**THE EFFECTS OF OPINION LEADERS AND CHANGE MESSAGES
ON ORGANIZATION MEMBER CHANGE ATTITUDES:
A FIELD EXPERIMENT**

THESIS

Ryan LeBlanc, Captain, USAF

AFIT/GEM/ENV/10-M06

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

	Form Approved OMB No. 0704-0188

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE **01 MAR 2010**	2. REPORT TYPE	3. DATES COVERED **00-00-2010 to 00-00-2010**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
THE EFFECTS OF OPINION LEADERS AND CHANGE MESSAGES ON ORGANIZATION MEMBER CHANGE ATTITUDES: A FIELD EXPERIMENT	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Air Force Institute of Technology,2950 Hobson Way,WPAFB,OH,45433-7765**	8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT
THE EFFECTS OF OPINION LEADERS AND CHANGE MESSAGES ON ORGANIZATION MEMBER CHANGE ATTITUDES: A FIELD EXPERIMENT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**69**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

AFIT/GEM/ENV/10-M06

THE EFFECTS OF OPINION LEADERS AND CHANGE MESSAGES ON
ORGANIZATION MEMBER CHANGE ATTITUDES: A FIELD EXPERIMENT

THESIS

Presented to the Faculty

Department of Systems and Engineering Management

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Engineering Management

Ryan L. LeBlanc, BA

Captain, USAF

March 2010

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

AFIT/GEM/ENV/10-M06

THE EFFECTS OF OPINION LEADERS AND CHANGE MESSAGES ON
ORGANIZATION MEMBER CHANGE ATTITUDES:
A FIELD EXPERIMENT

Ryan L. LeBlanc, BA
Captain, USAF

Approved:

- SIGNED -	15 Mar 10
Daniel T. Holt, Lt Col, USAF (Chairman)	Date
- SIGNED -	15 Mar 10
Dean C. Vitale, Lt Col, USAF (Member)	Date
- SIGNED -	15 Mar 10
Alfred E. Thal, Jr. (Member)	Date

AFIT/GEM/ENV/10-M06

Abstract

The extent to which three change introduction strategies (i.e., opinion leadership, edict, and change message) influenced readiness for change were tested at four locations as part of a quasi-field experiment with three groups receiving an enriched change message and one control group. Readiness was measured before and after change implementation where it was hypothesized that change readiness would be most improved within the groups that heard the most persuasive and rich change messages. These hypotheses were not supported and data indicated that the differing treatments were never received by the majority of the change recipients, rendering the results of the experiment questionable. Despite this, the findings provide a solid, theoretically grounded framework that can guide future projects.

Acknowledgments

Table of Contents

List of Figures

List of Tables

THE EFFECTS OF OPINION LEADERS AND CHANGE MESSAGES ON
ORGANIZATION MEMBER CHANGE ATTITUDES:
A FIELD EXPERIMENT

I. Introduction

"There are over two thousand years of experience to tell us that the only thing harder than getting a new idea into the military mind is to get an old one out"

(Sir Basil H. Liddell Hart, 1944, p.115).

Background

Today's world is more connected than ever. Globalization has led to new levels of competition and an environment in which the organizations that are most prepared to survive and grow are those that are most prepared to change (Friedman, 2005). Technological changes have resulted in revolutionary new products capable of disrupting entire industries. The recent economic downturn has forced structural changes within companies as they consolidate operations and reorganize to trim costs and meet new challenges. Business process reengineering (Hammer & Champy, 2001), lean manufacturing (Womack & Jones, 1996), and numerous other process improvement systems have yielded an environment of constant change in the private sector.

Military organizations are similarly affected; in a speech to officers at Maxwell Air Force base, then Secretary of Defense Robert Gates (2008) discussed the changing military environment and acknowledged that "such changes will be difficult for an organization that has been so successful for six decades." The United States military is

1

affected by change in multiple dimensions. Technological changes are common as scientific developments usher in new weapons systems such as the Joint Strike Fighter. This fifth-generation fighter will eventually replace much of the current fighter inventory and force the operations and maintenance communities within the Air Force, Navy, and Marines to adapt. The way in which the military is structured is also in a period of flux. The working relationship between active duty and reserve personnel are changing at many installations, where for the first time they are being blended into the same unit such that the membership is treated as one operational force instead of separate entities (McMichael, 2008). Lastly, services are looking to improve their business practices. The Air Force, for instance, is particularly interested in evaluating its processes for potential changes through a service-wide initiative it calls Air Force Smart Operations for the 21st Century (AFSO 21), a process-focused effort to trim waste and maximize the effectiveness in operations (Wynne, 2006).

Problem Statement

Though change is pervasive within both the public and private sector, it is not a simple matter to successfully bring about. Seventy percent of organizations implementing change either fail to get the effort fully launched, fail outright, or achieve the desired change late or over budget (Kotter, 1996). Additionally, a survey by McKinsey & Company (Meaney & Pung, 2008) found that only a third of organizations studied were able to improve performance following change efforts, despite the intentions of management. According to the McKinsey & Company survey as well as Beer and Nohria (2000), executives attributed these failures largely to their inability to communicate the need for change to their frontline workers. Similarly, Fine, Hansen, and

Roggenhofer (2008) found that employee mindsets were the reason organizations failed to realize up to half of projected savings on change efforts. In summary, by not addressing employee mindsets with a well communicated justification for change, efforts typically fail to achieve expected results. Similar literature exists in the military regarding struggles with change initiatives (Holt et al., 2009), although some research suggests that, despite the message communicated from management, this could be because military members believe the organization does not value change (Hammond, 2009).

Research Objective

The purpose of this study is to test three strategies used to communicate the need for organizational change to frontline employees and determine which provides the best chance of success for the initiative. Unlike previous empirical work, which focused on the effectiveness of a specific tactic (Lam & Schaubroeck, 2000), this quasi field experiment will attempt to evaluate multiple change introduction strategies using four similar groups within a larger population to systematically evaluate each strategy's effectiveness. The strategies used are grounded in existing descriptive and prescriptive models that explain the way in which organizations and individuals experience change events.

II. Literature Review and Hypotheses

The past 60 years have produced extensive literature devoted to understanding change. Although researchers have focused on many different aspects of the change process and its effects on organizations and individuals, they may be loosely separated into two broad categories: descriptive models and prescriptive models. Descriptive models describe the stages an organization or individual progresses through during periods of change. Prescriptive models provide courses of action and techniques for change agents to utilize to facilitate successful change. Together, the descriptive and prescriptive models can be combined with the traits and attitudes of individual change recipients and the culture of the organization to generate a comprehensive model that describes organizational change (Figure 1) to illustrate the relationship between these models.

Figure 1
Literature-Based Model Using Prescriptive and Descriptive Change Components
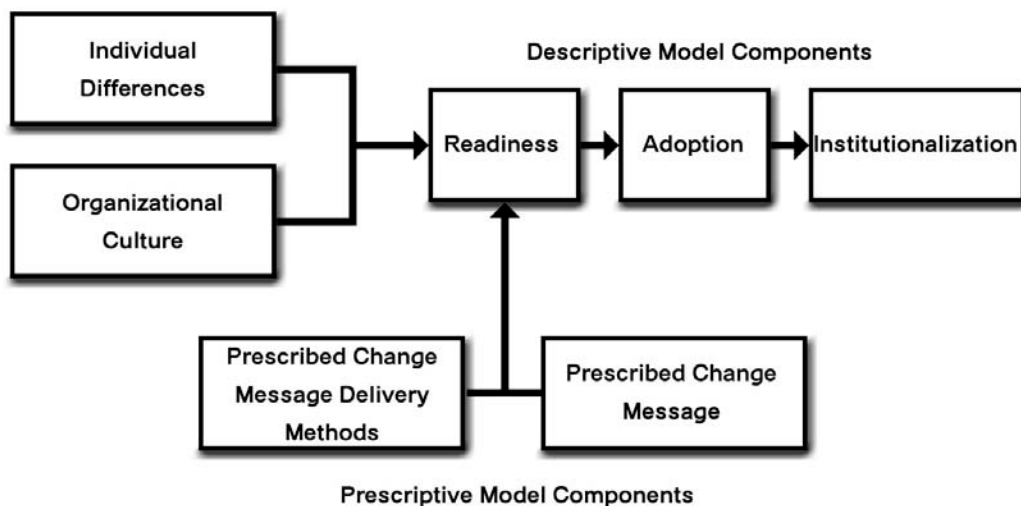
Note. Descriptive model components taken from Armenakis (1999).

Descriptive Change Models

Descriptive models describe the stages individuals and organizations go through from change initiation until the end of the change process. Early research (Lewin, 1947) proposed that change participants first went through a period during which they accept the possibility of future change and "unfreeze" themselves from their current processes. Following this initial acceptance of the need for change, Lewin (1947) described a transitional period in which participants begin to field the new change. Once the change has been accepted, the change "freezes" into an organizational norm and the process is determined to be complete for that particular change event. Later descriptive models (Prochescka & DiClementa, 1982; Meyer & Goes, 1988; Isabella, 1990; Armenakis et al., 1999) followed a similar pattern in that the participants in the change go through successive phases prior to full adoption (Table 1).

In an investigation of the processes that individuals use to change their troubled behaviors, Procheska and DiClementa (1982) differentiated between four stages of change which they felt individuals went through: (a) thinking about changing, (b) becoming determined to change, (c) modifying their behavior, and (d) maintaining the behavior change. The pre-action stages, labeled "contemplation" and "determination" by the research team, parallel Lewin's (1947) "unfreezing." The remaining two stages, "action" and "maintenance," are similarly suited to Lewin's model. It should be noted that Procheska and DiClementa (1982) first focused on change efforts initiated by the individual, but follow-on research has recently

Table 1
Summary of Descriptive Literature

Source	Focus	Phases Stage 1 *Unfreezing*	Stage 2 *Moving*	Stage 3 *Refreezing*
Lewin (1947)	*Organizational Change*	Dissatisfaction in current condition used to combat resistance to change	Change actions identified and implemented	New behavior becomes permanent as change is institutionalized.
Procheska & DiClementa (1982)	*Individual Smokers*	**Precontemplation, Contemplation, & Determination** — Individuals begin to consider changing their habits and ultimately make decision to change.	**Action** — Change occurs (like smoking cessation).	**Maintenance** — New habits become fixed as individual accepts it as status quo (i.e., have stopped smoking).
Meyer & Goes (1988)	Organizational Innovations	**Knowledge & Awareness** — Apprehension as innovation discovered evaluated for the organization. Adoption discussed.	**Evaluation & Choice** — Formal proposal of innovation for adoption and evaluation of investment using various criteria.	**Adoption & Implementation** — Trial implementation, followed by acceptance and future improvement.
Isabella (1990)	Individual Managers	**Anticipation & Confirmation** — Initially view change with speculation and anxiety, followed by rationalizing it based on past experiences.	**Culmination** — Generate understanding based on specifics of current change event. New norms and behaviors are created as the change happens.	**Aftermath** — Individuals test and experiment with the now permanent changes. The impact to the individual and the organization is evaluated.
Armenakis et al. (1999)	Organizational Change Events	**Readiness** — Beliefs, attitudes and intentions toward a change. When readiness exists, resistance is reduced	**Adoption** — Organizational members begin behaving in a new way. Change may either be adopted or rejected.	**Institutionalization** — Degree of commitment develops towards new effort. Change becomes the norm.

found it to be applicable to organizations as well (Harris & Cole, 2007).

When descriptive models are built to describe change initiated by an external power on an individual (Meyer & Goes, 1988; Isabella, 1990; Armenakis et al., 1999), they similarly show change recipients transitioning through stages such as those defined by Lewin. The initial stage of change in some models, whether labeled "anticipation," "contemplation," or "readiness," describe a comparable period of apprehension during which recipients grapple with understanding what has been imposed upon them. Others, such as Armenakis et al. (1999), focus on a motivation to reject or embrace a change initiative. In particular, they have described the need to build upon an individual's readiness for change prior to implementation (Armenakis et al., 1999), which is described as the sum of their beliefs, attitudes, and intentions toward the change effort. By focusing on these attitudes and beliefs related to the change event, it is thought that change agents can improve the chance of a given change's success (Armenakis et al., 1999). It is this model of readiness, adoption, and institutionalization that was used to frame the quasi field experiment.

Contextual Factors

Change Culture and Cynicism Toward Change. Numerous factors within the culture of an organization can have a significant impact on change readiness. One factor contributing to change resistance is change cynicism, which is defined as a "loss of faith in the leaders of a change and is a response to a history of change attempts that are not clearly successful" (Reichers, Wanous & Austin, 1997). Today's atmosphere of near continuous change has made it difficult for individuals within organizations to experience change without becoming cynical (Connell & Waring, 2002). If change is not justified in

7

the mind of the frontline workers, they may believe the organization is simply following fads or "changing for change sake." Moreover, frequent change builds an expectation that any efforts put forth in implementing change will be wasted, lost, or unrewarded when the change is ultimately discarded in favor of future change (Connell & Waring, 2002). Rumors, hunches, and fragmentary information generate a climate of nervous anticipation during the initial stage of the change process and this speculation and uncertainty are especially strong "when information is not forthcoming from official sources" (Isabella, 1990). According to Reichers et al. (1997), cynicism can be combated by making the message more believable through the use of credible spokespersons and positive logical appeals while delivering the message repeatedly through multiple channels. In short, change recipients must hear about the change from trustworthy influential members and the message must be logically constructed to emphasize benefits and consequences.

     Individual Differences.   Just as the model makes allowances for the culture of the organization as a whole, elements are added to the model to account for individual differences between change recipients, which can serve to either generally support or resist change. Individual attitudes, job attitudes, and contextual variables have been found to be strongly related to readiness for change (Eby et al., 2000). Individual differences such as self-esteem, optimism, and perceived control are related to higher levels of change acceptance (Wanberg & Banas, 2000). Similarly, a person's belief that they can control the events that affect them, called internal locus of control, has been linked to readiness for change (Lau & Woodman, 1995). These beliefs are not tied to the specific change event; they are general characteristics of the change recipient. Scheier

and Carver (1985) found that optimistic people approach events with the expectation that good things will happen, but research has been mixed on its predictive capabilities concerning readiness for change (Hammond, 2009). However, dispositional optimism has been found to have a strong correlation with perceived organizational support, which itself is a predictor for readiness for change (Hammond, 2009; Self et al., 2007). Perceived organizational support is an employee's belief that the organization values their contributions and well-being (Dawley, Andrews & Bucklew, 2008). The relationship of perceived organizational support may exist due to its strong negative relationship to cynicism (Lynch, Eisenberger & Armeli, 1999).

Prescriptive Change Models

Prescriptive models serve a different purpose than descriptive models; they provide tips for countering the cynicism and building readiness for change. Rather than simply describe the stages of change and what causes individuals or organizations to accept change, prescriptive models offer step-by-step directions to the change agent in hope of improving the chance of success (Kotter, 1996; Hui, Lam & Schaubroeck, 2001; Armenakis & Harris, 2002). Often, the prescriptions are dependent upon the type of organization experiencing the change. In self-managing work teams, for instance, literature suggests that leaders should lead others to lead themselves during trying situations (Manz & Sims, 1987). During a period of change, the leader would not direct the change effort as much as he or she would guide its adoption from outside the group. Other prescriptive models are far more directive in having the change agent sell the benefits associated with change adoption.

Whether it is an eight-step process generalized to cover most change efforts (Kotter, 1996) or simple step-by-step instructions for implementing a specific change, such as Lean techniques, into a specific setting (Harbour-Felax, 2008), these models all recommend specific courses of action. Common among most of these prescriptions are two fundamental issues: the methods to deliver the message and the message to be delivered to the members as the change is introduced.

Lewis, Schmisseur, Stephens, and Weir (2006), in a meta-analysis of popular books on change, identified several general strategies for communicating and introducing change and specific tactics for conveying those messages. Out of the 100 bestselling books studied, they suggested that change agents deliver their message through the use of informal networks (18 books) and managing the style and content of communication (14 books). It is precisely these two themes that are of primary interest in this study.

While the various tools and methods outlined have been prescribed by several authors, few have compared how one method better predicts adoption over other methods. This experiment examines two such change introduction methods to determine how organizations might best take advantage of prescriptive theories when launching change events. These methods seek to influence the attitudes of the individuals experiencing the change, and thus their readiness to accept it, by marrying a change message with a delivery method (Figure 1).

Edict. A simple straightforward message and method often used by managers in to introduce organizational change is the use of an edict, which involves a directive sent from the top through the organizational hierarchy (Mohrman, Ramkrishnan & Mohrman, 2003). Edicts state what the change will be and when it is to be implemented, but often

fall short of answering many of the questions organizational members might have related

to the change event, as noted in Armenakis et al.'s (2002) justification for the need for a

five-part change message. Studying eight companies, Mohrman et al. (2003) found the

use of an edict as the sole method of introducing change failed to yield new operating

norms and did not support the permeation of new plans into operations.

Opinion Leadership. While studying individuals who had changed their voting

intentions during the 1940 presidential campaign, Katz and Lazarfeld (1955) found that

the main factor in their decision to switch was influential peers. The term "opinion

leader" represents individuals that exerted a disproportionately great influence on the

intentions of their fellows (Katz & Lazarfeld, 1955). Conversely, the opinion leaders

were much more likely to have received their information, and thus made up their mind,

through mass media as opposed to receiving it from other individuals (Katz & Lazarfeld,

1955). This generated the "two-step flow of information" theory, in which influential

members would gather information and distribute that information to the less active

individuals (Katz & Lazarfeld, 1955). The level of influence individuals hold varies from

subject to subject; often, an opinion leader on one subject may adopt a follower role when

the subject changes (Weimann, 1991). For example, an opinion leader in a work setting

may rely upon a coworker, which typically adopts a follower role, as a key source for

non-work related information such as the information needed to guide a purchase of

home electronics.

The emerging research field of social networks has begun to shed light on how

opinion leaders fit within the larger networks of individuals found within organizations.

The literature also describes how to identify key individuals within these networks,

analogous to opinion leaders, that exercise influence by controlling the flow and access to information across organizational boundaries. Social network research has shown that understanding the informal networks within an organization can be critical to organizational effectiveness (Cross, Borgatti & Parker, 2002). Moreover, Mehra et al. (2006) provided empirical support for the assertion that leaders are more effective when they are well supported by social networks within an organization. Unfortunately, despite the enormous influence that key individuals within social networks wield within an organization, the networks are often invisible to senior leaders (Cross & Prusak, 2002). Because leaders fail to understand these internal social networks, organizations typically attempt to use hierarchical managers to introduce change, but this decision is often flawed. Understanding these networks is critical to the effective use of existing opinion leaders since opinion leadership is best practiced through existing informal networks, with influential peers selected by management as change agents from within those informal structures (Vitale, 2008).

Since midlevel managers often interact with frontline employees and typically have a strong understanding of the social networks, they can identify socially influential members (Cross & Prusak, 2002; Huy, 2001). Predictor characteristics such as public individuation, exposure to the message, product familiarity, personal involvement, risk preference, and dogmatism (negatively correlated) may also help identify opinion leaders (Chan & Misra, 1990). Employees who frequently engage in organizational citizenship behavior can also be successfully developed into opinion leaders with proper training (Hui, Lam & Schaubroeck, 2001). Influential members of the organization superior in position, but not excessively so, to frontline employees have been found to be particularly

effective in transmitting new knowledge within an organization (Feder & Savastano, 2006). Demographically, the most definitive characteristic of opinion leaders is higher levels of education relative to their peers (Nisbet, 2005).

In a field experiment, Lam and Schaubroeck (2000) found that opinion leaders can have a significant effect on the attitudes of frontline employees if they are selected properly and effectively involved by management in change initiatives. Although not technically a delivery method themselves, the opinion leaders function as such when utilized by management to disseminate their message, relying on their skill and influence to personalize the message to skeptical frontline workers as necessary.

Change Message. Although utilizing an effective delivery method has been found to be extremely beneficial during change introduction, the content being delivered is equally critical to its successful adoption. A change message works by answering critical questions for the workers who are being asked to change. This message conveys discrepancy, appropriateness, efficacy, principal support, and personal valence (Armenakis & Harris, 2002). Discrepancy refers to the need for change. This message is created by establishing a difference between the current and desired performance. The theoretical importance of this message is grounded in social accounts theory which holds that information should be provided to change recipients explaining the need for change (Armenakis et al., 2007). Once the discrepancy message is sent and understood, leaders should communicate that the particular change being introduced will resolve the discrepancy. This message is termed appropriateness. Change recipients must believe that not only will the change yield positive results, but that it will fix the discrepancy it is intended to address. The third component of the message must convey the ability of the

change recipients to implement the change. Grounded in the ideas of self-efficacy

originally presented by Bandura (1982), organizational change will be difficult at best if

change recipients are lacking belief in their change-related efficacy, as well as belief in

the organization's ability to accomplish the change (Armenakis & Harris, 2002). When

individuals do not believe they can succeed, little effort is put forth and efforts are

abandoned when obstacles are encountered. Principal support is defined by Armenakis et

al. (2007) as the belief that individuals spearheading the change, organizational leaders,

immediate supervisors, and the change recipient's respected peers demonstrate that they

support the change and will put effort towards seeing it succeed. Finally, the message

must convey valence or "what's in it for me?" This can detail both intrinsic rewards such

as satisfaction and extrinsic rewards such as bonuses. Each of these key messages are

summarized in Figure 2.

Figure 2

Five Component Change Message Based on Armenakis (2002) research

Discrepancy

Employees must believe that a need for change exists. A difference between current and desired performance should be established

Appropriateness

Justification of the desired change as the appropriate corrective action for the identified discrepancy

Efficacy

The perceived capability to implement the change initiative. This factor has both an organizational and personal context.

Principal Support

Support from change agents, global or local, for the change in question.

Valence

The attractiveness associated with the outcome of the change for the individual. "What's in it for me?"

APPROPRIATENESS

EFFICACY

DISCREPANCY

Message Conveying Strategies

Active Participation
Persuasive Communication
Management of Information

PERSONAL VALENCE

PRINCIPAL SUPPORT
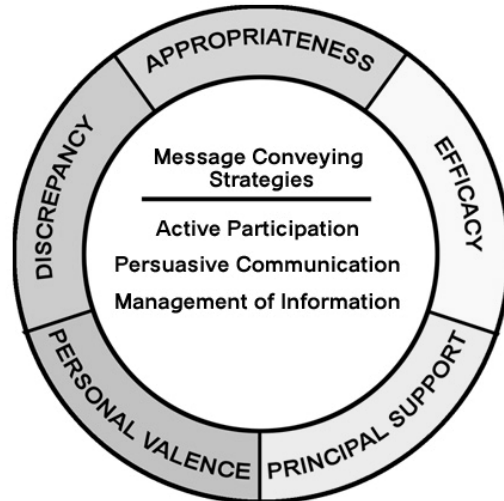
Armenakis and Harris (2002) tested the extent to which a comprehensive change message addressing each of these specific messages would influence readiness for change during a major reorganization in a large, multinational corporation. The president of a business unit within the organization was coached to convey each of these messages using several strategies that included direct communication with the members (with persuasive speeches), and indirect communication by having members actively participate, or external sources conveying the message. Armenakis and Harris' (2002) experiences with the change effort in this organization supported the usefulness of the model in building support for the change initiative, although surveys to ascertain the resulting change in readiness were stalled due to the assessment becoming overwhelmed by other events within the organization.

As noted, one delivery option for the change message is direct communication from senior leaders to frontline workers through speeches, video, or written communication. In contrast to using lower-level opinion leaders to adaptively tailor the way a change is presented to frontline workers to improve acceptance, the use of a formal change message allows management themselves to address potential frontline concerns and increase readiness for a change event (Armenakis & Harris, 2002). In today's digitally connected environment, this persuasive change message can be effectively transmitted orally via audio and videotape technology; likewise, the written message can be delivered through email correspondence (Armenakis et al., 1999).

Although much has been written by leading authors on change regarding the need for change messages (Armenakis & Harris, 2002; Hammer & Champy, 2001) and opinion leaders (Lam & Schaubroeck, 2000), the area is light on empirical support. This study seeks to bridge a portion of the gap between theory and empirically derived data. Media Richness Theory, which suggests that media differ in the ability to convey understanding, was explored to develop the hypotheses for how each method will perform related to the other. Media richness theory simply suggests that the media used to convey a particular message will be effective when it aligns with the message that is trying to be conveyed. Communications media differ in richness based on the cues that are available to convey the message and the immediacy of feedback that can be garnered such that the message can be adjusted. For instance, a face-to-face interaction is said to be a richer media than a written memo because the face-to-face interaction gives multiple cues through words, tone, and body language and permits the message sender to adapt as he or she observes the body language of others (e.g., Kahai, 2003). Consistent with this

theory, complex messages, like those often associated with organizational changes, would require richer media if the message is to be conveyed effectively. Moreover, Kahai (2003) found that richer media afforded individuals who were evaluating a message the opportunity to further assess the credibility of the message sender, strengthening the message when they viewed that person as credible. With this framework in mind, delivering the key change messages through a text message allows recipients no feedback opportunity and little confirmation, other than the assurances of management, that the program change being delivered was generated and supported by subject matter experts. In contrast, a video version of this same message could be constructed in such a way as to allow the recipients to view subject matter experts describing the change and detailing their justifications for it, lending more credibility to the overall message. Finally, interaction with opinion leaders would allow for that same message to be delivered personally by a previously identified local expert through a two-way interaction. Studies testing Media Richness Theory are inconclusive (Dennis & Kinney, 1998; Shepherd & Martz, 2006), but generally validate the claims made. Conceptually, Media Richness Theory would seem to support an increase in acceptance of the message by the recipients from text to video and another increase from video to delivery by opinion leader. This will be conceptualized in this study as increasing the personalization of the message to the recipient.

Hypotheses

The literature contains mixed results as to whether an increase in the degree of persuasiveness of the message delivery will have an impact in the receptiveness of the recipients. An edict is entirely impersonal; the instruction to change is simply demanded by the organization. Conversely, change recipients that participate in the generation of the change have a much greater personal connection to and acceptance of the final product, resulting in a strong positive relationship between participation and organizational commitment and a strong negative relationship with resistance to change (Lines, 2004). This assertion has not been definitively proven, however, and studies exist which counter this claim (Latham, Winters & Locke, 1994). In building the hypotheses for this experiment, the various delivery methods were fixed upon a scale hypothesizing the degree of persuasive power each holds (Figure 3). While the actual differences that are shown in Figure 3 are notional, the theory being proposed is that if the message content is similar, the persuasiveness of the delivery method itself may be the deciding factor in its power to influence the attitudes of the change recipients. The use of self-discovery or enabling change recipients to participate in the change generation is far more persuasive change strategy than a communicated change message (Armenakis et al., 1999).   The literature is less clear on how other change delivery methods compare to each other, which is the question the present study seeks to test. For the purpose of the study, it is hypothesized that since opinion leaders are able to tailor their discussions with change recipients to alleviate their specific individual concerns, the message should carry a greater degree of persuasive power than the video or text change message, which is generated for a mass audience to address aggregated concerns. Likewise, a change

message video which contains footage of members of the individual's organization

personally familiar to the change recipient as well as senior leadership should perform

better than the same message delivered via a text email. Justification for this assertion is

offered by Armenakis et al. (1999) in that "the time, energy, and resources utilized (in

contrast to a text message) in giving verbal communication provide symbolic evidence of

the change agent's support." Similarly, research shows that change agents can be more

effective when adapting the official message into their own words for the audience, rather

than simply repeating the message as given (Whittle, Mueller & Mangan, 2008). The

video allows for this tailoring to occur as each presenter states the benefits and

justifications in their own words.

Figure 3
Hypothesized Persuasiveness of Change Message Delivery Methods
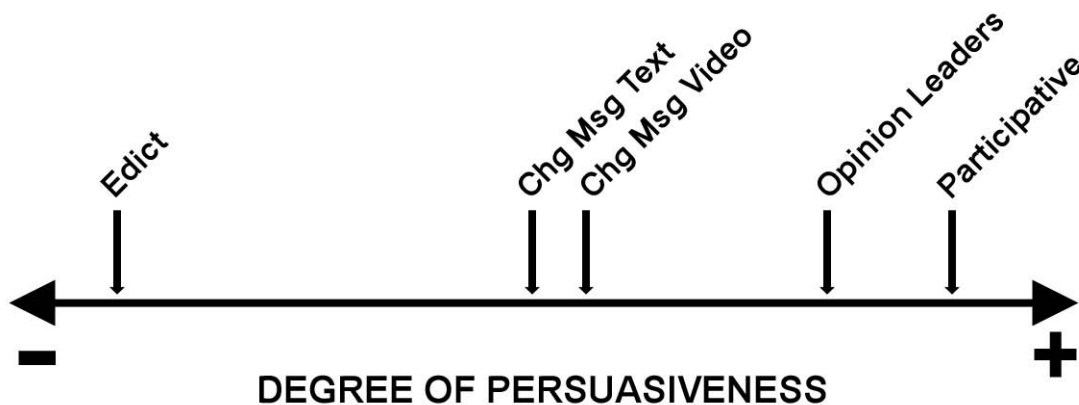
Building off of this idea that the delivery methods will be gradually more

effective based upon their degree of persuasiveness, the following hypotheses are

proposed:

Hypothesis 1: The use of a text change message based upon the five-part Armenakis model will increase readiness for change within an organization to a greater extent than the use of an edict.

Hypothesis 2: The use of a video change message based upon the five-part Armenakis model will increase readiness for change within an organization to a greater extent than the use of a text change message.

Hypothesis 3: The use of opinion leaders within an organization to advocate for the change and address individual concerns will increase readiness for change to a greater extent than all other tested methods.

<center>**III. Research Method**</center>

Research Design

Hypotheses were tested through a field quasi-experiment using a nonequivalent-groups design with three program groups and one comparison group. Nonequivalent groups were dictated by the inability to separate the affected change recipients from their organizations and reassign them to randomized groups. Although the members of the organization are assigned to each lower-level organization after receiving similar training, the culture varies by location. In this design, the effects that opinion leaders and a structured change message had on the dependent variable, readiness for change, were tested. Table 2 summarizes the design by group.

Table 2
Research Design

		T1 Survey	Opinion Leaders	Change Message Text	Change Message Video	Edict	T2 Survey
Group 1	N	X	X			X	X
Group 2	N	X		X		X	X
Group 3	N	X			X	X	X
Group 4	N	X				X	X

<center>21</center>

Four branches of a larger organization were divided into four treatment groups. While all groups were given the edict letter explaining the change, each independent variable (e.g., opinion leader involvement and change message type) was tested on one group. No interactions between the independent variables were tested because the response rates from the organizations receiving these treatments were insufficient to obtain results.

The change introduced into each organization was identical. It required the automation of a previously hand-carried, paper-based system through which customers requested facility construction and maintenance work from an engineering organization. Additionally, it alleviated many of the coordination problems that existed in the previous system by granting access to the automated system by not only the customers and the engineering personnel, but also the various outside agencies that had to approve and comment upon all requests. Lastly, it mandated new responsibilities such as customer notification in advance of service calls and the publication of priority lists to ensure customers had visibility on the relative importance of jobs.

Participants and Sample Selection

The initial population for this study included the employees of eleven similar, public sector organizations within the Department of Defense. Each of these organizations was part of a larger, parent organization that was responsible for infrastructure maintenance and construction at military installations throughout the continental United States. The number of employees varied based upon the size of the installation and the work requirements, ranging from approximately 200 to 400 employees. Surveys were issued to all members of each organization through a member

of the parent organization and participation was voluntary. While the exact number of employees receiving the survey is unknown because of the distribution method, the first survey was sent to an estimated total of 725 individuals, with 193 being returned for a response rate of 25%. Of these 193, 44 were either incomplete or contained unusable data. The survey responses for the first survey were spread relatively evenly across the eleven organizations. The second survey was sent using the same methods to eight of the installations. Of the estimated population available of 568, a total of 52 complete surveys were returned for a much lower response rate of 9%, with no responses coming from some organizations. Due to the extremely low response rate from four of the organizations, the experiment was modified to utilize only the four organizations that responded to the second survey. Once results of the first and second surveys were scrubbed to use only the responses from these four organizations, the response rates were 23% and 15%, respectively. Although the response rate for the first survey falls roughly in line with expectations for electronic surveys, the second survey was significantly lower than expectations, despite using techniques such as advance notification of survey participants, multiple reminders, and official sponsorship which have been found to have slight correlations with increased response rates (Cook, Heath & Thompson, 2000).

Treatment Groups

The method by which the comparison group received the change involved no structured change message, but rather the implementation of the change by edict or directive. This represented a typical change introduction strategy of the organization in which members are simply told by leaders that a change to the work order process must be implemented.

The first treatment variable, opinion leaders' involvement, was given to the organization in Group 1. The branch participating in the opinion leader treatment group sent members to participate in a three-day event to determine the scope of the change. These opinion leaders and other functional experts from elsewhere in the parent organization, collectively called the Process Improvement Team (PIT), were selected to develop the specific change that would be introduced to all of the groups. The opinion leaders were nominated by senior members of their particular organizations in telephone interviews with the research team. Asking supervisors who were familiar with all personnel within the organization to identify good opinion leader candidates was consistent with previous work by Hui, Lam, and Schaubroeck (2001). Four telephone interviews were conducted with middle managers at the Group 1 location to generate a list of potential opinion leaders. The names suggested in each interview were then compared to determine those most often identified for their influence within the organization. To ensure these influential individuals had the necessary experience to develop the change, the expertise of each nominee was also taken into consideration by using demographic data such as job specialty codes, rank or grade, and level of responsibility within the organization.

The second treatment variable, the change message, was divided into two conditions. The first condition conveyed the change message by text. It differed from the edict in that it was delivered to all members of the group via email and came from a senior leader of the parent organization and was crafted to explain the change in terms of discrepancy, appropriateness, self-efficacy, principal support, and personal valance (Armenakis & Harris, 2002). Examples of text addressing each of the five components

24

are in Table 3. For instance, discrepancy was conveyed through the following thought,

"Last fall, surveys went out to… (our) customers. The results…clearly showed

opportunities for improvement." The specific text was constructed from the words of the

opinion leaders themselves, collected through exit interviews following the process

improvement team meeting. Once crafted, the message was independently assessed by

three raters to determine how well the final composition conveyed each of the intended

sentiments.

Table 3
Examples of Change Message Text

Component	Examples
Discrepancy	*"Last fall, surveys went out to…(our) customers. The results…clearly showed opportunities for improvement"*
Appropriateness	*"The solution not only includes your survey inputs, but was also generated by your peers", "we've already seen improvements at bases implementing this new process"*
Efficacy	*"(we) have proven to be adaptive, and I believe we are fully capable of succeeding in this necessary change effort", "training will be provided"*
Principal Support	*"headquarters staff will be available to assist you to ensure you have the tools and training necessary to successfully implement this new process", "I fully support this initiative"*
Personal Valence	*"The two most recognizable benefits are a reduced workload for our customer support sections and a decline in customer complaints and requests for information"*

The second level of change introduction was to deliver the change message via

video, using a compilation of clips from the process improvement team exit interviews

coupled with an introductory clip from the most senior member in the parent organization. This video change message was also coded by individual raters to ensure it contained each component of the Armenakis change message. It was then mailed to Group 3 for delivery at a general assembly attended by all members and presided over by the senior member of that organization.

To evaluate the effects of the two treatment variables on the organizations, the experiment included two electronic web-based surveys, 12 months apart, to capture the pre- and post-treatment levels of the dependent variables. Prior to any treatments being applied to the various groups, baseline data was gathered to determine existing levels of readiness for change and perceived organizational support. The pre-treatment (Time 1 (T1)) survey was taken approximately 8 months prior to the introduction of the change. The post-treatment (Time 2 (T2)) survey was taken approximately 45 days after the change event.

Measures

Readiness for Change. Readiness for change was measured using a modified version of the 28-item Organizational Change Recipient Belief Scale (OCRBS) developed by Armenakis et al. (2007). Participants indicated their agreement using a 6-point Likert-point scale (1 = *strongly disagree,* 6 = *strongly agree*). Discrepancy was measured using four items, with appropriateness, valence, efficacy, and principal support measured using five, four, six, and nine items, respectively. Items were slightly modified to reflect the specific process being changed within the organization as opposed to referencing the organization as a whole. For example, an item designed to measure discrepancy was altered from "We needed to change the way we did some things in the

organization" to read "We needed to change the way we do some things in the work order process."

Likewise, the questions used in the post-treatment survey were modified slightly from pre-treatment measures in that they were adjusted to focus on a past event. For instance, an item in the pretreatment survey that read "Changing our work order process will improve our flight's performance" was adjusted to read "the change we have implemented in our work order process will improve our flight's performance." This can be seen in the following adjusted questions from Armenakis et al.'s (2007) original scale such as "a change was needed…; the change we have implemented…was correct for us; and most of my respected peers have embraced the change." Armenakis et al. (2007) reported the following ranges for coefficient alphas: discrepancy (.92-.70), appropriateness (.95-.89), efficacy (.86-.76), principal support (.87-.69), and valence (.90-.78). Coefficient alphas for the Time 1 sample were.93, .95, and .63, respectively, for discrepancy, appropriateness, and principle support (Hammond, 2009). Valence was measured using one item which read, "Changing the work order process will benefit me." Time 1 measurements for efficacy were not taken since the change had yet to be developed and thus the respondents could not be expected to know whether or not they could accomplish the change. Coefficient alphas for the Time 2 sample were .92, .97, .92, .96, and .92, respectively, for discrepancy, appropriateness, efficacy, principle support, and valence. Convergent validity was tested with eight items based on Lau and Woodman's (1995) measure of attitudes toward a specific change event. The coefficient alpha for this eight-item scale was .88.

Dispositional Optimism. To control for differences that may have existed

between participants, individually and collectively within groups, dispositional optimism

was measured using a scale developed by Scheier and Carver (1985). Significant

differences in dispositional optimism between the Time 1 and Time 2 survey respondents

could potentially affect the ability to determine whether measured differences in

readiness for change were due to the treatments, rather than individual differences within

the two groups. Respondents were given a 6-point Likert-point scale (1 = *strongly*

disagree, 6 = *strongly agree*) with questions such as (a) in uncertain times, I usually

expect the best and (b) I'm always optimistic about my future. Scheier and Carver (1985)

reported the coefficient alpha to be .76. The coefficient alpha for the T1 survey was .80

(Hammond, 2009). For the T2 survey, it was calculated at .83.

    Perceived Organizational Support. The extent to which participants believed

they received support from their local leadership was assessed using the eight-item

Survey of Perceived Organizational Support (Lynch, Eisenberger & Armeli, 1999).

Though the dependent variable of interest in this experiment is readiness for change,

perceived organizational support was examined due to its strong correlation to

dispositional optimism, which is a predictor for readiness for change (Hammond, 2009;

Self et al., 2007). Participants indicated their agreement with each statement using a six

point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*). Lynch et al. (1999)

reported a coefficient alpha of .90. A similar value was found at Time 1; the coefficient

alpha for this sample was .86 (Hammond, 2009). For the T2 survey, the coefficient alpha

was determined to be .91.

Treatment Variable Manipulation Checks. To determine the extent that the participants were affected by treatment variables, manipulation checks were included in the Time 2 survey. The change was introduced in all four organizations and each individual was asked to assess the extent to which the organization was implementing the change, the percentage of work orders that were being handled with the new process, and the extent to which members might be working around the change by continuing to utilize the previous work order system. Items such as "to what extent has your squadron put into practice the new work order process" and "to what degree are members 'working around' the automated process" were given on a 5-point Likert scale (1 = *not at all*, 5 = *to a great extent*).

Participants from the four organizations that received the opinion leader treatment also received manipulation checks to determine whether they were influenced by the opinion leader and, if so, to what degree. Three questions were asked, ranging from a general awareness on their part of whether members of their organization participated in the process improvement team to more specific questions related to the interaction, if any, between the individual respondent and the opinion leader(s). Similarly, participants from the four organizations that received the change message through video and text were asked questions related to their recollection of being presented with an email from a senior leader introducing the change to the work order process. Refer to the appendix for the complete questionnaire showing all items used.

IV. Results

Prior to evaluating the hypotheses, it was first necessary to test whether responses were influenced by dispositional optimism. This was examined at the individual and group level. Correlations between variables are shown in Table 4. As expected, dispositional optimism was positively correlated with perceived organizational support (r = .185, p < .05), although counter to previous findings (Hammond, 2009), perceived organizational support had no correlation with the five change readiness measures of discrepancy, appropriateness, valence, efficacy, and principle support (r = -.047, -.098, -0.86, .099, and .037, respectively). Likewise, dispositional optimism was not significantly correlated to any of the five dimensions of readiness for change, with values ranging from .013 (with discrepancy) to .256 (efficacy).

Table 4.
Correlation Between Variables

		1	2	3	4	5	6	7	8
1	Survey No (pre-treatment = 0, post-treatment = 1)								
2	Treatment Group	-.123							
3	Discrepancy	.113	-.107						
4	Appropriateness	-.109	-.094	.786**					
5	Valence	-.126	-.057	.659**	.821**				
6	Efficacy	***	.005	.434**	.729**	.776**			
7	Principle Support	-.160	.038	.366**	.593**	.486**	.705**		
8	Perceived Organizational Support	.231*	-.076	-.047	-.098	-.086	.099	.037	
9	Dispositional Optimism	-.021	.024	.013	.036	-.059	.256	.184	.185*

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).
*** Was not computed because Efficacy was only measured at Time 2).
Note. Readiness measures from Time 1 and Time 2 were combined for this analysis.

Additionally, because different individuals took the survey at each organization at Time 1 and Time 2, it was necessary to determine whether these two samples differed in dispositional optimism (Table 5). A comparison of means was performed, with the results showing F scores ranging from 0 to 3.760, with no significant differences found (all $p > .05$, the lowest of which being for the change message text group at $p = .061$).

Table 5.
Dispositional Optimism by Organization, Comparison of Means

| | Dispositional Optimism | | Dispositional Optimism | | |
| | Time 1 (N = 71) | | Time 2 (N = 52) | | F |
	M	SD	M	SD	
Opinion Leader Group	3.69	.48	3.69	.75	0
Change Message Text Group	3.95	.86	3.38	.77	3.760
Change Message Video Group	3.44	.73	3.92	.79	1.956
Edict Group	3.70	1.03	3.90	.74	.303

Note. N ranges from 9 to 27 due to missing data.

Analysis of the results of the manipulation checks for each treatment variable raise concerns. Specifically, there is evidence to suggest that a majority of the survey participants failed to receive the treatments intended in the experiment. Results from this analysis depended on the reaction of the individual members within the treatment groups after being exposed to differing change messages. If these differing change messages were not experienced by participants, then the conclusions drawn by the study would be in doubt. Seven of 13 survey participants from the opinion leader treatment indicated that they knew the opinion leader in their organization. They indicated this by responding "yes" to the following question, "I know someone in my squadron who participated on the Process Improvement Team." Only five of those seven, however,

responded affirmatively to the follow up question, "I've observed this person talk about the change in a one-on-one or group setting." Although Lam and Schaubroeck (2000) did not report any measurement of opinion leader contact, the method used in their study suggested a greater exposure between the opinion leaders and the rest of the participants in the study. Moreover, the opinion leaders that Lam and Schaubroeck (2000) identified were designated as "service-quality leaders" and were specifically trained in how to go about passing on the organization's message to others. The present study contained no such training or empowerment of the opinion leaders who were involved; therefore, it is understandable that the opinion leaders' abilities to communicate with, and thus influence, their peers might be diminished.

Similarly, although an email was sent to all members of the text change message treatment group, only 5 of 14 survey participants recalled reading the message. The treatment which seems to have gotten the least exposure was the video change message delivered to Organization 3. Instructions were given from leadership to the head of Organization 3 to show the 15 minute change message video during a mandatory meeting that included the entire organization. Despite this, only one survey respondent (of 12) answered affirmatively to the question, "do you remember seeing a video introducing the change to the new work order process?" If participants did not receive the treatment, the only potential exposure they may have had to the five component change message would be through second-hand information received through contact with peers that experienced the treatment. Even if the message was received through second-hand sources, however, it is unlikely that it would have the hypothesized effect on the recipient's attitudes toward the change. The hypothesis depended upon the recipient

experiencing the message from multiple change agents, including the senior leader, each

tailoring it in their own way while conveying the five component message designed to

elicit a strong response.

The subsequent findings should be interpreted with this background in mind. The

correlations between the components of readiness, namely, discrepancy, appropriateness,

valence, efficacy, and principal support, were significant ($p < .01$), which was consistent

with previous literature (e.g., Armenakis et al., 2007). There was no statistically

significant difference between organizations or from Time 1 to Time 2 on any of these

components, suggesting that either the treatments had no effect on the organizational

members' readiness for change, the treatments were too poorly administered to impact

the recipients, or the change itself was too minor to elicit an emotional response.

Hypothesis 1 stated that the use of a text change message that conveyed the

sentiments of discrepancy, appropriateness, valence, efficacy, and principal support

would increase readiness for change within an organization. Table 6 shows the means,

standard deviations for each of the readiness factors, and the test to evaluate whether

these values changed over time as expected. Counter to expectations, no significant

differences ($p < .05$) existed between the pre- and post-test measures for the change

readiness variables. The Time 1 values, shown in Table 6, were as follows: discrepancy

($M = 3.79$, $SD = 1.26$), appropriateness ($M = 3.79$, $SD = 1.33$), valence ($M = 3.42$, $SD = $

1.39), and principal support ($M = 4.44$, $SD = .77$). The Time 2 values were remarkably

similar: discrepancy ($M = 3.96$, $SD = 1.31$), appropriateness ($M = 3.59$, $SD = 1.18$),

valence ($M = 3.50$, $SD = 1.29$), and principal support ($M = 4.07$, $SD = 1.16$).

Hypothesis 1 could not be supported with the data obtained.

Hypothesis 2 suggests that the use of the video change message will result in a greater increase in readiness for change than the text version of the same message. Contrary to the expectations of the hypothesis, and similar to the findings of the change message text group, the change message video group experienced no significant change in any readiness component. Measures from Time 1 to Time 2 in discrepancy, appropriateness, and principal support were very similar. In the readiness component of valence, the means actually appeared to decrease from Time 1 (M = 3.78, SD = 1.09) to Time 2 (M = 2.92, SD = 1.04), but this decrease was also not significant. With no significant changes in any measure of change readiness, Hypothesis 2 was not supported.

Continuing in the same fashion as Hypotheses 1 and 2, Hypothesis 3 called for an increase in the measured dimensions of change readiness in the opinion leader group of a greater magnitude than was exhibited in the change message text and video groups. Again, no significant changes were seen in the measures of any readiness component. The Time 1 values in discrepancy (M = 3.93, SD = 1.75), appropriateness (M = 3.87, SD = 1.69), valence (M = 3.82, SD = 1.83), and principal support (M = 4.60, SD = .59) did not differ from the values at Time 2, which were as follows: discrepancy (M = 4.62, SD = .85), appropriateness (M = 4.05, SD = 1.06), valence (M = 3.57, SD = 1.15), and principal support (M = 4.23, SD = 1.09). The failure to find any significant differences from Time 1 to Time 2 results in Hypothesis 3 being not supported.

Table 6.

Dependent Variables, Comparison of Means

	Time 1		Time 2		F
	M	SD	M	SD	
Discrepancy					
Opinion Leader Group	3.93	1.75	4.62	.85	1.562
Change Message Text Group	3.79	1.26	3.96	1.31	.150
Change Message Video Group	3.78	1.11	4.25	1.37	.710
Edict Group	3.86	1.46	3.68	1.28	.122
Appropriateness					
Opinion Leader Group	3.87	1.69	4.05	1.06	.094
Change Message Text Group	3.79	1.33	3.59	1.18	.203
Change Message Video Group	3.60	1.09	3.45	1.36	.073
Edict Group	3.92	1.31	3.00	1.16	3.962
Valence					
Opinion Leader Group	3.82	1.83	3.57	1.15	.162
Change Message Text Group	3.42	1.39	3.50	1.29	.028
Change Message Video Group	3.78	1.09	2.92	1.04	3.374
Edict Group	3.64	1.63	3.04	1.26	1.181
Principal Support					
Opinion Leader Group	4.6	.59	4.23	1.09	1.099
Change Message Text Group	4.44	.77	4.07	1.16	1.068
Change Message Video Group	3.89	.85	3.91	1.13	.002
Edict Group	4.58	1.00	4.41	.56	.296
Perceived Organizational Support					
Opinion Leader Group	3.98	.93	4.51	.95	2.055
Change Message Text Group	4.22	.58	4.41	.56	.923
Change Message Video Group	4.13	.54	4.66	.69	3.690
Edict Group	4.03	.76	4.21	1.06	.337

Note 1. N ranges from 9 to 27 due to missing data.

IV. Discussion and Conclusions

Discussion

This study tested three strategies used to communicate the need for organizational change to frontline employees to determine which might have best facilitated adoption of the initiative. Unlike previous empirical work, which focused on the effectiveness of a specific tactic (Lam & Schaubroeck, 2000), a quasi field experiment evaluated multiple change strategies using four similar groups to test each strategy's effectiveness. Although the present study found no relationship to exist between the use of different methods of change introduction and increased levels readiness for change or perceived organizational support, practitioners would be wise to consider previous work (Armenakis et al., 1999; Hui, Lam & Schaubroeck, 2001) suggesting that relationships do exist between change introduction techniques and change success. Despite the inability to support this previous research based on the results from this study, managers should consider addressing the five components of Armenakis et al.'s change message as well as reaching out to influential members within their organization during periods of change. Additionally, managers in organizations which experience frequent change should look at selection practices and strongly consider prospective employees who demonstrate high levels of dispositional optimism, which this study found to correlate with perceived organizational support as previous work has suggested (Hammond, 2009; Self et al., 2007).

Limitations and Alternate Explanations for Findings

An extensive body of research exists that suggests relationships exist between the use of opinions leaders and change messages and change success. The inability of this

study to duplicate these findings, independent of whether the current hypotheses could be supported, suggests that the ineffectiveness of the treatments had a substantial affect on the present study. This may have been a significant hurdle in the acquisition of meaningful data.

Another explanation for our failure to discover any significant differences between the treatment groups could be that the change was not of sufficient magnitude to generate enough emotion to affect the groups' attitudes. This could also explain the extremely low post-treatment response rate that reduced the experiment from eight organizations down to the final four used in the study. Ultimately, the change generated by the Process Improvement Team amounted to little more than an automation of an existing process and a few minor procedural adjustments which impacted only about ten percent of the frontline workers at each location. Research (Hammond, 2009) has suggested that without vested interests in a change event, emotions will not form related to the change. Therefore, if only a small portion of the overall respondents generated emotion towards the change event, it is unlikely that any differences between groups would be discernable. Compounding the problem of a theorized low percentage of respondents being emotionally affected by the change is that the previously mentioned low response rate did not provide enough statistical power to pick up slight variations between study groups.

A final explanation for the lack of conclusive findings could be that unlike much of the other research in this area, this experiment was conducted in a military setting. Part of the organizational culture in the military is that employees are conditioned throughout their careers to follow orders and direction from the next higher

37

organizational level, often with little justification. This may create an atmosphere less

reliant on "selling" a change to workers than exists in the civilian sector, where most

studies cited took place. Because of this limitation, the conclusions drawn from the

present study may not be generalizable to civilian organizations.

Future Directions

The present study was initially designed to use eight organizations instead of the

four that comprised the final design. The benefit of using an increased number of

organizations was that it would have allowed the research team to not only test for main

effects, but also for interactions between the independent variables, as some

organizations would be able to receive multiple treatments, such as a text change message

as well as opinion leaders. For this study, the organization receiving both of these

treatments failed to respond to the second survey issued.

Future research should seek to take measurements during a much more significant

change event. Lastly, previous literature concerning the use of opinion leaders (Lam &

Schaubroeck, 2000) used a far greater percentage of the overall organization as opinion

leaders and yielded much stronger results. Financial and logistical concerns limited the

numbers of individuals utilized in this capacity for this study to around 1-2% of the

organization. Future studies should increase this number to fall in line with the roughly

10% of the organization used in previous research (Hui et al., 2001).

Appendix A: Edict Letter

22 April 2009

MEMORANDUM FOR ALL AMC CES/CCs

FROM: HQ AMC/A7
      507 Symington Drive
      Scott AFB IL 62225-5022

SUBJECT: Implementation of Work Order Process Changes

1. Effective immediately, all AMC Civil Engineer (CE) Squadrons will implement the changes specified in the attached draft AMC Supplement to AFI 32-1001, *Operations Management*. These changes direct the adoption of the installation planning tool (IPT) to manage work requests through approval and makes specific items to increase communication with customers mandatory. While IPT experienced some initial difficulties, the system is working well and promises to make the work order approval system more efficient and increase CE customer satisfaction.

2. Implementation of IPT will require training of users across the base. Training is available at https://a7ims.amc.af.mil. Additional training is available through Mr. Doug Allbright, DSN 779-0841, doug.allbright@scott.af.mil. Additionally, 375 CES is fully operational and is willing to provide assistance regarding implementation questions. My POC is SMSgt Brian Castillo, DSN 576-2090, brian.castillo-02@scott.af.mil.

3. Units will report to HQ AMC/A7O (SMSgt Maria Kraft, DSN 779-0701, maria.kraft@scott.af.mil) when the following milestones are met: These milestones should occur within 45 days of receipt of this memorandum.

   a. CSU units trained
   b. Base administrators are loaded into the system and trained
   c. Approval authorities are loaded into the system and trained
   d. Coordination agencies are loaded into the system and trained
   e. Facility managers are loaded into the system and trained
   f. Squadron commanders are loaded into the system and trained
   g. Bases stop accepting handwritten work requests

4. If you have any questions regarding implementation, please contact SMSgt Maria Kraft.

THERESA C. CARTER, Colonel, USAF
Director, Installations & Mission Support

Attachment:
Draft AMC Supplement to AFI 32-1001

Appendix B: Change Message Text

22 April 2009

MEMORANDUM FOR 437 CES/CC
100 West Stewart Ave
Charleston AFB SC 29404-4827

FROM: HQ AMC/A7
507 Symington Dr
Scott AFB IL 62225-5022

SUBJECT: Improving Our Work Order Process

1. Last fall, surveys went out to Air Mobility Command civil engineers and their customers to evaluate the state of our internal work order processes. The results of these surveys highlighted many areas notably customer service and craftsman expertise, in which we have excelled, but also clearly showed opportunities for improvement. Based upon these findings, the initial changes will be focused on standardization as well as how we receive information from and provide feedback to our customers. Your inputs, as well as those of our customers, related to these areas for potential improvement were vital in crafting these first steps in creating a new work order process.

2. In order to address the most pressing problems, a cross-functional team of engineers was assembled from across the command. This team of subject matter experts was composed of front line engineers, so the solution not only includes your survey inputs, but was actually generated by your peers. The team's solution involves the automation of the pre-approval process as well as the standardization of the post-approval process using our existing technology systems. Specifically, it will allow you to better manage work as it comes into the system, prioritize that work, and communicate the status back to the customer. Some of you may have tried the new software when it was made available last year. I know initial glitches in the system made its potential difficult to judge. Since then, thanks to feedback from the field, these bugs have been fixed. We've already seen improvements at bases implementing this new process, and I believe this solution holds exciting possibilities.

3. Air Force engineers have proven to be adaptive, and I believe we are fully capable of succeeding in this necessary change effort. For many of you, the changes will be minor. For others, training will be provided to ensure as seamless a transition as possible. In all cases, HQ AMC will be available to assist you to ensure you have the tools and training necessary to successfully implement this new standardized process. I can assure you that this is not simply a new "flavor-of-the-month" IT system that will fail to deliver. I have seen the results and fully support this initiative.

4. The two most recognizable benefits are a reduced workload for our customer support sections and a decline in customer complaints and requests for information. Here at Scott, we were a test bed for this new process, and our customers have had nothing but praise for it due to their increased ability to keep their boss informed and track the work. The most important thing to remember is that this is your change, and that we are only implementing the first step toward the final solution. This first step is fully compatible with any changes currently planned for the future, but your help is required to build the system that works best for you. In a few months, you'll receive a survey from the AFIT team that is helping to facilitate this new process. I encourage you to provide frank and honest feedback to ensure the final solution contains everything required to efficiently execute your mission.

5. If you have any questions regarding implementation, contact Maj Lori Walden or SMSgt Maria Kraft at DSN 779-0199 and DSN 779-0701, respectively, or via email at lori.walden@scott.af.mil and maria.kraft@scott.af.mil.

THERESA C. CARTER, Colonel, USAF
Director, Installations & Mission Support

Appendix C: Change Message Video Script

On Screen Text: **Improving our work order process**

Senior Leader: "Thank you for taking the time to view this video. This effort you're going to hear about in improving our work order process is one that's important to you both at the base level and to your customers in various locations around the installation as well.

Why do we need the change? You're probably asking yourself that very question and you're going to hear in a few minutes from people who probably asked the same thing before they participated in our Process Improvement Team. Think about how many times you get a call from a customer who says, "What's going on with my work order?" Wouldn't it be great if that customer could look up the status of that work request online and follow that work request through the entire process, going through the pre-approval, the Work Order Review Board and ultimately to project completion?

That's what this effort is all about. It's giving you the tools, whether you work in the customer service area, whether you're a superintendent in one of our CE shops or perhaps you're the Ops Chief. It's going to provide you with the tools you need to better manage our work as it comes into the system, prioritize that work and most importantly perhaps, communicate the status back to our customers.

What you're going to hear is personal stories from some people that were involved in this process from the beginning. Some of them were very skeptical. I think what you'll hear is that many of the concerns that they had went away over the course of being a participant in developing this new process and looking at the opportunities that it might provide.

Why do I also feel confident that this system is going to improve the way we get our work done at base level? Because we have seen it in progress here at Scott Air Force Base. Scott has been a test bed for this system and across the board the folks who may have been skeptical at the beginning about whether or not this was going to work, they have seen how it has improved their ability to get the job done and provided a standard process for their team to use. In

speaking with customers that were part of the IP team, they had nothing but praise for the process, because again it gave them the feedback they needed to keep their boss informed and be able to track the work as it was getting done.

You also may be thinking that, well, this is just the flavor-of-the-month; this is another new IT system that really isn't going to deliver. Perhaps it's not going to be everything we've advertised it to be. Well I challenge you to, again, look at what we're doing, give it a try, and I'll be surprised if at the end of this you don't agree that this is definitely a better way of doing business. And it's not the end solution. As you know we have a transformation going on with our IT effort and this is just one step in that evolution to get us to where we need to be, which is to be as efficient and effective as we can at providing quality service for all of our customers on the base.

So I invite you again to listen to the comments of your peers, listen to the perspective of the folks that have been a part of this development effort and keep an open mind as you go about implementing this change at your base. Thanks for your efforts and keep up the great work."

On Screen Text: **Is there a problem with the current work order process?**

Opinion Leader 1: "The information flow was broke, and I think that's the main reason we're here."

Opinion Leader 2: "It's something that has needed to be done."

Opinion Leader 3: "It's a very good system. Probably the only drawback is education."

Opinion Leader 4: "After the pre-approval on the work order side, we realized that there is a gap for the communication on how the work is being accomplished out there for the customer and the customer not knowing."

Opinion Leader 5: "332s would get lost; hard copies would get lost in routing or in coordination especially. They would just disappear and you'd end up having to re-accomplish them."

Opinion Leader 6: "Well, there were a lot of complaints from the customers."

Opinion Leader 7:   "I always thought we were somewhat in a rut because of the downsizing we went through the last twenty years and the deployments we're experiencing."

Opinion Leader 8:   "I don't think it was broken. Did it need to be tweaked a little bit? Yes, it needed to be tweaked a little bit and this might be the tweak that it needed."

On Screen Text: **Is this new work order process the right answer?**

Opinion Leader 9:   "The changes basically boil down to going from a manual system for coordination, for reviews by the shops, approval authority decisions…going from a manual system of submitting requirements to an automated system where customers can submit their requirements online, web based. Customer service can task those out to coordination agencies, multiple at the same time. They don't have to come in and visit you to coordinate off on requirements. Then you can forward those comments to the WORB for approval decisions by the approval authority. At a typical WORB meeting, you just log in on-screen and approve them right then and there. But right now, we're looking at going from a manual system to automated approval.

The process is basically going to be the same. We have to track the status information in IWIMS. However, to try to increase visibility at the customer interface is to ramp up and start doing regular reports that you feed to customers based on IWIMS based on the current status of your work that you have open as well as what you've closed out."

Opinion Leader 2:   "The change isn't going to be drastic. This change so far, it's addressing the way that we're able to communicate with the customer, obviously."

Opinion Leader 1:   "This process here works good, but for a little base, it would work even better, probably."

Opinion Leader 2:   "Doing it online, it automatically gets sorted, filed and routed. So all that is taken care of with just the click of a button."

Opinion Leader 7: "Over the years we've always talked about if we were king for a day what we might do then to change the process…make a pretty good product that'll improve the process for the bases in general."

Opinion Leader 4:   "It's just a matter of saving time and also eliminating the paperwork shuffle and 332s going into what customers would call 'the black hole'"

Opinion Leader 7: "It's the same format, so we're uniform from base to base."

Opinion Leader 4: "But now as a user, I love it"

Opinion Leader 2: "Tracking-wise, there isn't a better way to do it."

Opinion Leader 9: "We're always limited as far as execution based on resources available, manpower, money, etc but at least we can give them an approval decision up front and quick."

On Screen Text: How does this new work order process help me?

Opinion Leader 3: "I think the enhancement is going to bring it out to our customers a little bit more by putting it out in front of them with an automated email system that's into it. I think that's very good. In time I think it'll also eliminate a lot of work to our customer service unit itself getting those calls from the customers all the time, 'Hey what about this? What about this?' Well, they'll get it weekly. That's going to simplify their job, in time.

Opinion Leader 8: "I think it'll make a more efficient use of our time as a work center foreman, customer service or outside agency. I think it'll free up their time when it comes to doing the 332s."

Opinion Leader 1: "The foremen get the firsthand look at what's coming in first. 'OK, this is an install project; do we want to do this in-house?' It gives him the first chance to say, 'yeah, we can do this,' instead of someone in higher management saying, 'no, we don't want this.' I got to admit it; I thought it made it easier. I'm not a computer genius like I was saying, but it's pretty easy to navigate through this system."

Opinion Leader 2: "You can make certain work centers more efficient and reduce the number of hours that they are allocating right now to the work order system and the 332s that are being processed. It's going to make the

332 process a more efficient and manageable way to do it versus paper based."

Opinion Leader 6: "It's a win-win situation for everybody. Leadership gets a lot of calls from customers that don't understand where they stand on whatever project and now I think it is going to mitigate those calls because the customer is going to know where they stand. They're going to know their priority and they're going know the status of whatever work is being done."

Opinion Leader 8: "I think it'll allow them to do their job a little more efficient and I think if you're able to save thirty seconds on every job that you're able to do you've freed up about maybe an hour and a half throughout your day. Customer service folks will have a little bit of change. Ops Chiefs, you know I think it'll make their job easier because they won't have to look at all the packages stacked up in front of them. They'll be on a screen. Instead of looking at a stack of thirty of them which gets a little intimidating and boring, they can look at it on a computer screen. I think it'll help them out."

Opinion Leader 4: "Once they get accustomed to it the customer is definitely going to like it."

Opinion Leader 7: "As a CE guy it's going to streamline operations. If you're in customer service it's going to be less time for you. I think it's going to resolve a lot of problems we've had in the past with the 332 process, getting it to the approval stage."

Opinion Leader 9: "It saves a lot of time to do other things."

Opinion Leader 3: "Our customer service personnel, I think it's definitely going to benefit them. We all know that at first, the initial training is going to bog them down. But after that once everybody gets online and comfortable with the system, I think they're going to find that things flow pretty smoothly. The guys, the CE troops in the shop, no…because they won't see a lot of it. The shop foreman, now he'll get the emails to review the package on a 332 and he can do it right from his desk most of the time."

Opinion Leader 9: "The coordination agencies or shop reviews can be done just in time from their own computer as they have time"

On Screen Text: How difficult will this change be?

Opinion Leader 8: "There will be training involved, but anytime you involve training, especially older people like myself, and computers and technology you might have some people that are a little afraid of it and when you're afraid of it, you don't want to change. I think after they've gone through it two times, they'll have it down pat.

Opinion Leader 9: "I've worked out a lot of the kinks. I've got training materials I'll get out there so hopefully that will facilitate and make it a little easier from the 332 expert side of it versus the contractor saying, 'here's the system and this is what it does.' How you actually employ it and how we've employed it here. We've got that all kind of mapped out now. We went through some growing pains. People didn't know they were supposed to fill out that area that gave their coordination comments. They'd just hit a button and say, 'yes…I'm done.' But once you bring them in and train them and say 'ok, this is what you need to put in these blocks. This is what you need to do to move it through the system,' it gets pretty self explanatory."

On Screen Text: Your POC for training and assistance

Contractor: "All of the tools on the AMC IPT have a web link that you can access at A7IMS.AMC.AF.MIL to give you an idea of how the tools work with relationship to the AMC bases and how they would use them and access them as we run the tools. Additionally, each of the tools has a training set that if you look at the top right hand corner or bottom right hand corner of the web page allows the tools to be pulled up independently and you can review what the individual modules do. Additionally, AMC offers WebEx training through our contractor that allows you to get one-on-one training or the ability to sit at your desk, using your computer to see the screen shots to allow you to utilize these tools to the maximum extent possible. If you have any questions, feel free to call us at DSN 779-0846 at any time and we'll try to help you get whatever information you need regarding these tools."

Appendix D: Service Provider Survey, Time 1

Dispositional Optimism

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4, 219-247.

1= Strongly disagree   2=Disagree 3= Slightly disagree   4= Slightly agree
5= Agree   6= Strongly agree

1. In uncertain times, I usually expect the best.
2. If something can go wrong, it will. (R)
3. I always look on the bright side of things.
4. I'm always optimistic about my future.
5. I hardly expect things to go my way (R)
6. Things never work out the way I want them to. (R)
7. I'm a believer in the idea that "every cloud has a silver lining".
8. I rarely count on good things happening to me. (R)

Readiness for Change

Armenakis, A.A., Bernerth, J.B., Pitts, J.P., & Walker, H.J. (2007). Organizational Change Recipients' Belief Scale: Development of an Assessment Instrument. Journal of Applied Behavioral Science, 43, 481-505.

1= Strongly disagree   2=Disagree 3= Slightly disagree   4= Slightly agree
5= Agree   6= Strongly agree

Discrepancy measures:
1. We need to improve our effectiveness by changing the work order process.
2. We need to improve the way we accomplish work orders.
3. We need to change the way we do some things in the work order process.
4. A change is needed to improve the work order process.

Appropriateness measures
5. Improving the work order process will prove to be the best for our situation.
6. When I think about changing the work order process, I realize it is appropriate for the squadron to do so.
7. Improving the work order process will prove to be the best for our situation.
8. Changing the work order process will improve the performance of CES.
9. I believe that changing the work order process will have a favorable effect on our operations.

Valence measures:
    10. Changing the work order process will benefit me.
    11. As a result of the change, I can focus more on what I do best.

Principal Support measures:
    12. Most of my peers that I respect believe that changing the work order process will be beneficial.
    13. My immediate supervisor is in favor of improving the work order process.
    14. The top leaders in the organization are "walking the talk" of change.
    15. Squadron leadership supports change.
    16. My flight leadership supports change.

Perceived Organizational Support (POS)

Lynch, P. D., Eisenberger, R., & Armeli, S. (1999). Perceived organizational support: Inferior versus superior performance by wary employees. *Journal of Applied Psychology, 84*(4), 467-483.

1= Strongly disagree 2=Disagree 3= Slightly disagree   4= Slightly agree
5= Agree   6= Strongly agree

1. The squadron would forgive an honest mistake on my part.
2. If given the opportunity, my squadron would take advantage of me. (R)
3. My squadron is willing to help me when I need a special favor.
4. The squadron shows very little concern for me. (R)
5. The squadron cares about my opinions.
6. Help is available from the squadron when I have a problem.
7. My squadron really cares about my well-being.
8. The squadron strongly considers my goals and values

Appendix E: Service Provider Survey, Time 2

Dispositional Optimism
Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4, 219-247.

1= Strongly disagree   2=Disagree 3= Slightly disagree   4= Slightly agree
5= Agree   6= Strongly agree

1. In uncertain times, I usually expect the best.
2. If something can go wrong, it will. (R)
3. I always look on the bright side of things.
4. I'm always optimistic about my future.
5. I hardly expect things to go my way (R)
6. Things never work out the way I want them to. (R)
7. I'm a believer in the idea that "every cloud has a silver lining".
8. I rarely count on good things happening to me. (R)

Readiness for Change
Armenakis, A.A., Bernerth, J.B., Pitts, J.P., & Walker, H.J. (2007). Organizational Change Recipients' Belief Scale: Development of an Assessment Instrument. Journal of Applied Behavioral Science, 43, 481-505.

1= Strongly disagree   2=Disagree 3= Slightly disagree   4= Slightly agree
5= Agree   6= Strongly agree

Discrepancy measures:
1. We needed to improve our effectiveness by changing the work order process.
2. We needed to improve the way we were approving work orders.
3. We needed to change the way we do some things in the work order process.
4. A change was needed to improve the work order process.

Appropriateness measures
5. The change to the new work order process will prove to be the best for our situation.
6. When I think about the change from the old work order process to the new work order process, I realize it was appropriate for our organization.
7. The change we have implemented in the work order process was correct for us.
8. The change we have implemented in our work order process will improve our flight's performance.
9. I believe changing the old work order process had a favorable effect on our operations.

Valence measures:
    10. The change to the new work order process will benefit me.
    11. With this change in my job, I will experience more self-fulfillment.
    12. As a result of the change, I can focus more on what I do best.
    13. I have greater access to the information I need as a result of the change.

Efficacy measures:
    14. I have the capability to implement the change to the new work order process.
    15. I can implement this change in my job.
    16. I am capable of successfully performing my job duties since the change to the work order process.
    17. I believe my flight can successfully implement this change in the work order process.
    18. Our flight has the capability to make this change work.
    19. Our flight has the necessary skills to execute the work order process changes.

Principal Support measures:
    20. The majority of my respected peers are dedicated to making this change successful.
    21. My supervisor is in favor of the change to the work order process.
    22. My supervisor encouraged me to support the change in the work order process.
    23. Most of my respected peers have embraced the change.
    24. CE leadership is "walking the talk."
    25. CE leadership supports the change to the new work order process.
    26. CE leadership is taking this change seriously.
    27. My supervisor works to make the change successful.
    28. My co-workers are convinced the change is a good one.

Perceived Organizational Support (POS)
Lynch, P. D., Eisenberger, R., & Armeli, S. (1999). Perceived organizational support: Inferior versus superior performance by wary employees. *Journal of Applied Psychology, 84*(4), 467-483.

1= Strongly disagree   2=Disagree 3= Slightly disagree   4= Slightly agree
5= Agree   6= Strongly agree

1. The squadron would forgive an honest mistake on my part.
2. If given the opportunity, my squadron would take advantage of me. (R)
3. My squadron is willing to help me when I need a special favor.
4. The squadron shows very little concern for me. (R)
5. The squadron cares about my opinions.
6. Help is available from the squadron when I have a problem.
7. My squadron really cares about my well-being.
8. The squadron strongly considers my goals and values

Treatment Variable Manipulation Checks

Opinion Leader Group

1. I know someone in my squadron who participated on the work order Process Improvement Team.
2. I've observed this person talk about the change in a one-on-one or group setting
3. When talking about the change, the person seemed to feel very positive about it.

Change Message Video Group

1. Do you remember seeing a video introducing the change to the new work order process?

Change Message Text Group

1. Do you recall reading an email with a letter from Col Carter explaining why we are making the change to the new work order process?

References

Armenakis, A. & Harris, S. (2002). Crafting a change message to create transformational readiness. *Journal of Organizational Change Management,* 15(2): 169-183.

Armenakis, A., Harris, S. & Field, H. (1999). Making change permanent: A model for institutionalizing change interventions. *Research in Organizational Change and Development,* 12: 97-128.

Armenakis, A., Bernerth, J., Pitts, J. & Walker, H. (2007). Organizational Change Recipients' Belief Scale: Development of an Assessment Instrument. *Journal of Applied Behavioral Science,* 43: 481-505.

Bandura, A. (1982). Self-Efficacy Mechanism in Human Agency. *American Psychologist,* 37(2): 122-147.

Beer, M. & Nohria, N. (2000). Cracking the code of change. *Harvard Business Review,* 78(3): 133-141.

Chan, K. & Misra, S. (1990). Characteristics of the opinion leader: a new dimension. *Journal of Advertising,* 19(3): 53-60.

Cook, C., Heath, F. & Thompson, R. (2000). A meta-analysis of response rates in web- or internet-based surveys. *Educational and Psychological Measurement,* 60(6): 821-836.

Connell, J. & Waring, P. (2002). The BOHICA syndrome: a symptom of cynicism towards change initiatives? *Strategic Change,* 11: 347-356.

Cross, R., Borgatti, S. & Parker, A. (2002). Making Invisible Work Visible: Using Social Network Analysis to Support Strategic Collaboration. *California Management Review,* 44(2): 25-46.

Cross, R. & Prusak, L. (2002). The people who make organizations go – or stop. *Harvard Business Review,* June: 104-112.

Dawley, D., Andrews, M. & Bucklew, N. (2008). Mentoring, supervisor support and perceived organizational support: what matters most? *Leadership and Organization Development Journal,* 29(3): 235-247.

Dennis, A. R. & Kinney, S. T. (1998). Testing Media Richness Theory in the New Media: The effects of Cues, Feedback, and Task Equivocality. *Information Systems Research,* 9(3): 256-274.

Eby, L., Adams, D., Russell, J. & Gaby, S. (2000). Perceptions of organizational readiness for change: Factor related to employees' reactions to the implementation of team-based selling. *Human Relations,* 53(3): 419-443.

Feder, G. & Savastano, S. (2006). The role of opinion leaders in the diffusion of new knowledge: the case of integrated pest management. *World Development,* 34(7): 1287-1300.

Fine, D., Hansen, M. & Roggenhofer, S. (2008). From lean to lasting: Making operational improvements stick. *The McKinsey Quarterly,* November: 1-11.

Friedman, T. (2005). *The World Is Flat: A Brief History of the Twenty-First Century.* New York: Picador / Farrar, Strus and Giroux.

Gates, R. (2008, April 21). *Remarks to Air War College (Montgomery, AL).* Retrieved November 2, 2009, from U.S. Department of Defense website: http://www.defenselink.mil/speeches/speech.aspx?speechid=1231

Hammer, M. & Champy, J. (2001). *Reengineering the Corporation.* New York: HarperCollins.

Hammond, G.D. (2009). Perceived need for change: A test of individual emotion and contextual influences. Unpublished master's thesis, Air Force Institute of Technology, Dayton, Ohio.

Harbour-Felax, Laurie A. (2008). The Leadership Imperative. *Automotive Design & Production,* 120(11): 18.

Harris, S. G. & Cole, M. S. (2007). A stages of change perspective on managers' motivation to learn in a leadership development context. *Journal of Organizational Change Management,* 20(6): 774-793.

Holt, D., Armenakis, A., Harris, S. & Field, H. (2007). Toward a comprehensive definition of readiness for change: a review of research and instrumentation. *Research in Organizational Change and Development,* 16: 289-336.

Holt, D., Dorey, E., Bailey, L. & Low, B (2009). Recovering when a change initiative stalls: correcting implementation mistakes. *OD Practitioner,* 41(1): 14-18.

Hui, C., Lam, S. & Schaubroeck, J. (2001). Can good citizens lead the way in providing quality service? A field quasi experiment. *Academy of Management Journal,* 44(5): 988-995.

Huy, Q. (2001). In Praise of Middle Managers. *Harvard Business Review,* September: 2-79.

Isabella, L. A. (1990). Evolving interpretations as change unfolds: How managers construe key organizational events. *Academy of Management Journal,* 33(1): 7-41.

Kahai, S. S. & Cooper, R. B. (2003). Exploring the Core Concepts of Media Richness Theory: The Impact of Cue Multiplicity and Feedback Immediacy on Decision Quality. *Journal of Management Information Systems,* 20(1): 263-299.

Katz, E. & Lazarsfeld, P. (1955). *Personal Influence: The part played by people in the flow of mass communications.* Glencoe, Illinois: The Free Press.

Kotter, J. (1996). *Leading Change.* Boston: Harvard Business School Press.

Lam, S. & Schaubroeck, J. (2000). A Field Experiment Testing Frontline Opinion Leaders as Change Agents. *Journal of Applied Psychology,* 85(6): 987-995.

Latham, G. P., Winters, D. C. & Locke, E. A. (1994). Cognitive and motivational effects of participation: a mediator study. *Journal of Organizational Behavior,* 15: 49-63.

Lau, C. & Woodman, R. (1995). Understanding organizational change: a schematic perspective. *Academy of Management Journal,* 38(2): 537-554.

Lewin, K. (1947). Frontiers in group dynamics. *Human Relations, 1*, 2-38.

Lewis, L. K., Schmisseur, A. M., Stephens, K. K. & Weir, K. E. (2006). Advice on communicating during organizational change. *Journal of Business Communication,* 43(2):113-137.

Liddell Hart, Basil H. (1944). *Thoughts on War*. London: Farber and Farber.

Lines, R. (2004). Influence of participation in strategic change: resistance, organizational commitment and change goal achievement. *Journal of Change Management,* 4(3): 193-215.

Lynch, P., Eisenberger, R. & Armeli, S. (1999). Perceived Organizational Support: Inferior Versus Superior Performance by Wary Employees. *Journal of Applied Psychology,* 84(4): 467-483.

Manz, C. C. & Sims, H. P. (1987). Leading Workers to Lead Themselves: The External Leadership of Self Managed Work Teams. *Administrative Science Quarterly,* 32: 106-128.

McMichael, W. (2008, November 26). *Gates: Active Force, reserves must integrate.* Retrieved November 2, 2009, from Air Force Times website: http://www.airforcetimes.com/news/2008/11/military_gates_guard_reserve_112408/

Meaney, M. & Pung, C. (2008). Creating organizational transformations. *McKinsey Quarterly,* August: 1-4.

Mehra, A., Dixon, A. L., Brass, D. J. & Robertson, B. (2006). The Social Network Ties of Group Leaders: Implications for Group Performance and Leader Reputation. *Organization Science,* 17(1): 64-79.

Meyer, A. & Goes, J. (1988). Organizational assimilation of innovations: A multilevel contextual analysis. *Academy of Management Journal,* 31(4): 897-923.

Mohrman, S., Ramkrishnan, V. & Mohrman Jr., A. (2003). The Role of Networks in Fundamental Organizational Change: A Grounded Analysis. *The Journal of Applied Behavioral Science,* 39(3): 301-323.

Nisbet, E. (2005). The engagement model of opinion leadership: testing validity within a European context. *International Journal of Public Opinion Research,* 18(1): 3-30.

Prochaska, J. O. & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research and Practice,* 19: 276-288.

Reichers, A., Wanous, J. & Austin, J. (1997). Understanding and managing cynicism about organizational change. *Academy of Management Executive,* 11(1): 48-59.

Scheier, M. F. & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology,* 4: 219-247.

Self, D. R., Armenakis, A. A., & Schraeder, M. (2007). Organizational change content, process and context: A simultaneous analysis of employee reactions. *Journal of Change Management,* 7(2): 211-229

Shepherd, M. M. & Martz, W. M. Jr. (2006). Media richness theory and the distance education environment. *Journal of Computer Information Systems,* 47(1): 114-122.

Vitale, D. C. (2008). Organizational change recipients and choosing an opinion leader: a mixed method investigation. Unpublished doctoral dissertation, Auburn University, Alabama.

Wanberg, C. & Banas, J. (2000). Predictors and Outcomes of Openness to Changes in a Reorganizing Workplace. *Journal of Applied Psychology,* 85(1): 132-142.

Weimann, G. (1991). The influentials: Back to the concept of opinion leaders? *Public Opinion Quarterly,* 55: 267-279.

Whittle, A., Mueller, F. & Mangan, A. (2008). In Search of Subtlety: Discursive Devices and Rhetorical Competence. **Management Communication Quarterly,** 22(1): 99-122.

Womack, J. & Jones, D. (1996). *Lean thinking: banish waste and create wealth in your organization.* New York: Free Press.

Wynne, M. (2006, March 8). *Letter to Airmen: Air Force Smart Operations 21.* Retrieved May 14, 2009, from Air Force Portal website: http://www.af.mil/shared/media/document/AFD-070205-087.pdf

Vita

Biographical Sketch

Captain Ryan LeBlanc graduated from Lafayette High School in Lafayette, Louisiana in 1994. He entered undergraduate studies at the University of Louisiana at Lafayette where he graduated with a Bachelor of Architecture degree in April 2001. In June 2003, he was commissioned as a Second Lieutenant in the United States Air Force through Officer Training School, Maxwell, Alabama.

His first assignment was at Dover AFB, Delaware in the 436th Civil Engineer Squadron where he was assigned first as Readiness Flight Commander and then as a military construction project manager. While at this assignment, he was deployed for a 200-day tour to Balad, Iraq as the Deputy Officer in Charge, 732nd Expeditionary Civil Engineer Squadron, Detachment 6. In July 2006, he was assigned to Hill AFB, Utah as the 388th Fighter Wing Civil Engineer. After holding the position for two years, Captain LeBlanc was selected in 2008 to complete his Master of Science degree in Engineering Management at the Air Force Institute of Technology, Wright-Patterson AFB, Ohio.

Education

Master of Science, Engineering Management, Air Force Institute of Technology, Wright-Patterson AFB, OH. Master's Thesis: The effects of opinion leaders and change messages on organization member change attitudes: A field experiment. Chair: Lt Col Daniel Holt. In progress. Expected graduation date: March 2010.

Bachelor of Architecture, University of Louisiana at Lafayette, May 2001

REPORT DOCUMENTATION PAGE

1. REPORT DATE (DD-MM-YYYY) 26-03-2010	2. REPORT TYPE Master's Thesis	3. DATES COVERED (From – To) Jul 2009 - Mar 2010

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
The Effects of Opinion Leaders and Change Messages on Organization Member Change Attitudes: A Field Experiment	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)	5d. PROJECT NUMBER N/A
LeBlanc, Ryan L., Captain, USAF	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S) Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 Hobson Way WPAFB OH 45433-7765	8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GEM/ENV/10-M6
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Carter, Theresa C., Colonel, USAF Director, Installations and Mission Support, Air Mobility Command 507 Symington Drive Scott AFB, IL 62225 DSN: 779-0738	10. SPONSOR/MONITOR'S ACRONYM(S) AMC/A7
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

13. SUPPLEMENTARY NOTES

14. ABSTRACT
The extent to which three change introduction strategies (i.e., opinion leadership, edict, and change message) influenced readiness for change were tested at four locations as part of a quasi-field experiment with three groups receiving an enriched change message and one control group. Readiness was measured before and after change implementation where it was hypothesized that change readiness would be most improved within the groups that heard the most persuasive and rich change messages. These hypotheses were not supported and data indicated that the differing treatments were never received by the majority of the change recipients, rendering the results of the experiment questionable. Despite this, the findings provide a solid, theoretically grounded framework that can guide future projects.

15. SUBJECT TERMS
Opinion Leadership, Change Message, Change Attitudes

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Lt Col Daniel T. Holt (AFIT/ENV)
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U	UU	68	19b. TELEPHONE NUMBER (Include area code) 937-255-3636 ext. 7396