, and company television station ("Audit the Impact," 2003; Sinickas, 2005; Taylor, 1998). Researchers have studied the impact of these mediums on employee outcomes. For instance, employees experienced increased morale and productivity, and feelings of respectfulness and engagement with an effective communication plan. This strategic plan can include any of the previously mentioned channels to communicate the organization’s progress and rationale of the changes (Taylor, 1998).

Conversely, utilizing ineffective channels could produce negative results and can potentially lead to M&A failure. Melcher and Beller (1968) claim that each type of channel possesses distinctive characteristics to be evaluated prior to channel usage decisions (e.g. financial data, amount of time for message transmission, employee
acceptance/resistance to the medium, level of personal responsibility emitted from the medium, employee attributes, purposes of intended communication, and factors in the social environment). To the extent these characteristics are not taken into account in the medium decision process, negative employee reactions will most likely formulate. These characteristics, coupled with components of richness theories presented next, will aid in choosing the most effective medium for high anxiety phases, like M&A announcements. The present study attempts to detect changes in anxiety, task performance, and fairness perceptions depending on which communication channel is utilized (low-in-richness versus high-in-richness medium).

The communication literature stresses the criticality of succinct communication and effective channels. Currently, the organization communication literature mainly focuses on a limited amount of elements in the communication process (e.g. message, source, channel). However, there is a dearth of research investigating effective channels during the announcement phase.
Theories of Organization Communication

Two theories, media richness theory (MRT) and channel expansion theory (CET), focus on communication channels and processes, and are intertwined throughout the organization communication literature, portraying the importance of using these components for effective communication decisions and channel choice. Each theory builds a framework for understanding these intricate communication processes. The communication literature primarily focuses on channel choice and message reception, and both elements contribute to the complexity of the communication process (Putnam, 1982).

Due to the complex communication process, mediums must be appropriate and create positive outcomes. However, some mediums are more effective in some situations than other mediums. These theories provide ways to decipher among effective versus ineffective mediums. As a method to break down these complexities, the following theories can be used as guidelines so that choosing effective mediums occurs with clear understanding.

Media Richness Theory

A widely recognized and well-accepted theory within the organization communication literature is media richness theory (MRT; Daft & Lengel, 1986). Media richness
theory identifies aspects that reflect the degree of richness of each channel (D'Urso & Rains, 2008). Communication mediums are placed on a richness continuum that depicts the amount of richness contained in each channel (Daft & Lengel, 1986). Richness is measured by the degree to which each medium provides quick feedback, portrays message clarity, expresses content with common language, provides contextual and nonverbal cues, and pertains to employees' futures (Daft & Lengel, 1986; D'Urso & Rains, 2008; Timmerman & Madhavapeddi, 2008).

According to Dickey, McLure, Chudoba, and Bennett (2006), face-to-face and oral communication methods are considered the richest mediums, even though both have short duration of message effects, and no permanence of message content. The next richest medium is the telephone, with computer documents and memos (both written and computer-based) as the least rich communication mediums (D'Urso & Rains, 2008).

Meshing media richness theory concepts in organizational communication strategies is crucial for M&A practitioners, but, unfortunately, researchers have not made this leap into studying communication in the announcement phase. By integrating media richness criteria within organizations, D'Urso and Rains (2008) suggest
evaluating the degree of channel richness and of the message's content in order to determine the appropriate channel. For instance, face-to-face and telephone communication should be utilized to express unclear or complicated messages. When messages are simple and clear, the least rich channels may be utilized (e.g. memos). For example, memos can be used to communicate minor procedural changes (i.e. meeting date/time changes).

After integrating message content levels with channel richness levels, an effective medium is chosen (D'Urso & Rains, 2008). Since merger announcements are often complex and contain important information, choosing a less rich medium may not be the most effective at producing positive outcomes. Therefore, the current study experimentally tests two mediums, constituting different media richness levels, to determine which channels are the most effective in the announcement phase of a merger or acquisition, during which messages are often complex.

Channel Expansion Theory

Channel expansion theory (CET), posited by Carlson and Zmud (1999), focuses on the process of how individuals develop channel richness perceptions. As an example, associations constructed among individual's current knowledge about mediums, and based on past experiences
with these mediums, are utilized to evaluate each channel's messages (Carlson & Zmud, 1999). Additional experiences effecting perceptions of channel richness include experiences with a specific medium, with the message subject, with the context of the organization, and with individuals involved in the communication process. Richness perceptions are dependent on such experiences, and once evaluated, an individual innately develops these perceptions (e.g. high richness or low richness perceptions). For example, increased usage of email communication allows communicators to develop knowledge schemas about this medium, thereby developing perceptions of richness over time. Thus, the communicator will then be able to communicate effectively utilizing the medium of choice.

To the extent that individuals form these knowledge schemas from past experiences, CET postulates that the more experiences with a specific channel, the more he or she will perceive that channel as rich. Conversely, little experience with a channel will produce negative perceptions of that channel, thereby resulting in personal preference for least rich mediums. However, as individuals experience repetitive exposure of a specific channel, he or she may develop perceptions of increasing richness of
that channel. For instance, due to repetitive usage of face-to-face communication, individuals will prefer this medium and perceive face-to-face as effective and rich. Aligning with this rationale, participants in the current study will naturally evaluate each medium's richness and utilize existing schemas to essentially result in positive or negative responses (e.g. anxious reactions versus not anxious).

D'Urso and Rains (2008) note that the current literature lacks clarity around whether or not CET is applicable to every communication medium, both old and new mediums (e.g. face-to-face, telephone, and new technology such as instant messaging). D'Urso and Rains (2008) investigated CET to reveal that e-mail, telephone, instant messaging, and face-to-face communications are heavily utilized, but each medium differs in the degree that they are meshed within communication strategies. For example, as organizations integrate new communication (i.e. instant messaging) in their strategies, low-in-richness perceptions will be evident until communicators gain experience with the medium. The criticality of choosing the most effective channel(s) while considering employee richness perceptions is evident.
CHAPTER FOUR
INTEGRATION OF MERGERS AND ACQUISITIONS AND ORGANIZATION COMMUNICATION LITERATURES

The Role of Communication in the Announcement Phase

There is widespread consensus in the organization communication literature and M&A literature supporting the criticality of studying communication (Bastien, 1987; Hutchison, 2002; Lewis, 1999). Hutchison (2002) and Bastien (1987) agree that communication is the most important component compared to all other human elements during M&As. High stress organizational change endeavors, like M&As, require communication to ameliorate uncertainty, stress, and anxiety, and to lessen negative perceptions and outcomes (Taylor, 1998). Choosing effective mediums is essential.

A great deal of research demonstrates the importance of communication processes during any large-scale organizational change (Ackerman, 1982; Baronas & Louis, 1988; Covin & Kilmann, 1990; Lewis, 1999). Covin and Kilmann (1990) conclude that employees highly regard communication that specifically pertains to the company’s goals and progress of the change process. With effective
communication, employees become emotionally connected to the change, and chances of increased performance rise.

One example of successful communication in the announcement phase occurred with Hewlett-Packard. Extra precautions were given to utilizing effective communication channels for the announcement and throughout subsequent phases. Specifically, employee briefings, individualized employee-subordinate sessions, e-mail usage, and company websites were used. Using these channels, HP provided employees with comprehensive details regarding the merged company’s future plans, and the roles of all employees throughout the M&A (Cottam & Bajer, 2003/2004). This “action event” involved 800 selected employees, including communication and leadership teams. The HP merger was marked by financial success, as well as increased employee engagement and motivation assessed through employee surveys six months after the “action event (Cottam & Bajer, 2003/2004).”

As seen in the HP merger, merger communication involves strategies to lessen negative employee perceptions, thereby decreasing anxiety, increasing performance, and adding to fairness perceptions. One such strategy to implement in the announcement phase includes choosing effective communication mediums to express the
organizational change vision, mission, and goals
(Fairhurst, 1993; "Go in with," 1999/2000; Hargie & Dickson, 2007), just as HP executed. Since the announcement phase is a period of high anxiety and uncertainty, employees strive for this specific information to decrease negative outcomes. To provide this information, placing communication on the forefront of M&A activities is of utter importance. Knowing which mediums are the most effective for the announcement will promote positive employee outcomes and perceptions of M&As.

Undoubtedly, M&As are dynamic change efforts. A problem exists because the M&A literature has barely meshed with organizational communication literature regarding effective communication mediums during M&A processes. The organization communication literature mainly suggests testing message content, channel, and source to determine effectiveness and its underpinning reasons (Lewis, 1999). The M&A literature lacks empirical efforts on choosing effective mediums, especially in the announcement phase when employees inherently strive for information during periods of organizational change. Not only is communication crucial specifically during the announcement, but mediums utilized must be well strategized. It is here that the literature lacks clarity.
CHAPTER FIVE
PRESENT STUDY

Communication is critical in the announcement phase of a merger or acquisition, a period of high anxiety and uncertainty (Carey et al., 2004). As evident in extant literature, relevant outcomes of M&As include anxiety, uncertainty, fairness perceptions, task performance, and stress (Astrachan, 1990; Astrachan, 2004; Ivancevich et al., 1987). In the present study, effective M&A communication was operationalized as choosing appropriate communication mediums to produce positive outcomes.

Therefore, the impact of communication channels was measured with three constructs including anxiety, task performance, and fairness perceptions in a laboratory experiment simulating an M&A. Furthermore, communication channel richness perceptions was measured to determine its mediational role in the relationship between communication channel mediums and participant reactions.

According to media richness theory, the richest mediums are face-to-face and oral communication, the next richest is telephone usage, and the least rich is written documents and memo communication (Dickey et al., 2006).
From this, the following hypotheses were derived to represent the extremes (richest and least rich):

- **H1**: Individuals receiving face-to-face communication will report lower levels of anxiety than individuals receiving memo communication.

- **H2**: Individuals receiving face-to-face communication will exhibit higher task performance than individuals receiving memo communication.

- **H3**: Individuals receiving face-to-face communication will report higher levels of fairness perceptions than individuals receiving memo communication.

- **H4**: Individual's communication channel richness perceptions will mediate the relationship between the communication channel conditions (face-to-face and memo) and individuals' reactions (anxiety, task performance, and fairness perceptions).
CHAPTER SIX

METHODS

Participants

A total of 156 undergraduate students from California State University at San Bernardino participated in this study. This sample size was needed to test for the proposed mediational effects, according to MacKinnon, Lockwood, and Williams (2004). To obtain a power of .80, the effect size was considered in the medium range, according to Cohen's (1992) classification.

Participants included both males and females. Participants were not limited on any demographic characteristic other than English as a first language, given the nature of the task and measures written in English. All participants signed and dated an informed consent prior to the data collection process in accordance with APA ethical guidelines for research with human subjects.

Procedure

Introduction and Distribution of Pre-Announcement Task

This study simulated the announcement phase of a merger or acquisition to capture participants' reactions
to communication mediums. Participants were recruited using an online research participation system. Participants met with the researcher in the Industrial/Organizational Psychology laboratory at designated dates and times. Each session had a total of 3-5 participants.

A between-groups experimental design was utilized, in which the one independent variable, communication medium, consisted of two levels, Face-to-Face vs. Memo communication, and was manipulated to examine its impact on three dependent variables (anxiety, task performance, fairness perceptions). Communication channel richness perceptions were also measured to examine its potential mediational relationship between communication channel mediums and participant reactions.

Once all participants arrived in the laboratory, the researcher introduced herself and orally described the premise of the task (see Appendix A). The researcher informed participants that, in order to increase efficiency, additional participants in room #2 were working at the same time on sections of the task. This was intended to create the perception that two groups performed the task at the same time.
The researcher informed participants that the final proofreading document consisted of each participant’s passages. It is important to note that every participant completed the exact same passages. The researcher then explained that all participants who completed the task would be entered into the raffle for a chance to win $100 (i.e. reading all passages to detect errors). The researcher explained the task directions to detect all proofreading errors, instructed participants not to speak to one another, and asked if there were any questions.

Each participant was then given passages #1 and #2 (to demarcate pre-announcement performance) and was asked to begin working immediately (see Appendix B). The researcher informed participants that the others in room #2 would be checked on, and that the researcher would return in a few minutes.

Announcement Phase and Distribution of Post-Announcement Task

Regardless of condition, each participant group was interrupted after five minutes of performing at which time the merger was announced. Specific procedures for the Memo and Face-to-Face conditions are described.

Memo Condition. The researcher entered the room after participants worked on the task for five minutes,
apologized for the interruption, and distributed to each participant the merger announcement memo document (see Appendix C). Participants had approximately 30 seconds to read the document, after which they were instructed to continue working on the proofreading task. In this document, participants were told that once the merger began in a few minutes, not everyone was eligible for the cash raffle entry because only some participants were needed for task completion. Participants were informed that the researcher would make the decisions of who would be needed for task completion and who would be eligible for the raffle entry. In addition, the memo informed participants that questions were not be answered at that time, but questions could be emailed after task completion.

Next, the researcher distributed passages #3 and #4 (to demarcate post-announcement performance) to complete the remainder of the task (see Appendix B). The researcher instructed participants to continue working on the task until further details about the merger were made. Participants were informed that the researcher would exit the room to inform participants in room #2 of the merger.

**Face-to-Face Condition.** The researcher entered the room after five minutes of task performance, apologized
for the interruption, and a high-in-richness medium to communicate merger details was utilized. The researcher orally informed participants of the same merger memo document details as was distributed to the Memo condition (see Appendix D). The only detail different in this document compared to the Memo condition merger announcement document was that participants were orally informed that they had the opportunity to verbally ask the researcher basic questions immediately or they also had the opportunity to ask questions immediately after full completion of the task. Only the information contained in the merger memo document was used to answer any questions during the experiment. The opportunity to ask questions immediately after the announcement conforms to media richness criteria of MRT (Daft & Lengel, 1986; D’Urso & Rains, 2008; Timmerman & Madhavapeddi, 2008).

The researcher then followed the remaining same procedures as was performed in the Memo condition. Participants were informed that the researcher would exit the room to inform participants in room #2 of the merger.

**Experiment Commencement**

After the second five-minute performance interval, the researcher entered the room, announced that the allotted time expired, and collected all proofreading
passages. Participants were informed that room #2 participants would momentarily join them in room #1 to continue the proofreading task. At this point, it was also stated that their eligibility to be entered into the cash raffle was still undetermined, and the researchers' decisions regarding their entry would occur after the groups merge, and after task completion.

Participants were then asked to complete the three measures that were distributed (completed in the order of anxiety, fairness perceptions, and media richness scales). Participants were informed not to include their name, and that results were kept confidential and anonymous. Once participants completed the surveys, the researcher collected all measures, announced the experiments' commencement, and stated that they would be informed at a later date of the raffle winner. Participants were debriefed and dismissed.

Materials

The materials for this experiment can be grouped into two categories: stimulus materials and outcome measures.

Stimulus Materials

Stimulus materials for each of the two experimental conditions (Face-to-Face and Memo) were used to
communicate merger details to participants. In the Memo condition, a standard, typed, one-page merger memo document was distributed to the Memo condition, which announced the merger of the proofreading participants in the two rooms (see Appendix C). In the Face-to-Face condition, the content contained in the memo was presented orally (see Appendix D).

**Outcome Measures**

The outcome measures used in this experiment were self-report, paper-based measures of anxiety, task performance, fairness perceptions, and media richness perceptions.

**State-Trait Anxiety Inventory.** The State-Trait Anxiety Inventory (STAI) Form Y-1 was used to measure participants' immediate state reactions and current level of anxiety (see Appendix E) (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Due to the nature of this study, the trait measure was not included. As Spielberger et al. (1983) suggested, the researcher used the title "Self-Evaluation Questionnaire" on the participant's copies so that using the term "anxiety" did not add to their reported anxiety scores.

When using Cronbach's alpha, the anxiety scale in the current study was found to be highly reliable (20 items;
α = .93). Similarly, Gaudry, Vagg, and Spielberger (1975) demonstrate the high internal consistency of the original STAI S-Anxiety with coefficients ranging from .83 to .94. Furthermore, Spielberger and Vagg (1984) conclude that all items on the STAI S-Anxiety Form Y showed construct validity due to high anxiety scores during stressful events versus low scores in less stressful events, as well as demonstrating a stable factor structure.

Spielberger et al. (1983) demonstrated a test-retest reliability coefficient for the STAI S-Anxiety scale at .54. Producing similar results in a population of undergraduate students, Rule and Traver (1983) reported a test-retest correlation of .40 for the State scale.

The STAI Form Y-1 consisted of twenty items. An example item is, “I feel frightened.” For each item, participants indicated how he/she “feels at the moment (Spielberger et al., 1983).” Responses were assessed on a four-point scale (not at all, somewhat, moderately so, very much so). Reverse scoring was calculated for applicable items. High scores indicated high anxiety versus low scores (Spielberger et al., 1983).

Task Performance. Task performance was measured before and after the merger announcement to detect changes in performance due to the medium utilized. The
experimental task to determine performance required participants to proofread 4 typed passages, each ranging from approximately 472-532 words (see Appendix B) (Riefer, 1991). The original passages (Riefer, 1991) contained approximately 250 words each, but the researcher added between 222-282 words to each passage for sufficient content to fit this study. The passages were extracted from popular books and magazines, and developed for use in research settings.

Each passage contained 10 typographical errors for participants to detect, including misspellings and contextual errors, in which letters of a word are changed to become a new word, but no longer fit the context. The task had been pre-tested to ensure the typographical errors within each passage range in difficulty (Riefer, 1991).

Within the literature, proofreading tasks are used to detect participants' task performance, such as speed and accuracy, and speech/noise transmission effects (Förster, Higgins, & Bianco, 2003; Venetjoki, Kaarlela-Tuomaala, Keskinen, & Hongisto, 2006; Weinstein, 1974). It is also documented that proofreading tasks were administered to detect stress and anxiety effects. These studies concluded that participants experiencing more stress and anxiety
detect fewer errors contained in the proofreading tasks than those experiencing less or no stress and anxiety (Baum, Gatchel, & Schaeffer, 1983; Cohen, 1980).

Passages #1 and #2 were distributed before the merger announcement, and passages #3 and #4 after the announcement, which demarcated performance at two intervals. Performance scores were calculated by adding the total number of errors participants detected on passages #1 and #2 (pre-announcement performance), and then total number of errors detected on passages #3 and #4 (post-announcement performance). To the extent that participants detected more errors after the announcement indicated an increase in performance.

Dimensionality of Organizational Justice Scale. Fairness perceptions were measured using the Dimensionality of Organizational Justice Scale (see Appendix F) (Colquitt, 2001). Minor changes were made to the language of items in order to fit the parameters of this study. Cronbach’s alpha was used to assess the internal reliability of this 20-item scale ($\alpha = .83$).

To date, several researchers conceptualize organizational justice in different ways. However, the commonality among researchers exists that organizational justice includes
fairness perceptions one has towards his or her organization (Colquitt, 2001; Greenberg, 1990).

Colquitt’s scale (2001) includes four subscales of justice, which are procedural, informational, distributive, and interpersonal. These subdimensions, when taken together as an overall measure of justice, are considered to be the strongest and most thorough measurement of fairness perceptions. This was confirmed through meta-analytic studies (Colquitt, Conlon, Wesson, Porter, and Ng, 2001), which determined that justice perceptions are stronger predictors of attitudes ($R^2 = .31$ to $.57$) than behaviors ($R^2 = .08$ to $.19$). Confirmatory analysis (CFA) concludes strong construct validity in two settings (a university and a manufacturing company) (Colquitt, 2001). Furthermore, discriminate validity was evident through examination of correlational relationships between the items, along with structural equation modeling (SEM) indicating strong predictive validity (Colquitt, 2001; Colquitt et al., 2001).

An example item from the measure is, “Have you been able to express your views and feelings during those procedures?” Responses were assessed on a 5-point Likert scale (to a very small extent, to a small extent, to a moderate extent, to a large extent, to a very large
extent). To the extent that participants indicated fair and just perceptions, the merger announcement process was fair and the appropriate medium was apparent.

**Perceived Richness of the Communication Medium to Announce the Joining of Groups Survey.** Participants completed the Perceived Richness of the Communication Medium to Announce the Joining of Groups Survey to ensure the mediums chosen, indeed, consisted of varying richness components (see Appendix G). The 5-item questionnaire was adapted from Carlson and Zmud's (1999) Perceived Richness of Electronic Mail subscale ($\alpha = .75$). Similarly, the Cronbach’s alpha for the richness scale used in this study was .77. Minor changes were made to the language of items in order to fit the parameters of this study. The items contained media richness criteria such as immediate feedback, variety, and clarity of language, language tailored to individuals, and assessment of language cues (Daft & Lengel, 1986).

An example item from the questionnaire stated, “The communication process gave me the opportunity to ask questions immediately after the announcement.” Responses were assessed on a 5-point Likert scale (strongly disagree, moderately disagree, neither agree nor disagree, moderately agree, strongly agree). Participants in the
Face-to-Face condition were expected to respond with higher total scores than the Memo condition.
CHAPTER SEVEN

RESULTS

Prior to conducting the primary analysis, all data was screened for missing cases, out-of-range values, and violations of assumptions. Descriptives statistics yielded 158 participants (memo N = 85; face-to-face N = 73), and no out-of-range values were detected. Frequency tables were checked for missing data.

In SPSS 16, the complete cases only option was selected, and two participants were filtered out. This resulted in no missing data (memo N = 85; face-to-face N = 71; total N = 156). For the memo condition, 84.7% were females and 15.3% were males (females N = 72; males N = 13). For the face-to-face condition, 74.6% were females and 25.4% were males (females N = 53; males N = 18) (see Table 1).

Frequencies and descriptives, as evident in Table 1 and Table 2 respectively, ensured no missing data after the two cases were filtered out (N = 156). To check for univariate outliers on the dichotomous variables, the split on the gender and medium variables were well within the required 90/10 split for regression analyses, which indicates that univariate outliers were not evident.
(Tabachnick & Fidell, 2007). To check for univariate outliers on the continuous variables, z-scores were created for all three scales. No variables showed significant skewness or kurtosis, and no univariate outliers were found.

<table>
<thead>
<tr>
<th>Medium</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid Female</td>
<td>72</td>
<td>84.70</td>
</tr>
<tr>
<td>Male</td>
<td>13</td>
<td>15.30</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100.00</td>
</tr>
<tr>
<td>Face-to-Face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid Female</td>
<td>53</td>
<td>74.60</td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>25.40</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Before starting hypotheses testing, it was ensured that the ANOVA assumptions of normality of sampling distributions and homogeneity of within-group variance (Levene’s statistic) were met. Multiple regression assumptions were also evaluated and were all met.

According to Tabachnick and Fidell (2007), the ratio of cases to IVs requirement for one IV with two levels is \( N = 105 \); therefore, this assumption was met with 156 participants. Multicollinearity and singularity were not
violated since all bivariate correlations were less than the .90 guidelines. In addition, the normality, linearity, homoscedasticity of residuals were all met by visually examining the scatterplots (Tabachnick & Fidell, 2007).

Hypotheses 1 Through 3 ANOVA Results

To test the relationship between anxiety and medium (face-to-face, memo), a one-way ANOVA was conducted using medium as the independent variable (IV) and anxiety as the dependent variable (DV). Results indicated that there are no significant mean differences in anxiety as a result of medium (face-to-face $M = 31.59$ and memo $M = 31.88$) ($F (1, 154) = .03, p = .86$). Therefore, the data did not support hypothesis one.

To test the relationship between task performance and medium (face-to-face, memo), a one-way ANOVA was conducted using medium as the independent variable (IV) and time 2 performance as the dependent variable (DV). Results indicated significant mean differences in time 2 performance as a result of medium (face-to-face $M = 11.06$ and memo $M = 8.52$) ($F (1, 154) = 34.07, p = .00$). This means that time 2 performance scores for the face-to-face condition are significantly different than the memo
condition (face-to-face $M = 11.06$ and memo $M = 8.52$). In this case, the data supported hypothesis two.

To test the relationship between fairness perceptions and medium (face-to-face, memo), a one-way ANOVA was conducted using medium as the independent variable (IV) and fairness as the dependent variable (DV). Results indicated that there are no significant mean differences in fairness as a result of medium (face-to-face $M = 65.00$ and memo $M = 62.74$) ($F (1,154) = 1.29, p = .26$). Therefore, the data did not support hypothesis three.

An additional ANOVA analysis was conducted to verify that each condition (face-to-face and memo) did indeed detect different richness levels. This concluded that both conditions assessed a significant difference in richness ($F (1,154) = 80.39, p = .00$). Also, Table 2 shows the similar means for face-to-face ($M = 65.00$) and memo ($M = 62.74$) for fairness perceptions, and the face-to-face ($M = 31.59$) and memo ($M = 31.88$) means for anxiety.
Table 2. Means and Standard Deviations for All Variables (N = 156)

<table>
<thead>
<tr>
<th>Medium</th>
<th>Variables</th>
<th>Valid N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memo</td>
<td>Anxiety</td>
<td>85</td>
<td>31.88</td>
<td>9.98</td>
</tr>
<tr>
<td></td>
<td>Richness</td>
<td>85</td>
<td>11.56</td>
<td>4.76</td>
</tr>
<tr>
<td></td>
<td>Fairness</td>
<td>85</td>
<td>62.74</td>
<td>13.35</td>
</tr>
<tr>
<td></td>
<td>Performance_Time 2</td>
<td>85</td>
<td>8.52</td>
<td>2.81</td>
</tr>
<tr>
<td>Face-to-Face</td>
<td>Anxiety</td>
<td>71</td>
<td>31.59</td>
<td>10.74</td>
</tr>
<tr>
<td></td>
<td>Richness</td>
<td>71</td>
<td>17.79</td>
<td>3.71</td>
</tr>
<tr>
<td></td>
<td>Fairness</td>
<td>71</td>
<td>65.00</td>
<td>11.05</td>
</tr>
<tr>
<td></td>
<td>Performance_Time 2</td>
<td>71</td>
<td>11.06</td>
<td>2.58</td>
</tr>
</tbody>
</table>

Hypothesis 4 Mediation Results with Sobel Test Statistics

To determine if communication channel richness perceptions mediated the relationship between communication channel conditions (face-to-face, memo) and individuals' reactions (anxiety, task performance, fairness perceptions), the mediational steps outlined by Baron and Kenny were followed (1986) for each of the three DVs. Baron and Kenny (1986) devised four steps to establish mediation: (1) the IV significantly predicts the DV (path c); (2) the IV significantly predicts the mediator (path a); (3) the mediator significantly predicts
the DV (path b); and (4) the effect of the IV on the DV should be reduced when the mediator is added (path c').

Additionally, for each of the three DVs, the Sobel (1982) test statistics were calculated, when appropriate, as a direct test of mediation by using the unstandardized beta coefficients (\(\beta\)) and the standard errors (\(SE_a, SE_b\)).

**Testing for Mediation of the Association Between Medium and Anxiety**

To test the first step in mediation that the IV (medium) should significantly predict the DV (anxiety) (path c), the linear multiple regression (MR) concluded that medium did not significantly predict anxiety

\[(\beta = -0.01) (R = .01, R^2 = .00, \text{adj } R^2 = -.01, F (1, 154) = .03, p = .86).\]

The second mediational step that the IV (medium) should significantly predict the mediator (richness) (path a), the linear MR concluded that medium predicted richness

\[(\beta = .59) (R = .59, R^2 = .34, \text{adj } R^2 = .34, F (1, 154) = 80.39, p = .00).\]

To test the third mediational step that the mediator (richness) should significantly predict the DV (anxiety) (path b), results showed that richness predicted anxiety

\[(\beta = -0.17) (R = .17, R^2 = .03, \text{adj } R^2 = .02, F (1, 154) = 4.75, p = .03).\]
To test the fourth mediational step that the effect of the IV (medium) on the DV (anxiety) should be reduced when the mediator is added (path $c'$), a hierarchical MR was conducted with the DV (anxiety) and the mediator (richness) in Block 1; and the IV (medium) in Block 2. Results indicated that prediction of anxiety can significantly be improved by adding medium to a model that also contains richness ($R^2_{\text{change}} = .01$, $F_{\text{change}} (1, 153) = 3.32, p = .04$). However, the standardized beta coefficients slightly increased ($\beta = -.01$) compared to results from the first mediational step ($\beta = .13$). The Sobel test also indicated no indirect effects in this mediational analysis (Sobel test statistic $= -2.19$, $p = .01$). Therefore, richness did not mediate the relationship between medium and anxiety (see Table 3).
Table 3. Regression Analyses for Perceived Richness as a Mediator Between Medium and Anxiety

<table>
<thead>
<tr>
<th>Step</th>
<th>Path</th>
<th>IV</th>
<th>DV</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>Medium</td>
<td>Anxiety</td>
<td>-0.29</td>
<td>1.66</td>
<td>-0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Medium</td>
<td>Richness</td>
<td>6.22</td>
<td>0.69</td>
<td>0.59*</td>
<td>0.59</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>Richness</td>
<td>Anxiety</td>
<td>-0.34</td>
<td>0.15</td>
<td>-0.17*</td>
<td>0.17</td>
</tr>
<tr>
<td>C'</td>
<td>Medium</td>
<td>Anxiety</td>
<td>2.74</td>
<td>2.01</td>
<td>0.13</td>
<td>0.20</td>
<td></td>
</tr>
</tbody>
</table>

Sobel test statistic = -2.19, p = 0.01 (one-tailed)

Note. Steps indicate the mediational steps outlined by Baron and Kenny (1986). B = Unstandardized regression coefficient; SE B = Standard error of B; β = Standardized beta coefficient.
*p < .05

Testing for Mediation of the Association Between Medium and Task Performance

To test the first mediational step that the IV (medium) should significantly predict the DV (time 2 performance) (path c), the linear multiple regression (MR) concluded that medium predicted task performance (β = .43) (R = .43, R^2 = .18, adj R^2 = .18, F (1, 154) = 34.07, p = .00).

To test the second mediational step that the IV (medium) should significantly predict the mediator (richness) (path a), the linear MR concluded that medium predicted richness (β = .59) (R = .59, R^2 = .34, adj R^2 = .34, F (1, 154) = 80.39, p = .00).
To test the third mediational step that the mediator (richness) should significantly predict the DV (time 2 performance) (path b), results showed that richness predicted task performance ($\beta = .21$) ($R = .21$, $R^2 = .04$, adj $R^2 = .04$, $F (1, 154) = 6.80$, $p = .01$).

To test the fourth mediational step that the effect of the IV (medium) on the DV (time 2 performance) should be reduced when the mediator is added (path c'), a hierarchical MR was conducted with the DV (time 2 performance) and the mediator (richness) in Block 1; and the IV (medium) in Block 2. Results indicated that prediction of task performance could significantly be improved by adding medium to a model that also contains richness ($R^2_{change} = .14$, $F_{change} (1, 153) = 26.58$, $p = .00$). However, the standardized beta coefficients slightly increased ($\beta = .47$) compared to results from the first mediational step ($\beta = .43$) (see Table 4). The Sobel test also indicated no indirect effects in this mediational analysis (Sobel test statistic = 2.85, $p = .00$). Therefore, richness did not mediate the relationship between medium and task performance (see Figure 1).
Table 4. Regression Analyses for Perceived Richness as a Mediator Between Medium and Performance_Time 2

<table>
<thead>
<tr>
<th>Step</th>
<th>Path</th>
<th>IV</th>
<th>DV</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>Medium</td>
<td>Performance_Time2</td>
<td>2.54</td>
<td>0.44</td>
<td>0.43*</td>
<td>0.43</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Medium</td>
<td>Richness</td>
<td>6.22</td>
<td>0.69</td>
<td>0.59*</td>
<td>0.59</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>Richness</td>
<td>Performance_Time2</td>
<td>0.12</td>
<td>0.04</td>
<td>0.21*</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>C'</td>
<td>Medium</td>
<td>Performance_Time2</td>
<td>2.77</td>
<td>0.54</td>
<td>0.47*</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Sobel test statistic = 2.85, p = 0.00 (one-tailed)

Note. Steps indicate the mediational steps outlined by Baron and Kenny (1986). B = Unstandardized regression coefficient; SE B = Standard error of B; β = Standardized beta coefficient

*p < .05
Figure 1. Results of the Hypothesized Mediational Model Indicating no Mediating Effects of Richness Perceptions in the Relationship between Medium and Task Performance (Unstandardized Regression Coefficients Presented on Top with Standardized Errors of Unstandardized Coefficients in Parentheses; \( *p < .05 \))
Furthermore, regression analyses conclude that a minimal amount of variance in task performance (18.4%) was explained by medium and richness. Richness explained only 4.2% variance, while 14.2% more variance was explained by adding medium to a model that also contained richness. It was clear that medium, rather than richness, was more important to predict task performance because medium explained more variance than richness.

Also, in this hierarchical regression to test the effects of medium and richness on task performance, when medium was added in the second block, additional variance was explained, but then richness was no longer a significant predictor of task performance. This is due to the shared variance of medium and richness.

Testing for Mediation of the Association Between Medium and Fairness Perceptions

To test the first mediational step that the IV (medium) should significantly predict the DV (fairness perceptions) (path c), the linear multiple regression (MR) concluded that medium did not predict fairness ($\beta = -.34$) ($R = .34$, $R^2 = .01$, adj $R^2 = .00$, $F (1, 154) = 1.29$, $p = .26$).

The second mediational step that the IV (medium) should significantly predict the mediator (richness) (path
a), the linear MR concluded that medium predicted richness ($\beta = 0.59$) ($R = 0.59$, $R^2 = 0.34$, adj $R^2 = 0.34$, $F (1, 154) = 80.39$, $p = 0.00$).

To test the third mediational step that the mediator (richness) should significantly predict the DV (fairness perceptions) (path b), results showed that richness predicted fairness perceptions ($\beta = 0.38$) ($R' = 0.38$, $R^2 = 0.15$, adj $R^2 = 0.14$, $F (1, 154) = 26.19$, $p = 0.00$).

To test the fourth mediational step that the effect of the IV (medium) on the DV (fairness perceptions) should be reduced when the mediator is added (path c'), a hierarchical MR was conducted with the DV (fairness perceptions) and the mediator (richness) in Block 1; and the IV (medium) in Block 2. Results indicated that prediction of fairness perceptions can significantly be improved by adding medium to a model that also contains richness ($R^2_{\text{change}} = 0.03$, $F_{\text{change}} (1, 153) = 4.91$, $p = 0.03$). However, the standardized beta coefficients slightly increased ($\beta = -0.34$) compared to results from the first mediational step ($\beta = -0.20$). The Sobel test also indicated no indirect effects in this mediational analysis (Sobel test statistic = 4.53, $p = 0.00$). Therefore, richness did not mediate the relationship between medium and fairness perceptions (see Table 5).
Table 5. Regression Analyses for Perceived Richness as a Mediator Between Medium and Fairness Perceptions

<table>
<thead>
<tr>
<th>Step</th>
<th>Path</th>
<th>IV</th>
<th>DV</th>
<th>( B )</th>
<th>( SE_{B} )</th>
<th>( \beta )</th>
<th>( R^{2} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>Medium</td>
<td>Fairness</td>
<td>2.26</td>
<td>1.99</td>
<td>-0.34</td>
<td>0.34</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Medium</td>
<td>Richness</td>
<td>6.22</td>
<td>0.69</td>
<td>0.59*</td>
<td>0.59</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>Richness</td>
<td>Fairness</td>
<td>0.89</td>
<td>0.17</td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>C'</td>
<td>Medium</td>
<td>Fairness</td>
<td>-4.98</td>
<td>2.25</td>
<td>-0.20*</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Sobel test statistic = 4.53, \( p = 0.00 \) (one-tailed)

Note. Steps indicate the mediational steps outlined by Baron and Kenny (1986). \( B \) = Unstandardized regression coefficient; \( SE_{B} \) = Standard error of \( B \); \( \beta \) = Standardized beta coefficient

*\( p < .05 \)

Exploratory Analyses

Since the hypotheses were not supported, exploratory analyses were conducted to understand relationships and patterns among the three scales (Anxiety Scale, Richness Scale, Fairness Scale) and the Time 2 Task Performance variable. Specifically of interest in this study was the examination of relationships between the variables within each condition. When examined separately by condition, it was possible to determine which condition had stronger associations among the variables, thus concluding notable relationships. Several variables were either weakly or moderately correlated (see Table 6 and Table 7).
For the face-to-face condition, richness correlated positively with fairness ($r = .34, p = .00$), and negatively with task performance ($r = -.28, p = .02$) (the more participants perceive richness in the medium, then their Time 2 Performance Score decreases). Fairness also correlated negatively with anxiety ($r = -.26, p = .03$), which means that as participants report higher levels of fairness perceptions, then lower anxiety scores will be reported (see Table 6).

For the memo condition, fairness correlated positively with richness ($r = .44, p = .00$), and negatively with anxiety ($r = -.32, p = .00$). The positive correlation between fairness portrays that as participants report higher levels of fairness perceptions, then higher levels of richness will be reported, and the reverse is true for the latter negative correlation (higher levels of fairness are associated with lower anxiety scores) (see Table 7).

Lastly, anxiety also correlated negatively with richness ($r = -.27, p = .01$), meaning that a low-in-richness medium correlates with increased anxiety.
Table 6. Correlations for All Variables within the Face-to-Face Condition

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anxiety</td>
<td></td>
<td>-0.12</td>
<td>-0.26*</td>
<td>-0.02</td>
</tr>
<tr>
<td>2. Richness</td>
<td></td>
<td></td>
<td>0.34**</td>
<td>-0.28*</td>
</tr>
<tr>
<td>3. Fairness</td>
<td></td>
<td></td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>4. Performance Time 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All values indicate Pearson correlations
*p < .05; **p < .01

Table 7. Correlations for All Variables within the Memo Condition

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anxiety</td>
<td></td>
<td>-0.27*</td>
<td>-0.32**</td>
<td>0.00</td>
</tr>
<tr>
<td>2. Richness</td>
<td></td>
<td></td>
<td>0.44**</td>
<td>0.07</td>
</tr>
<tr>
<td>3. Fairness</td>
<td></td>
<td></td>
<td></td>
<td>0.12</td>
</tr>
<tr>
<td>4. Performance Time 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All values indicate Pearson correlations
*p < .05; **p < .01
CHAPTER EIGHT
GENERAL DISCUSSION

The current study empirically examined merger communication, which is one human element in mergers and acquisitions that has been largely ignored (Blake & Mouton, 1985; Carey et al., 2004; Giffords & Dina, 2003; Hutchison, 2002). An abundant amount of M&A literature concluded the criticality of effective communication during any large-scale organizational change for positive, successful M&A outcomes (Ackerman, 1982; Argote, Goodman, & Schkade, 1983; Baronas & Louis, 1988; Covin & Kilmann, 1990; Hutchison, 2002; Lewis, 1999; Roach, 2007). This literature generally says face-to-face communication is effective in organizational change efforts, and plays a bigger role than newsletters, intranet, and letters (memos). Furthermore, their results were based on merger communication processes as a whole with varying elements (i.e. source, timing, informal/formal communication, post-merger communication, M&A outcomes), rather than focusing solely on the medium and the medium's effects on individuals (Allen et al., 2007; Bastien, 1987; Casey et al., 1997; Cottam & Bajer, 2003/2004; Fairhurst, 1993;
Roach, 2007; Whalen, 2004). To date, however, no research has tested these mediums in the M&A announcement phase.

It is important to study communication during the announcement of an M&A because this a period of high anxiety, stress, ambiguities, and uncertainty when employees seek a great amount of information about the change processes (Allen et al., 2007; Carey et al., 2004; Giffords & Dina, 2003; Speight & Goodman, 1998). Medium selection is a critical component to create an effective communication strategy to mitigate these potentially negative M&A announcement reactions.

Therefore, this study attempted to empirically test the effectiveness of two mediums using a laboratory M&A announcement simulation. Behavioral (task performance), affective (anxiety), and cognitive (fairness perceptions) psychological concepts were measured to determine which medium is the most effective for an M&A announcement.

The current study’s sole supported finding concludes that face-to-face communication produces higher task performance rather than memo communication. This means that participants in the face-to-face condition detected more errors in the proofreading task after the announcement, on average, than those who received memo communication; thus, exhibiting higher task performance.
This finding is in accordance with Bastien (1987) and Taylor (1998) who conclude that effective communication increases/maintains productivity (performance) during organizational change processes.

In relation to the other hypotheses, past literature found that ineffective and unfair communication processes produced increased anxiety during organizational change processes (Brockner, Tyler, & Cooper-Schneider, 1992; Weisenfeld & Brockner, 2001), but the current study did not find the same results. In fact, those who received face-to-face communication did not report lower levels of anxiety, and also did not report higher levels of fairness when compared to those receiving the memo communication medium. Therefore, neither of these hypotheses for anxiety and fairness were supported by the data. Possibly, in accordance with the link found between anxiety and fairness (Brockner et al., 1992; Weisenfeld & Brockner, 2001), if the face-to-face condition would have reported higher fairness perceptions than the memo condition, then their anxiety scores might also have been affected. For instance, if high fairness perceptions were reported for the face-to-face condition, then they might have also reported lower anxiety scores than the memo condition. This meshes with the literature that concludes when
fairness perceptions are high, then anxiety decreases (Brockner et al., 1992; Weisenfeld & Brockner, 2001). Therefore, it is possible that if the fairness hypothesis was supported, the anxiety hypothesis might have also been supported as well.

The relationships between condition and anxiety and fairness were weaker than the relationships found in the literature due to the current study's limitations pertaining to participants' vestment in the study. Perhaps with changes made to the methodology, such as offering extra credit or distributing the STAI measure immediately after the announcement, participants might have reported higher anxiety than was indicated. Furthermore, based on the believability questions asked at the commencement of the study, participants indicated that they believed the other participants existed, and they thought their cash raffle entry would potentially be taken away. With this in mind, if participants were not wholeheartedly interested in the cash raffle entry, then they would not report high anxiety when learning that their chances could be diminished, as was stated in the merger announcement.

Relating to the fairness perceptions hypothesis, perhaps fairness scores between the two conditions were not significantly different because the study assessed
fairness using Colquitt’s (2001) scale as an overall measure. The focus of this study did not include emphasis on the individual subscales. Rather, the third hypothesis included fairness perceptions as a whole, which means each participant had one fairness perceptions score instead of scores for each subscale. If the fairness hypothesis focused on the examination of the four subscales individually, maybe that data would shed light into which elements of the current study were perceived as fairer by each condition. Future researchers could attempt such a study.

Pertaining to the mediational hypothesis, the organizational communication literature concludes that richness matters for effective communication processes (D’Urso & Rains, 2008). In this study’s M&A context, however, richness did not mediate the relationship between communication medium (face-to-face and memo) and participant reactions (anxiety, task performance, fairness perceptions). The basic relationship between medium and fairness perceptions, and between medium and anxiety was not evident, and, therefore, mediation of richness did not exist in these two relationships. On the other hand, there was evidence that medium and richness both significantly predicted task performance, and these two basic
relationships allowed mediational analyses steps to proceed. After mediation analyses were evaluated, though, results indicated no mediation of richness in the association between medium and task performance. This means that medium matters for fluctuations in task performance, but it is not because participants viewed the medium as more or less rich.

Even though richness was not a mediator in the relationship between medium and individual reactions (anxiety, fairness perceptions, task performance), perceived richness was found to be important in these relationships, which is consistent with communication literature that says media richness matters (Daft & Lengel, 1986; D'Urso & Rains, 2008; Melcher & Beller, 1968; Timmerman & Madhavapeddi, 2008). However, it is critical to note that testing the mediating effect of perceived richness, as in this study, has never been conducted in extant research. Therefore, it can still be concluded, based on the significant relationship between richness and task performance, that richness is important for effective medium selection, but not as a mediating variable.

To further understand the relationships among the variables, exploratory analyses were conducted by
examining correlations among the three scales (Anxiety Scale, Richness Scale, Fairness Scale) and the Time 2 Task Performance variable. These correlations add some insight into interesting relationships between the variables of this study, and, even though weak to moderate correlations exist, these relationships are worth noting. For the face-to-face condition, richness negatively correlated with task performance, which means as richness perceptions increase, then their task performance decreases. This relationship relates to the current finding that medium predicts task performance when richness is not a mediator. For the memo condition, richness was negatively related to anxiety, meaning that a low-in-richness medium correlates with increased anxiety. However, this significant correlational relationship did not exist for the face-to-face condition. Evidently, face-to-face communication contains greater richness elements than memo (Daft & Lengel, 1986), and in this study, the differing element was that face-to-face participants had the opportunity to ask questions. This opportunity, in combination with the other richness elements are believed to lessen anxiety to a certain degree (Weisenfeld & Brockner, 2001).

Regardless of condition (face-to-face or memo), richness moderately and positively related with fairness.
For participants who perceive higher richness, then their fairness perceptions also increased. Lastly, and also regardless of condition, fairness was weakly and negatively correlated with anxiety, which means as participants report higher fairness, then anxiety levels decrease. It is meaningful that this relationship is in accordance with research that concludes fairness perceptions decrease anxiety (Brockner et al., 1992; Weisenfeld & Brockner, 2001). It is important to note that, while indicating these significant correlational relationships, one cannot predict causal relationships, such that higher richness perceptions cause an increase in fairness perceptions for both conditions.

Implications

Based on the current study’s findings, a few avenues for future research exist. First, it would be interesting for future researchers to continue this line of research at the announcement phase within an organization undergoing a merger or acquisition. To date, such a study has not been conducted. Doing so would shed additional light into medium selection decisions for the announcement, and would further enhance generalizability to other M&As. Additionally, using employees instead of an
undergraduate student population would gain the most accurate information since employees experience M&As first-hand, thus experiencing genuine reactions first-hand as well (anxiety, task performance, fairness perceptions). It would be interesting to determine if employees would increase their performance, as in the current study, since they are more vested in their job tasks than participants. On the other hand, perhaps employees would produce different results than the current study in terms of anxiety and fairness. For instance, maybe employees receiving face-to-face communication would exhibit lower anxiety because of their career-related investment. Such findings would enhance external validity for M&A organizations to understand how employees truly react in that environment.

Even though the supported finding suggests using face-to-face communication to announce an M&A for heightened task performance, future studies should examine the underlying mechanisms of why this association is evident. Could face-to-face communication create increased motivational factors, which in turn increase performance outcomes? Is job confusion or distraction exhibited by the memo condition participants the reason why performance is affected since they cannot ask immediate questions, for
instance? The current study tested the mediating effects of richness perceptions, but the data did not support this hypothesis. Therefore, other underlying mechanisms should be examined to better understand why performance increases for face-to-face versus memo communication for the announcement.

For practical purposes, organizations undergoing a merger or acquisition can apply this study's results within the workplace. Based on the findings, organizational change agents should exercise caution when deciding the type of communication medium to announce an M&A, along with weighing the pros and cons of the medium. For instance, face-to-face communication should be chosen so that performance is not negatively affected by the M&A announcement details. Thus, communication mediums during an organizational change process are a crucial factor in any organizational change effort, as supported by this general agreement in the literature (Ackerman, 1982; Argote et al., 1983; Baronas & Louis, 1988; Casstevens, 1979; Covin & Kilmann, 1990; Melcher & Beller, 1968). Even though the data did not support all of the four hypotheses, the findings, coupled with extant research, portray the importance of choosing the most effective communication mediums.
Also imperative for M&A success is for organizations to communicate key pieces of information while using the most effective medium, and be adamant about communicating crucial M&A details, such as the merger's intentions and rationale, employee involvement, length of time speculated, and goals of the merger (Carey & Ogden, 2004; Cottam & Bajer, 2003/2004; Ivancevich et al., 1987). The mediums used in the current study communicated these key M&A elements. For instance, employee involvement was addressed when the M&A announcement explicitly stated that additional work must be completed for cash raffle entry; thereby affirming their future participative roles. As such, key pieces of information were delivered to participants in the simulated M&A announcement.

In order for these practical implications to be effectively delivered, organizations should employ teams equipped with the knowledge of medium selection and strategic communication planning competencies. The present findings, along with the literature (Allen et al., 2007; Bastien, 1997; Brockner et al., 1992; Dix & Eaton, 2007; Weisenfeld & Brockner, 2001) suggest that effective communication strategies can negatively or positively affect anxiety, fairness perceptions, or task performance. Essentially, successful and knowledgeable communication
teams are organizational assets when it comes to producing positive individual outcomes. As an example, communication teams can achieve positive results, such as using face-to-face communication to increase task performance, as evident in this study. This positive result is applicable to practically any organization undergoing an M&A.

Limitations

Some aspects of the present study posed as limitations when testing the research questions. First, the five-minute time lapse between the announcement and distribution of measures presented a limitation. The results for the two hypotheses (anxiety and fairness perceptions) might have been similar to extant organizational change communication literature (Brockner et al., 1992; Weisenfeld & Brockner, 2001) that says effective and fair communication strategies decrease anxiety, if their immediate reactions were assessed directly after the announcement instead of five minutes later. As evident in the literature, during experiments, a shorter time lapse between the manipulation and measure(s) distribution (data collection) is more effective to gather timely data representative of participants' true reactions.
and behaviors due to memory duration effects (Monk, Trafton, & Boehm-Davis, 2008). Ultimately, in the present study, if the measures were distributed immediately after the announcement, this would have resulted in near-immediate participant reactions to the announcement.

Another limitation includes the possibility that participants might not have been fully vested in winning the cash raffle or completing the experimental proofreading task. This is evident in the extremely similar means of both conditions (face-to-face and memo) for each variable (anxiety and fairness). Therefore, participants might not have experienced much anxiety when learning at the announcement that cash raffle entry might be taken away. Instead, a future study can use extra credit as the buy-in incentive as opposed to the cash raffle in this study. Using a reward that is of high importance to participants can benefit further research.

Finally, the undergraduate student population sample restricted the generalizability of the current findings since they were the only participants used for the M&A simulation. This population does not have the work experience, employee-subordinate professional relationships, and the sources of communication that employees undergoing an M&A would have to effect employee
reactions (anxiety, fairness perceptions, performance, dissatisfaction, employee attitudes) (Allen et al., 2007).

These psychological relationships are better understood through examining fundamental communication aspects within the M&A announcement simulation. Regardless of the limitations, this study exemplifies the importance of understanding and evaluating communication mediums to announce a merger or acquisition.

Conclusion

In summary, organizations undergoing a merger or acquisition should choose face-to-face communication to impact performance during the announcement phase. Organizations should be aware not to undermine the importance of this critical human element in M&As–merger communication. While not all of the current study's hypotheses were supported, it is important to note the strong effect that different mediums have on employee reactions, as evident in face-to-face communication increasing task performance in this study. The hope remains that organizational communication researchers will further their M&A research to then provide practical techniques for implementation by M&A change agents within the workplace.
APPENDIX A

THE RESEARCHER'S SCRIPT
The Researcher’s Script

After all participants in each experimental condition arrive in the laboratory, the following script will be used.

Introduction & Distribution of Pre-Announcement Task

The researcher will orally provide the introduction: “Hello. My name is Janell Hopeck and I am a master’s student in the Industrial/Organizational Psychology program. I would first like to thank you for showing up and participating in this short task. I ask that you not use your cell phones or speak to one another until the task is completed so that I can have everyone’s undivided attention.”

Cash Raffle Entry:

“As you all know, there is a cash prize at stake and your entry into the raffle is performance-based. Therefore, the only way to be entered into the $100 cash prize is to completely finish the proofreading task by working on the task in the time I give you. Are there any questions?”

Experimental Task:

“The task you are about to complete requires that you proofread a few passages to find as many proofreading errors as possible in the time I give you. The proofreading errors consist of misspellings and contextual errors, in which letters of a word are changed to become a new word, but no longer fit the context. Participants in room #2 will also be working on sections of this document. The final document will consist of each of your passages. Therefore, your goal is for each of you to complete your passages. Each of your sections are part of a larger document. I will give you more details shortly.”

Distribution of Passages #1 and #2 (Pre-Announcement Task):

The researcher will distribute the passages and state the directions: “Please use a pen or pencil to begin the proofreading task immediately. Circle all proofreading errors. There is no need to provide the correct spelling. When you are finished with each passage, place it facedown in front of you. DO NOT go back to a passage once you are finished. Please do not speak with anyone or use cell phones for the duration of the task. Thank you. I will return within a few minutes to collect the documents after I check on the other participants.” (Tell them they can start the task now).
Announcement Phase & Distribution of Post-Announcement Task

Memo Condition:

After the Memo condition has worked on the task for 5 minutes, the researcher will say: “I’m sorry for the interruption, but I have some important information to distribute. Please read this document immediately. If you have any questions after reading it, please feel free to email them to me anytime after the task is fully completed.” (After they read the merger announcement, then distribute passages #3 and #4). “Here are the next proofreading passages. The same directions mentioned earlier still apply. Please continue working on the task until further merger details are given to you. I will be back in a few minutes after I make the merger announcement to the other participants.” (The researcher will leave the room and pretend to check on the room #2 participants).

Face-to-Face Condition:

After the Face-to-face condition has worked on the task for 5 minutes, the researcher will say: “I’m sorry for the interruption, but I have some important information to announce. Please listen to the following details. If you have any questions, you can ask me now or you will have the opportunity to ask me in person immediately after you finish the proofreading task.” (The researcher will now orally inform participants of the same merger announcement memo document details as was distributed to the Memo condition. Then, the researcher will distribute passages #3 and #4). “Here are the next proofreading passages. The same directions mentioned earlier still apply. Please continue working on the task until further merger details are given to you. I will be back in a few minutes to collect your work after I make the merger announcement to the other participants.”

Experiment Commencement

After participants have worked on the task for the remaining 5 minutes, the researcher will say: “Time is now up for this portion of the task.” (Collect the passages). “In a few minutes, participants from room #2 will join you to continue the task. As mentioned in the announcement, fewer participants will be needed for task completion due to lack of resources, and since I do not need 2 people working on the same passage. Therefore your eligibility for the cash raffle is undetermined right now. Because of this merger I will be making the eligibility decisions after all of you finish the task.

Before we join the other participants to continue working on the task, I need you to complete 3 brief surveys about the process. Please do not indicate your name on any of the papers, complete the measures in the order they are given to you, and do not speak with one another. All answers will be kept confidential and anonymous. Thank you.” After the researcher has collected the 3 measures, the researcher will conclude the experiment by thanking the participants and distributing the debriefing statement.
APPENDIX B

PROOFREADING PASSAGES
Proofreading Passages

INSTRUCTIONS

This proofreading task contains a series of short passages in which you must read and detect a certain number of typographical errors (only misspellings). There will be no errors based on grammar or punctuation. As you read each passage, find and circle each error.

Also, as you read each passage, please read it straight through, without going back and re-reading any parts. Once you’ve finished, simply turn the passage face down on the table. Your participation is totally voluntary and you may choose to discontinue your participation at any point without penalty. Complete confidentiality will be assured. At no time during the experiment will your name be required or associated with the data you provide.

Passage 1

With over 100 U.S. plants operating and more being built, nuclear energy is now our second leading source of electricity, behind coal. But not one nuclear plant has been planned in the United States since 1978, while at least 50 have been ordered in other parts of the world. Many countries have found it necessary to distinguish between the risks of nuclear power and the need for new forms of energy, and they have chosen nuclear energy to fill those needs.

One advantage of nuclear power plants is that they do not depend on the use of fossil fuels to operate. Because of this, the cost of nuclear power for all of these countries is not affected by changes in gas and oil prices. Another advantage is that nuclear power plants do not emit a large amount of carbon dioxide. Furthermore, nuclear power technology is readily available, and a “high amount of electrical energy” can be generated in one power plant. Today, over 360 nuclear power plants are producing electricity today in other countries.

Our country has a lot more oil, natural gas, and coal than most other countries. But natural gas is more valuable for other uses than for burning in power plants, and coal can’t be expected to do the job alone. For instance, natural gas has various uses within residential, commercial, and the transportation industries. Coal also serves many purposes, such as heat, air conditioning, and electricity. Furthermore, coal’s byproducts can even be utilized to make steel, cosmetics, and tar.

So what is the best way to generate large amounts of electricity? Should the United States proceed with utilizing the same electricity-producing tactics as in the past? Should the United States use new techniques to produce electricity? There may not be one right or wrong answer because many possibilities exist. Some scientists
wonder if "nuclear generated electricity might be losing its financial advantage over coal-powered electricity." However, the National Academy of Sciences has stated that "coal and nuclear power are the only economic alternatives for large-scale application in the remainder of this century."

Some wonder why power plants are so scarce in the United States. Well this can be due to the fact that it takes approximately 20 to 30 years to plan and build a new nuclear power plant. It is a very difficult task to create new plants in a short time. Furthermore, disadvantages of power plants also need to be considered. It is known that the plants emit large amounts of toxic, radioactive, and nuclear waste into the air. Plants are also at high risk for dangerous accidents to happen due to the hazardous and toxic substances.

Through the growing use of nuclear electricity, countries all over the world are reducing their dependence on oil. Strengthening their position in increasingly competitive world markets, these countries realize that a healthy national economy needs a secure supply of electrical energy. The United States realizes this as well. Will we have to play a costly and potentially dangerous game of catch-up in the years ahead? America runs the risk of doing just that, if we ignore the growing international reliance on nuclear energy, and the reasons behind that growth.

Passage 2

Once the prince of waterfowl in the East, black ducks are in trouble. Their population has declined steadily for 20 years. Biologists with the U.S. Fish and Wildlife Service, Canadian Wildlife Service, and state wildlife agencies are studying the problem and have intensified research in recent years. Meanwhile, hunters are being asked to go easy on black ducks. Some conservationists and biologists believe that the declining black duck population could be due to hunting and habitat destruction, and also due to the interbreeding of the black duck and the mallard duck.

The black duck is a wild duck related to the mallard duck. This excellent game bird is commonly found in eastern North America, as well as Mexico, Canada, Puerto Rico, and Bermuda. Unfortunately, its nesting and wintering habitats have been destroyed by agriculture and urban development, and have also been further degraded by pollution. Mallard ducks have been able to adjust to these changing environments better than the black duck. Thus, as the eastern forests have disappeared, the more adaptable mallards have moved in.

Mallard ducks are found in nearly any body of freshwater in Asia, Europe, and North America. They can also live in saltwater habitats, which adds to their versatility of surviving in diverse environments. There are many species of mallard ducks, so their existence is not threatened. However, a threat that could potentially lessen their existence is the hybridization with other species of ducks. Now there's evidence that
mallard ducks are breeding with black duck hens, and some biologists fear that black ducks could be bred out of existence.

Biologists are not certain how much hunting has contributed to the black duck’s decline, since black ducks are sometimes the most popular breed of duck that hunters seek. But from the perspective of wildlife agencies, hunting is one factor we can control. Thus, hunting seasons and bag limits have been restricted. Many countries, such as Canada and Nova Scotia, have placed such restrictions on hunters within the past ten to twenty years. In fact, hunting in some parts of the world was restricted in 1983, and this allowed the black duck population to become stable and then increase. Hunter cooperation with these regulations is the key, according to biologists, to helping this duck in distress.

Your state and federal wildlife agencies, with assistance from private conservation groups, are doing everything they can to bring the black ducks back. Efforts from these organizations and individuals throughout Nova Scotia and North America can help ensure that the black duck species won’t become more threatened in the years to come. In fact, the United States and Canada developed the Black Duck Joint Venture, which helps to save the black duck species. You can help by learning to identify black ducks as they come over your blind—and then give them a break.

Passage 3

Three years ago, in an effort to combat a perceived media hostility toward the country’s estimated 12 million redheads, Stephen Douglas of Laguna Beach, California, founded an organization known as Redheads International. Founded in the early eighties, his organization is one of many who celebrate the redhead culture. He has since emerged as one of the most militant defenders of the often slandered redhead American. Stephen, also a redhead himself, is also considered around the world to be the expert on redhead information. He has made appearances on ‘The Today Show’ and ‘Good Morning America,’ along with being featured in thousands of television shows, newspaper and magazine articles, and radio talk shows.

Some wonder why Douglas has the passion to defend redheads. Nothing in particular tipped him over. He was just tired of the worn-out jokes and sometimes not-too-subtle putdowns. “People used to say to me, ‘You’re really good-looking, for a redhead,’” recalls the normally easy-going Douglas, who doesn’t see red easily. “Now just what is that supposed to mean?” he asks.

His organization now has more than 15,000 members. Each of these members pays annual dues of $18, which entitles them, among other things, to a subscription to The Redheader, an often controversial and entertaining quarterly dedicated to improving the lot of its subscribers. In 1996, Stephen also authored a book called, “The
Redhead Encyclopedia,” which is a collection of famous redheads, trivia, celebrity quotes, songs, scientific facts, and folklore.

One such fact is that “natural redheads make up only 2 percent of the U.S. population, and the country with the most number is Scotland with 13 percent, followed by Ireland at 10 percent.” The book is meant to be a comical and comprehensive compilation of information about redhead culture. He wrote this book after spending 14 years promoting the unique qualities of redheads and 10 years conducting research about the redhead culture.

It is Douglas’ contention that society does not select redheads to be among it’s famous or elite. Stephen was also fascinated by the survey results and studies that showed how others perceive redheads, and how they perceive themselves. He claims there are not enough redheads on television, in motion pictures, or in modeling. Some may agree or disagree with him. The magazine recently singled out modeling agency boss Eileen Ford for it’s annual “Dead Rose Award” because of her claim that red hair doesn’t sell.

The quarterly magazine relies heavily on some relatively obscure trivia in its efforts to defend the native American redhead. For instance, a recent issue of the magazine noted that while redheads make up at least 6 percent of the country’s population, they represent only 1 percent of its prison population. Stephen spent nearly fifteen years finding information in attempt to define the redhead culture, even though some people say that he fell short of his endeavors. He continues to urge producers and promote redheads into appearing in movies and television shows for redhead exposure.

Passage 4

Health scientists have discovered that people who are committed to heavy physical activity, such as jogging, can become addicted to the adrenalin “highs” that these activities lead to. Scientific evidence says that our brain releases substances called beta-endorphin and serotonin, which both elevate our moods. The majority of physically active people would agree that exercising and sports can improve mood, lower anxiety, and promote positive emotions. This has important implications for how we exercise, because if we do not learn to “back off” from the ‘highs’ that result from exercise, then the very pleasure we derive from even healthy endeavors can be a slow form of self-destruction.

Most people would scoff at the idea that some medication or artificial stimulant could ever bind them to its clutches. Yet they are totally unprepared for the disruption to their lives that addiction to physical activity can cause. And it can develop without their even being aware of it. An addicted person forgets about everything in his or her life except for sports and/or physical activity. This addiction can also lead to failing
relationships, family issues, and work problems because he or she is strictly focused on exercising.

How do you tell the difference between being addicted to physical activity as opposed to other exercise problems? A good sign is having one or more of the following reactions concerning a specific physical activity: a) You feel excited or encouraged only when you engage in your activity b) When you stop your activity you feel very unhappy c) You would rather engage in your activity than sleep d) Your activity helps you to forget your problems temporarily e) You fantasize a lot about your activity when you are away from it f) When you stop your activity, you have heightened anxiety and discomfort with rest and relaxation.

In addition to the above symptoms that have been specifically identified, there are a number of unclassified problems that can result from addiction to physical activity. Addicts experience a blurred line between what is a healthy and admirable workout versus exercise that is over the edge and dependent. "Healthy exercisers organize their exercise around their lives, whereas dependents organize their lives around their exercise." The more you can answer "yes" to the above statements, the greater the possibility that you are "hooked" on the high that physical activity gives you. Exercise can be healthy, as long as it is balanced with a full life.

If you think you are addicted to exercise, there are a few tips to cut down on exercising. You should try to take some time off and do fun activities that you enjoy. Once you do this for at least one week, you can add exercise slowly back into your routine. The last tip is getting a personal trainer or workout with a friend. They can assist you on setting limits for yourself "on how much exercise your body really needs." Following these tips can ensure you have a healthy physical and psychological future.
APPENDIX C

ANNOUNCEMENT OF CHANGES TO THE "$100.00 CASH RAFFLE STUDY: PART 2" FOR MEMO CONDITION
ANNOUNCEMENT OF CHANGES TO THE “$100.00 CASH RAFFLE STUDY: PART 2” (FOR MEMO CONDITION)

Because of recent budget concerns, terms for this study have been changed. The CSUSB Psychology Department recently received information regarding the new policies and procedures. Due to significant cuts in the Department budget, funds allocated for this study have been significantly reduced (as have all funds allocated to laboratory experiments). Changes were made in other CSUSB departments as well. To abide by new guidelines, the researchers were required to make immediate changes from the original study you agreed to complete.

Specifically, the following experiment’s procedures that you were informed of during Part One of the study are changed immediately:

- Not all participants will remain eligible for the $100 cash raffle
- Additional passages than originally stated must be completed for the raffle to be granted to anyone
- Participants from the two groups will be combined to work on the task—not all will be eligible for the raffle

To clarify, prior to this change, participants in room #1 were working on sections of this proofreading task. However, with the current changes, fewer participants are needed and two people will not be able to complete the same section. Therefore, not all of you will be permitted to continue working on the task.

After it is determined who is needed for task completion, I will be making the final decisions regarding who will be entered into the raffle.

Once these above changes occur, you must then work with participants in room #2 until further announcements are made. I ask for your patience and understanding with these changes. I will work closely with each participant to make the integration process as smooth as possible. Thank you for your hard work and understanding.

If you have any questions about the merger, you can email me at the address below.

Sincerely,
Janell Hopeck
MSIO Program
jhopeck2@hotmail.com
APPENDIX D

ANNOUNCEMENT OF CHANGES TO THE "$100.00 CASH RAFFLE STUDY: PART 2" FOR FACE-TO-FACE CONDITION
ANNOUNCEMENT OF CHANGES TO THE "$100.00 CASH RAFFLE STUDY: PART 2" (FOR FACE-TO-FACE CONDITION)

Because of recent budget concerns, terms for this study have been changed. The CSUSB Psychology Department recently received information regarding the new policies and procedures. Due to significant cuts in the Department budget, funds allocated for this study have been significantly reduced (as have all funds allocated to laboratory experiments). Changes were made in other CSUSB departments as well. To abide by new guidelines, the researchers were required to make immediate changes from the original study you agreed to complete.

Specifically, the following experiment’s procedures that you were informed of during Part One of the study are changed immediately:

- Not all participants will remain eligible for the $100 cash raffle
- Additional passages than originally stated must be completed for the raffle to be granted to anyone
- Participants from the two groups will be combined to work on the task—not all will be eligible for the raffle

To clarify, prior to this change, participants in room #1 were working on sections of this proofreading task. However, with the current changes, fewer participants are needed and two people will not be able to complete the same section. Therefore, not all of you will be permitted to continue working on the task.

After it is determined who is needed for task completion, I will be making the final decisions regarding who will be entered into the raffle.

Once these above changes occur, you must then work with participants in room #2 until further announcements are made. I ask for your patience and understanding with these changes. I will work closely with each participant to make the integration process as smooth as possible. Thank you for your hard work and understanding.

If you have any questions, you can ask me immediately OR you will have the opportunity to ask me immediately after you finish the task.

Sincerely,
Janell Hopeck
MSIO Program
jhopeck2@hotmail.com
APPENDIX E

SELF-EVALUATION QUESTIONNAIRE
Self-Evaluation Questionnaire

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Moderately so</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel calm</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I feel secure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I am tense</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I feel strained</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I feel at ease</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I feel upset</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I am presently worrying over possible misfortunes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. I feel satisfied</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I feel frightened</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. I feel comfortable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. I feel self-confident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I feel nervous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. I am jittery</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I feel indecisive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I am relaxed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. I feel content</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. I am worried</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. I feel confused</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. I feel steady</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. I feel pleasant</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

APPENDIX F

THE DIMENSIONALITY OF ORGANIZATIONAL JUSTICE
The Dimensionality of Organizational Justice

For the following items, please indicate your fairness perceptions around your inclusion into the cash raffle. For each item, circle your response according to the extent that you experienced each item. For example, indicating a “5” for number 1 (Procedural Justice sub dimension) means that you were able to express your views and feelings to a very large extent during the procedures to determine your cash raffle entry. Thank you.

Please use this rating scale: 1 = to a very small extent 2 = to a small extent 3 = to a moderate extent 4 = to a large extent 5 = to a very large extent

<table>
<thead>
<tr>
<th>Justice Measure Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Procedural Justice</strong></td>
</tr>
<tr>
<td>The following items refer to the procedures used to determine cash raffle entry after the merger announcement. To what extent:</td>
</tr>
<tr>
<td>1. Have you been able to express your views and feelings during these procedures?</td>
</tr>
<tr>
<td>2. Have you had influence on those procedures?</td>
</tr>
<tr>
<td>3. Have those procedures been applied consistently?</td>
</tr>
<tr>
<td>4. Have those procedures been free of bias?</td>
</tr>
<tr>
<td>5. Have those procedures been based on accurate information?</td>
</tr>
<tr>
<td>6. Have you been able to appeal those procedural decisions?</td>
</tr>
<tr>
<td>7. Have those procedures upheld ethical and moral standards?</td>
</tr>
<tr>
<td><strong>Distributive Justice</strong></td>
</tr>
<tr>
<td>The following items refer to your chances of winning the cash raffle. To what extent:</td>
</tr>
<tr>
<td>1. Does your chance of raffle entry reflect the effort you put into your work?</td>
</tr>
<tr>
<td>2. Is your chance of raffle entry the appropriate decision for your completed work?</td>
</tr>
<tr>
<td>3. Does your chance of raffle entry reflect your contributions of your section to the one large proofreading document?</td>
</tr>
<tr>
<td>4. Is your chance of raffle entry justified, given your task performance?</td>
</tr>
</tbody>
</table>
Interpersonal Justice

The following items refer to the researcher who conducted the merger. To what extent:

1. Has she treated you in a polite manner?  
   1 2 3 4 5
2. Has she treated you with dignity?  
   1 2 3 4 5
3. Has she treated you with respect?  
   1 2 3 4 5
4. Has she refrained from improper remarks or comments?  
   1 2 3 4 5

Informational Justice

The following items refer to the researcher who conducted the merger and to the merger information she informed you about. To what extent:

1. Has she used straightforward communication with you?  
   1 2 3 4 5
2. Has she explained the merger details thoroughly?  
   1 2 3 4 5
3. Were her explanations regarding the merger reasonable?  
   1 2 3 4 5
4. Has she communicated the merger details in a timely manner?  
   1 2 3 4 5
5. Has she seemed to tailor her communications to participants needs?  
   1 2 3 4 5

APPENDIX G

PERCEIVED RICHNESS OF THE COMMUNICATION MEDIUM

TO ANNOUNCE THE JOINING OF GROUPS
Perceived Richness of the Communication Medium to Announce the Joining of Groups

Given how you were communicated with regarding the announcement to join the two proofreading groups, please indicate the degree to which you agree/disagree with each statement below. Circle the number which best represents your answer. Thank you.

1 = STRONGLY DISAGREE
2 = MODERATELY DISAGREE
3 = NEITHER AGREE NOR DISAGREE
4 = MODERATELY AGREE
5 = STRONGLY AGREE

1. The communication process gave me the opportunity to ask questions immediately after the announcement.
2. The medium allowed the researcher to give participants details specific to his/her participation in the study.
3. The information I received about joining the two groups was specific enough to understand the process of joining the two groups.
4. The information I received about joining the two groups was clear and unambiguous.
5. I feel that I was able to observe the researchers’ social cues (tone of voice and overall attitude) during the announcement to gain important information about joining the two groups.

APPENDIX H

HUMAN SUBJECT REVIEW BOARD APPROVAL
Human Subjects Review Board
Department of Psychology
California State University,
San Bernardino

PI: Hopeck, Janell and Agars, Mark

From: John Clapper

Project Title: Face-to-Face Communication Versus Memo Communication to Announce Mergers and Acquisitions: The Importance of Media Richness

Project ID: H-10WI-06

Date: Sunday, October 17, 2010

Disposition: Revision Review

Your IRB proposal is approved. This approval is valid until 9/20/2011.

Good luck with your research!

John P. Clapper, Chair
Psych IRB Sub-Committee
REFERENCES


Audit the impact of your messages; (2003); no author. 
*Strategic Communication Management, 7*(3), 1. from database Communication & Mass Media Complete.


Go in with your eyes open: Case study; no author; (Dec1999/Jan2000). *Strategic Communication Management, 4*(1), p. 8 from database Communication & Mass Media Complete.


