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high-tech industry? Replication and expansion**

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San Jose State University, 1993

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WILL ORGANIZATIONAL CRISIS TAKE A BYTE OUT OF
SILICON VALLEY'S HIGH-TECH INDUSTRY?
REPLICATION AND EXPANSION

A Thesis
Presented to
The Faculty of the
Department of Journalism and Mass Communications
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
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ABSTRACT

WILL ORGANIZATIONAL CRISIS TAKE A BYTE OUT OF SILICON VALLEY'S HIGH-TECH INDUSTRY? REPLICATION AND EXPANSION

by Stacy L. Damron

This study sought to replicate and extend the hypothesis that as organization size increases, crisis readiness increases. A survey methodology was used to measure participants' perceptions of their organization's level of crisis readiness in the high-tech industry industry, specifically Santa Clara County. The survey instrument, a self-administered questionnaire, was mailed to 200 Silicon Valley High-Tech managers. Organizations selected for participation were randomly chosen from a sample frame of over 5800 companies. The study also attempted to replicate positive correlations between the crisis readiness components, thereby strengthening the validity of the crisis readiness construct. The study found support for the hypothesis that increasing size is associated with increasing crisis readiness. Research on this subject also found strong support for the validity of the crisis readiness concept.

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TABLE OF CONTENTS

LIST OF TABLES	vi
I. INTRODUCTION	1
II. LITERATURE REVIEW	2
Organizational Crisis Defined.....	2
Crisis Readiness Strategy.....	4
The Crisis Readiness Construct.....	7
Crisis Communication.....	9
Organizational Size.....	12
Organizational Structure.....	15
Typology of Organizations.....	17
Organizational Structure of High-Technology Firms....	18
Recap of Hypotheses.....	19
III. RESEARCH METHODOLOGY	20
Sample Frame	20
Measuring the Independent Variable	21
Measuring the Dependent Variable	23
Procedure	25
Cover Letter and Revised Questionnaire	25
Mailing	26
Follow-up Letter	27
Study Predictions	27
IV. RESULTS	29
V. CONCLUSIONS AND SUMMARY	32
References	37
Appendix	40

LIST OF TABLES

Table 1: Scale Intercorrelations Between Core Crisis Readiness Components and Communication Strategy	30
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CHAPTER I

INTRODUCTION

Reilly's study (1987), in which strong support was found for the hypothesis that increasing organizational size is associated with increasing crisis readiness, merits further study. Reilly's exploratory study sought to develop and test a new construct, "crisis readiness," and to examine the link between organizational variables and crisis readiness. The central question posed here is whether the results seen in Reilly's final analysis are an accurate reflection of organizational size and crisis readiness, or simply a reflection of differences among the varying industries included in the sample. With the benefits of random sampling and design changes, a replication of Reilly's findings would extend support for the hypothesis that organization size is positively related to crisis readiness. Finally, given Reilly's use of available sampling methods to test a wide range of industries, the use of an industry-specific sample would lend additional support to Reilly's findings while allowing for a truer test of the hypothesis.

CHAPTER II

LITERATURE REVIEW

The following literature will relate directly to the research question presented here: "What is the relationship between an organization's size and crisis readiness?" The literature review will follow closely the format presented in Reilly's original study (1987).

Organizational Crisis Defined

A review of both organizational crisis and crisis management literature shows that crisis has been defined in many ways. Hermann's (1969) three-variable crisis model is perhaps the best known model of crisis. Hermann's model includes the following three elements: surprise (the lack of awareness by the decision makers that the crisis is likely to occur), short decision time (when a situation will be altered in the near future), and threat to valued goals (the potential hindrance to some state or goal desired by the unit). In this model all three attributes must be present in order for a crisis to exist.

Research by Billings, Milburn, and Schaalman (1980) suggests that Hermann's model is incomplete without a

thorough understanding of the concept of crisis and the individual decision maker's perception of crisis. Billings et al. propose the notion that the first step in defining a crisis is actually perceiving the "triggering event" to the crisis. In their final analysis Billings et al. conclude that the triggering event must be "perceived, attended to, and evaluated against some standard or measure of how things should be, in order for a problem to be sensed" (1980, p. 302).

Smart and Vertinsky (1977) suggest that stress, surprise, and threats to high priority goals characterize organizational crisis. Mitroff and Kilmann (1984) introduce organizational crises as the growing number and increasing frequency of the unspeakable and unbelievable things that are happening to organizations of all kinds. More specifically, Fink (1986) defines a crisis as any situation that runs the risk of: 1) escalating in intensity; 2) falling under close media or government scrutiny; 3) interfering with normal operations of business; 4) jeopardizing a positive corporate image; and 5) damaging a company's bottom line in any way.

Pauchant and Mitroff (1992) suggest that a combination of definitions by Perrow (1984) and Habermas (1973) seems to capture the true essence of crisis. Pauchant and Mitroff suggest the following definition:

A crisis requires at least two conditions: first, the whole system needs to be affected to the point of being physically disturbed in its entirety; second, the basic assumptions of the members of that system need to be challenged to the point where they are forced either to realize the faulty notions of these assumptions, or to develop defense mechanisms against these assumptions (1992, p.12).

Finally, Reilly draws from Milburn, Schuler, and Watman's (1983) concept of organizational crisis in suggesting the following definition: "A situation may be considered a potential organizational crisis if it represents a significant threat to the existence of the affected organization" (1987, p. 83).

Crisis Readiness Strategy

Reilly builds the crisis readiness construct presented here on the theory that "an organization which has strategically prepared for potential crisis should be better able to manage the threatening situation, *ceteris paribus*, than an unprepared counterpart" (1987, p. 80). This assertion that strategic preparation is critical to effective crisis management is strongly supported in the literature (Berge, 1990; Billings et al., 1980; Fink, 1986; Mitroff, 1988; Smart & Vertinsky, 1977).

Billings et al. (1980) suggest that in being unexpected, a crisis does not allow for planning. However, if a potential crisis is expected, then specific plans can be developed to change the situation either by preventing the crisis or lessening its impact. "The point here is that a potential crisis is more likely to become a crisis if no plans exist to deal with the problem" (p.306). Billings et al. conclude that it is not the unexpectedness of crisis in itself, but the lack of contingency planning, which leads to perceived crisis.

Smart and Vertinsky (1977) suggest the following classes of crises-specific pathologies that affect the process of decision making and thus, compound the nature of organizational crisis: narrowing of cognitive processes, information distortion, negative group pathologies, rigidities in programming and lack of decision readiness. In response to these pathologies Smart and Vertinsky suggest a crisis decision making strategy or plan to impede the negative effects of crisis.

Smart and Vertinsky's strategy (1977) includes structural and procedural modifications of the crisis decision-process. These modifications might include scenario building, dialectics, and use of "devil's advocates." Another aspect includes the development of certain capabilities such

as the refinement of information processing capabilities, selective recruitment of executives and improvement in employees' sensitivities through drills. Finally, Smart and Vertinsky (1977) proposes the creation of dual specialized structures, one for routine decision making and one for crisis decision making.

On a more simplistic level Fink (1986) cleverly compares this state of preparedness with a sudden power outage. He suggests that those who don't already know where the flashlight is when the lights go out will spend precious time running around in the dark trying desperately to locate it. Fink proposes that by assembling a strategic crisis management plan, an organization is simply locating its own version of the flashlight well in advance of the crisis, when the lights are on and all is running smoothly.

Berge (1990) asserts that simply because crises are inevitable, organizations need not succumb to them. On crisis readiness Berge states that, "The importance of having a crisis plan, is for one thing, that such a plan allows the company to act quickly. All the guesswork has been done beforehand and can thus be removed from the mechanics of handling a crisis" (1990, p. 16). For this reason, Berge points to the importance of crisis and risk assessment audits as part of an organization's crisis readiness strategies.

The Crisis Readiness Construct

Reilly (1987) suggests that given the nature and type of possible organizational crisis is unlimited, organizations and individuals are clearly prohibited from developing specific contingency plans for every possible situation. Therefore, Reilly broadly defines crisis readiness as the "readiness to cope with the uncertainty and change engendered by a crisis" (1987, p. 80). Reilly refers to Mintzberg and Waters (1985) and Mitroff (1986) when further defining crisis readiness as: "an umbrella of crisis readiness general guidelines, which are appropriate for complex, unpredictable, and uncontrollable environments" (1987, p. 80). The following components represent the crisis readiness construct initially developed and tested by Reilly.

1. The organization's ability to respond quickly to a crisis.
2. How informed the managers are about the organization's crisis management repertoire.
3. Manager's access to the organization's crisis management plans, resources, and tools.
4. How adequate the firms' strategic planning is.
5. The organization's media management ability in a crisis.
6. The perceived likelihood of crisis striking the organization.

The crisis readiness items presented in Reilly's survey instrument (1987) comprises six subscales. Each scale consists of five items measuring the respondents' perceptions of the six proposed dimensions of crisis readiness. The five point response array was judged adequate. A low score on this aggregate measure denotes a high degree of perceived crisis readiness.

According to Reilly's data (1987), significant construct validity was found for the crisis readiness construct. Reilly found that quick response, "informedness," access, crisis planning, and media management were all positively and significantly correlated with each other. However, initial data analysis showed no significant relationship between the perceived likelihood of crisis and the other five dimensions of crisis readiness; therefore, Reilly eliminated this component from the final questionnaire.

Reilly (1987) attributes this to "assumptions of rational behavior, suggesting that an organization which perceives a high probability of crisis would attempt to prepare for such an event. However, an organization which is likely to be subject to a crisis may not necessarily exhibit high levels of quick response, informedness, access, media management, and crisis planning.

Specifically, Reilly's data analysis (1987) illustrated that the subscales themselves showed good reliability, with the first five dimensions positively correlated with one another at the $p < .05$ level. Reilly points out that nine of ten intercorrelations were significant at the $p < .001$ level.

Hypothesis 1a: Respondents' perceptions of quick response ability, informedness, resource access, adequate crisis planning and media management will all be positively and significantly interrelated.

Crisis Communication

Unfortunately, while Reilly (1987) touches upon organizational crisis communication, not enough attention is devoted to this subject. Strategic crisis plans that are developed without detailed attention to organizational communication during are simply incomplete. While media management ability does represent an important crisis readiness component, Reilly fails to include in her construct the development of specific crisis communication strategies for audiences other than the media. Therefore, for the purposes of this study, the existence of specific crisis communication strategies will replace the perceived

likelihood of crisis striking the organization as the sixth component of the crisis readiness concept.

Berge (1990) asserts that the key to crisis management is not just planning, but planning *and* communication strategies. Berge states that whatever the type of crisis, the consequences will always be less costly and less traumatic when crisis communications are thoughtfully prepared in advance. "It's a matter of consistent and persistent communication on a permanent basis. Day in, day out. Year in, year out" (1990, p. 12). Finally, Berge concludes that these communication strategies should be executed in accordance with the four keys of crisis communications: speed, accuracy, credibility, and consistency.

In addition to the media, a myriad of other communication "targets" exist. These potential target publics or stakeholder groups include the following audiences: employees, shareholders, industry analysts, financial analysts, consumers, communities groups, governmental agencies, environmental agencies, and disaster relief organizations (Fisher & Briggs, 1989; Saunders, 1988; Werner, 1990).

According to Werner the most important task in managing a crisis is conveying the organization's key messages to target audiences in "a coherent, disciplined and organized way" (1990, p. 30). He suggests the organization that has a communication blueprint on hand has already taken a major step toward mastering the challenge of crisis. Werner's solution to tackling crisis is what he calls "following the MAP" or the message action plan. This message action plan or communication matrix includes publics to be addressed, message elements, communications techniques, responsibilities, time and scheduling factors, and accountability factors. The MAP enables managers to remain focused on important communication strategies, while acting as a reminder of the key messages to be communicated and the objectives to be achieved. Werner concludes that the use of a MAP will result in a more controlled and consistent communication effort. Reilly admits that the organizational communication process is a "clear candidate" for increased attention in most firms (Reilly, 1987).

It appears that Reilly (1991) attempts to remedy this situation, with increased attention to studying communication among internal and external constituencies during crisis. The assertion that this subject deserves attention is strongly supported throughout organizational crisis and crisis communication literature (Berge, 1990; Felts, 1992; Fink,

1986; Mitroff & Kilmann, 1984; Murphy, 1988; Pinsdorf, 1987 and 1991; Werner, 1990).

Hypothesis 1b: Respondents' perceptions of the existence of specific crisis communication strategies will be positively related to the other five components of crisis readiness.

Organizational Size

The relationship between organizational size and structure has received much attention within organizational theory literature. Research indicates a significant relationship between organizational size and the structuring of activities (Lal, 1990; Pugh & Hickson, 1976). While the size of an organization can be defined in a variety of different ways, it is likely that different aspects of size will tend to be closely correlated.

The Aston group (Pugh, Hickson, Hinings, & Turner, 1969) demonstrated a strong positive correlation between the net assets employed and the number of employees. Mansfield (1986) points out that this is not the case in economic literature, where the most commonly employed aspect of size used relates to the value of capital employed by the organization or its

annual income. However, organizational scholars most often use the number of employees as the best single indicator of size for comparative purposes. Organizational theorists have also indicated a significant relationship between organizational size and structuring of activities, as measured by sales revenue (Lal, 1990). While this range of operational definitions for organizational size exists, the most commonly used measure is number of employees (Kimberly, 1976).

Many organization theorists have stressed the importance of size as a determinant of organization structure. Weber, a pioneer in the study of large complex organizations, suggests that the structural characteristics of "bureaucracy" would be most evident among the larger and more complex organizations (Weber, 1947). To date the evidence is such that it has become widely accepted that organizational size is one of the major factors which management must consider when faced with questions of organizational structure and design. "Indeed the linkage between size and structure is so close that it would not be unreasonable to consider size as an aspect of structure itself, although conventionally it is not so considered" (Mansfield, 1986 p. 73).

Organization research suggests that in general, as organizations become larger they seem to illustrate more elaborate divisions of labor. Mansfield concludes that

empirical evidence shows that size will normally be positively related to functional specialization, role specialization, divisionalization, departmental differentiation, and number of hierarchical levels. For example, larger organizations that have the ability to exert a greater degree of specialization generally often have the ability to engage experts, who could not be economically employed by smaller operations (Florence, 1953; Starbuck, 1965). While such advantages do exist, strong relationships have also been found between the extent of bureaucratization and size (Pugh et al., 1969). Mansfield (1986) attributes this to "the inevitable breakdown of any system of control based on personal relationships as organizations become progressively larger" (p. 74). Likewise, Mansfield asserts that in smaller organizations, personal forms of control are more possible and are likely to be efficient. These smaller organizations are often characterized by centralized decision making and little bureaucracy.

Reilly (1987) also concedes that not all the organizational size literature supports the positive relationship suggested by her hypothesis, admitting that in many cases larger organizations may suffer from a loss of control and be less likely to respond quickly. For the most part though, Reilly asserts that increasing organizational size has been associated with specialized functions and

procedures and greater resources, "hence, big companies are more likely to have specialized crisis management teams and tools than smaller organizations" (1987, p. 82).

Reilly's hypothesis (1987) that organizational size is positively related to crisis readiness is grounded in this theory that organizational size and various organizational outcomes and strategies are related; these organizational strategies include crisis planning. Reilly's findings suggest that this link between organizational size and crisis readiness, is strongly positive. Results of the multiple regression analysis demonstrated a significant relationship between the two variables at the $p < .05$ level.

Hypothesis 2: As organizational size increases, crisis readiness scores increase.

Organizational Structure

In addition to size there are other factors that effect organizational strategies. These factors include organizational structure and typology. Weber (1947), coined the word "bureaucracy" to describe what he considered the ideal organizational form. Weber concluded from his studies that these bureaucracies possess certain characteristics that allowed them to operate efficiently, accomplish their goals,

and meet the demands of all clients in a fair and equitable manner. Weber suggests that together these characteristics constitute a working definition. Included in this definition are the following aspects: hierarchy of authority, specialization, formalized impersonality, and rules and records.

Following in Weber's footsteps, generations of organizational scholars have studied and recognized the effects of organizational structure on organizational effectiveness. Organizational scholars have built on and improved Weber's study, identifying several other characteristics. The most widely cited being centralization, formalization, stratification, and complexity (Grunig, 1992).

Centralization refers to the extent to which decision making is concentrated at the top. Formalization refers to the number of formal rules and regulations and the extent to which an organization follows them. Stratification is the extent to which rewards and recognition are concentrated on a few people and complexity refers to the extent of specialization or differentiation (Grunig, 1992).

Grunig (1992) points out that in most organizations these four characteristics correlate to each other, coming together to form an organizational structure or style. These

styles are often categorized as mechanistic and organic (Burns & Stalker, 1961). Based on Burns and Stalker's work, Grunig characterizes mechanistic or mechanical organizations as centralized, formalized, stratified and less complex and organic organizations as generally decentralized, less formalized, less stratified and complex.

According to Grunig, "The essential difference between the two organizations is the amount of autonomy given employees and the extent to which all employees participate in the management of an organization" (1992, p. 226). Hage (1980) suggests that while mechanistic organizations may be more efficient, organic organizations are more often innovative.

Typology of Organizations

More recently, Hage and Hull (1981) developed a typology of organizations based on the two major dimensions of scale and complexity. Here scale represents the size and repetitiveness of events at the organization and complexity refers to the level of technical sophistication or knowledge base in use at the organization. This typology helps to link overall organizational structure to the "environmental niche in which the organization fits" (Grunig, 1992, p. 403).

According to the Hage-Hull matrix (1981), the variables of scale and complexity work together to form four organizational types that occupy four environmental niches. Type I organizations, known as "traditional" or craft organizations, are typically small-scale operations with low complexity. Type II, or "mechanical" organizations are large-scale, low-complexity operations that employ many people. Type III organizations, or "organic" organizations, are small-scale, high-complexity operations. Finally, Type IV organizations are of a mixed mechanical/organic make-up. Such operations are large-scale, high-complexity operations.

Organizational Structure of High-Tech Firms

For the purposes of this study, of special interest is the placement of high-tech firms into one of these categories. To date there is no research available that has addressed the organizational structure, typology and size of high-tech firms. However, one recent study has come rather close. Grover's study (1992) attempts to positively relate certain organizational structures to specific organizational strategies. Grover hypothesized that the 25 largest high-tech semiconductor firms in Silicon Valley would practice excellence in public relations and communications management because they were "organic, highly complex organizations in a highly competitive environment" (p. 1).

However, Grover found no support for the hypothesis, attributing this to the fact that many high-tech firms are still maturing in organizational development with most of them less than 20 years old. Grover theorized that as the high-tech firms matured so would their public relations and communications management. This study suggests that when drawing conclusions about the relationship between structure and strategy, the inherent differences among varying industries must be addressed.

Recap of hypotheses

Hypothesis 1a: Respondents' perceptions of quick response ability, informedness, resource access, adequate crisis planning and media management will all be positively and significantly interrelated.

Hypothesis 1b: Respondents' perceptions of the existence of specific crisis communication strategies will be positively related to the other five components of crisis readiness.

Hypothesis 2: As organizational size increases, crisis readiness increases.

CHAPTER III

RESEARCH METHODOLOGY

Sample Frame

For the purposes of this study, the sample frame was limited to only those high-tech companies located within Santa Clara County. As both a major economic player and a research and development leader in the industry, Santa Clara County's high-tech industry serves as an interesting testing ground for the hypothesis that an organization's size is positively related to crisis readiness. In addition, research on the high-tech industry is limited at best and to date, no research on this specific subject has been done. Reilly's original study (1987), "Are Organizations Ready for Crisis? A Managerial Scorecard," surveyed individuals from a wide range of Midwestern industries and occupations. This study attempts to extend Reilly's findings to a geographic and industry-specific sample.

Companies that manufacture products or perform services related to the high-tech industry were included in the sample frame. Categories include semiconductors, computers, computer software, peripherals, test and measurement instruments, capital equipment, telecommunications equipment and systems,

word processing and text editing equipment, military and aerospace equipment, process/production and environmental control instruments and systems, sound equipment, and research and development.

The sample frame was obtained from Rich's High-Tech Business Guide to Silicon Valley & Northern California. This comprehensive reference book contains more than 5,800 companies involved in the high-tech industry in Santa Clara County's Silicon Valley and the surrounding areas of Northern California. Information provided includes the following: firm name, address, and phone number; principal officers' names and titles; number of employees; product description and classification; type of facility; and year of establishment.

For replication, only individuals at the managerial level and above were targeted for the survey, specifically those having corporate communication, public relations, or marketing communication functions.

Measuring the Independent Variable: Organizational Size

In keeping with Reilly's method of analysis, organizational size was operationalized as a five-level continuous variable based on number of employees. The five levels used in the original study were as follows: 1-25,

26-100, 101-1000, 1001-10,000, and over 10,000 employees (Reilly, 1987, p. 82). Reilly constructed these levels according to her own notions of what the appropriate categories might be (personal communication, October, 1992). Reilly then distributed the survey instrument to a captive audience of 79 M.B.A. students. She asked respondents to note the size category that best reflected the number of people employed at their organization (personal communication, October, 1992). For this study, an adjustment was made to category parameters to better reflect the concentration of mid-range companies as indicated by an examination of Rich's Guide to High-Tech.

The revised categories included are as follows: 1-25, 26-100, 101-500, 501-1,000 and 1,000+. This random sampling method allowed for a truer test of Reilly's hypotheses than would have been possible with the original levels. In addition to this measure of size for replication purposes, Rich's Guide to High-Tech provided the number of people employed by each organization included in the sample as a second measure of size.

Measuring the Dependent Variable: Crisis Readiness

Crisis readiness was operationalized by Reilly using an aggregate of the following crisis readiness components: quick response ability, informedness, resource access, adequate crisis planning, and media management. Reilly's original survey (1987) included questions based on organizational readiness for crisis and specific crisis management tools. The respondents were asked to rate their level of agreement or disagreement with items in this section using a five-point scale with 1 representing Strongly Agree and 5 representing Strongly Disagree. In most cases, the lower the score, the higher an organization's crisis readiness. However, five of the original questions were inversely anchored. Instead of a response of "1" representing the highest level of crisis readiness, the questions were anchored such that a response of "5" would denote the most crisis readiness answer.

For consistency, the inversely anchored questions were reworded (see Appendix A) in a way that remained true to the concept in question, while at the same time remaining consistent with the scale in use throughout the survey instrument. This resulted in an index of crisis readiness where the lowest number on the five-point answer scale

denoted the most readiness and the highest number, the least readiness.

The construct validity of the crisis readiness concept was tested to illustrate how the subscales related to each other, once with Reilly's original five components (1987) and again with the addition of a sixth component of communication strategy. The addition of this concept would not affect responses to earlier questions because of its placement as the last question. Each component was individually operationalized using separate subscales to assess the respondents' perceptions of that particular component. Together these components denote an organization's crisis readiness score.

The second section of Reilly's survey consisted of items about specific crisis management tools and procedures. Responses to questions in this section were also anchored to a five-point scale, but here possible responses were specific to the topics addressed. For example, a question about the accessibility of crisis management plans is scaled with 1 equaling very accessible and 5 representing very inaccessible.

The overall index is an unweighted summation of each sub-index. The separate subscales come together to denote the

crisis readiness score. Quick response, access, and informedness each have three items, or survey questions, per subscale. Planning has the most items with seven; with media management having four items. The crisis communication strategy subscale includes only one item.

For replication the index remained as presented in Reilly's study. However, the reader should be aware that as is, planning receives twice as much voice in the total index as quick response, access, and informedness. This unweighted summation is in reality a scale, not an index.

Procedure

The cover letter, revised questionnaire, and self-addressed envelopes were mailed to managers, directors and vice presidents of corporate communications, public relations, and marketing communication departments of 200 high-tech companies randomly sampled from Rich's High-Tech Guide. The cover letter and questionnaire follow as Appendix B and C. Upon receiving the preliminary mailing list from Rich's, the researcher placed a phone call to each of the 200 companies confirming addressee's title, name, and correct company address. Of those 200 companies, 20 refused to release necessary names and titles. In these cases, the questionnaires were sent "to the attention of. . . " the

corporate communications, public relations, or marketing managers without any name specified. The managers were asked to complete the questionnaire and return it in the enclosed self-addressed stamped envelope. All participants were assured that both their identity and responses would remain confidential.

The questionnaires were mailed on February 2, 1993. By February 20, the initial mailing had yielded 53 responses for a response rate of 26.5%. During that time two respondents called to ask questions about the study. The first caller identified himself as an employee of a small company that worked mainly on governmental defense contracts. The caller asked if "something" like the dramatic budget cuts in defense spending was what was meant by a "crisis that would affect a company's bottom line." The caller was told that such a scenario was an appropriate example of crisis. The second caller briefly explained that as a representative for one of the larger high-tech company's in Silicon Valley, company policy precluded her from divulging such information. Despite assurances of confidentiality the caller would not agree to participate in the study.

A second mailing went out on March 8, 1993, to those participants that had not yet responded. Included in the second mailing was a follow-up cover letter explaining the

nature of the study and the importance of a response. The follow-up cover letter follows as Appendix D. By March 28, the second mailing had yielded an additional 50 responses for a combined total response rate of 51.5%. The response rate per category was as follows: category one, the smallest companies, received 22 responses; category two received 26 responses; category three received 21 responses; category four received 26 responses; and category five received 17 responses. Each category had a potential of 40 respondents.

Study Predictions

Reilly suggested the following hypothesis: "The components of the crisis construct are all expected to be positively related to an organization's "crisis readiness" score as well as positively related with each other" (1987, p. 82).

Hypothesis 1a: Respondents' perceptions of quick response ability, informedness, resource access, adequate crisis planning and media management will all be positively and significantly interrelated.

Prediction 1a: Responses to questions 1-14 and 16-21 will demonstrate a positive interrelation among the five proposed dimensions of crisis readiness.

Hypothesis 1b: Respondents' perceptions of the existence of specific crisis communication strategies will be positively related to the other five components of crisis readiness.

Prediction 1b: Responses to questions 1-21 will demonstrate a positive interrelation among the respondents' perception of the existence of crisis communication strategies and the other five components of crisis readiness.

Hypothesis 2: As organizational size increases, crisis readiness scores increase.

Prediction 2: Those respondents who circle size category four or five in question 22 will score a higher degree of "crisis readiness" than those respondents' who circle size category one, two, or three.

CHAPTER IV

RESULTS

One of the goals of this study was to examine the construct validity of Reilly's (1987) crisis readiness concept. For the purposes of this study, prediction 1a was stated as follows: Responses to questions 1-14 and 16-21 will demonstrate a positive intercorrelation among the five proposed dimensions of crisis readiness.

Table 1 illustrates the intercorrelations among the original five crisis readiness components. The table shows strong support for hypothesis 1a. As predicted, quick response, informedness, access, crisis planning, and media management were all positively and significantly correlated with each other ($p < .01$).

Table 1

Scale Intercorrelations Between Core Crisis Readiness
Components and Communication Strategy

	Plan	Media	Access	Inform	Strategy
Quick	.7867**	.4812**	.6336**	.7205**	.4773**
Plan		.6228**	.7537**	.8733**	.7052**
Media			.5399**	.5556**	.5251**
Access				.8064**	.5697**
Inform					.7043**

** $p < .01$ (two-tailed test)

N=103

This study also sought to examine the relationship between the five crisis readiness components and participants' perceptions of the existence of specific crisis communication strategies. Prediction 1b was stated as follows: Responses to questions 1-21 will demonstrate a positive intercorrelation among the respondents' perception of the existence of crisis communication strategies and the other five components of crisis readiness. As predicted, quick response, informedness, access, crisis planning, and media management, were all positively and significantly related with crisis communication ($p < .01$; See Table 1).

Finally, the main objective of this study was to explore the relationship between organizational size and crisis readiness. Prediction 2 was stated as follows: Those respondents who circle size category four or five in question 22 will score a higher degree of "crisis readiness" than those respondents who circle size category one, two, or three.

The measure of size was generated from the addition of the respondents self-assessment of company size and size as reflected in Rich's High-Tech Guide. This averaging of measures was done in an attempt to minimize the unreliability of either measure. This comparison of the two measures shows a significant correlation of .8165 ($p < .01$).

Support was found for the hypothesis that increasing organizational size is associated with increasing crisis readiness. For replication, the relationship between size and crisis readiness was examined once, with Reilly's core crisis readiness components, and again, with the addition of the communication strategy question. Replication found support for the hypothesis in that crisis readiness correlated with size of company ($r = -.2113$; $p < .05$). Results also found support for the hypothesis with the addition of the communication strategy question in that crisis readiness correlated with size of company ($r = -.2207$; $p < .05$).

CHAPTER V

CONCLUSIONS AND SUMMARY

The study reported above focused on strategic preparation for crisis management in Santa Clara County's high-tech industry. The results of this study support Reilly's crisis readiness construct and, in addition, support the hypothesis that as organizational size increases, crisis readiness increases.

As predicted, quick response, informedness, access, crisis planing, and media management were all positively and significantly correlated with each other. These correlations remained almost unchanged with the addition of the communication strategy question. Results also suggest that within Santa Clara County's high-tech industry, organizational size is, in fact, significantly related to crisis readiness. Together these results provide support for the premise underlying this study, that organizations that strategically prepare for potential crisis should be better able to manage such threatening situations.

In addition to these general findings, individual data analysis of the crisis readiness components revealed interesting trends worth noting. Specifically, the communication strategy question was found to be significantly

correlated with size ($p < .01$). Only 5 out of the original 21 survey items were found to be significantly related to size. In fact, the addition of the strategy question incidentally improved the overall index. Together these findings are encouraging support for more research in the crisis communications area.

Results also showed that the reliabilities of the individual subscales were strong. In replication, the reliability coefficients of quick response and access to resources were actually increased. Replication repeated Reilly's finding that crisis planning showed the strongest reliability among subscales and that media management scored the lowest reliability of all the components.

In fact, the first media management item showed a correlation with only 2 of 21 items tested in the survey instrument. What we don't know here is whether this was an unreliable question in general, or perhaps just not applicable to high-tech. However, of the 5 items that were individually related to size at the $p < .01$ level, 2 were media management items. This disparity in results would suggest that further research on this subject is needed.

Given that the crisis readiness construct held up under replication, the individual indices merit greater attention. The question remains whether varying industries place greater importance upon certain crisis readiness components. Perhaps the high-tech industry places great importance upon crisis planning, but little importance upon specific media management skills; this may or may not be the case in other industries. Given that the planning index was given twice the voice of any other index, with 7 items, we can only suggest summary conclusions.

The make-up of the index itself also merits further study. For example, as mentioned earlier, Reilly's overall index was an unweighted summation of each individual index. However, Reilly fails to provide a compelling reason for this. Of interest here would be a study that either appropriately weighted the individuals indices or one that presented the index with an equal number of items per crisis component.

It should be noted that the results of this study are actually a reflection of an organization's self-analysis, or perception, of their state of crisis readiness. Perhaps larger organizations are biased in their assessment of crisis readiness, suggesting a higher level of readiness than

actually exists. The mere perception of crisis readiness does not necessarily predict the manner in which an organization will manage a crisis.

Having found support for both the crisis readiness construct and the hypothesis that increasing organization size is associated with increasing crisis readiness, several questions still remain unanswered; most importantly, though, is the question of causality. On the surface it appears that larger organizations are more crisis ready. However, this assertion suggests that size actually determines crisis readiness. Couldn't it be that the actual causal relationship is one where crisis ready organizations are inherently more likely to succeed and thus, become large? This would suggest a type of "Darwinian Survival of the Crisis Ready" where only organizations that are crisis ready to begin with, survive long enough to become large. Of interest here would be some sort of study that would measure the crisis readiness of several small start-up companies and gather information over time, to see which of them "survived" long enough to develop into a large organization.

In the end, the scope of this study and the overall pattern of results, indicate findings that would be as relevant outside the high-tech industry as within it. While this study focused on the high-tech industry, it yields

results of interest to any organization interested in improving its crisis management ability by way of improved crisis preparation. Organizational crisis management is a subject that remains wide open to myriad research opportunities.

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APPENDIX A
REVISED QUESTIONS

Question #2

From: My organization doesn't spend time looking out for crisis situations that may never happen.

To: My company does a good job planning ahead for potentially threatening situations.

Question #5

From: My company is slow in responding to threatening situations.

To: My company's overall behavior in responding to most crisis situations is to take action as quickly as possible.

Question #6

From: My organization would probably panic in the event of a sudden crisis because of its general lack of preparedness.

To: My company would NOT panic in the event of a sudden crisis because it is prepared.

Question #9

From: Overall, my organization's employees know little about any crisis management resources the company may have.

To: Overall, my organization's employees are informed about any crisis management resources the company may have.

Question #12

From: If a major crisis hit my firm and the "60 Minutes" news team showed up to investigate the situation, my company's management would probably panic.

To: If a major crisis hit my firm and the "60 Minutes" news team showed up to investigate the situation, my company's management would respond openly and honestly.

APPENDIX B
COVER LETTER

Dear _____:

We seek your help in conducting a study of how high-tech businesses prepare for potential crisis situations. You've been selected to represent a portion of Santa Clara County's high-tech industry, and your response is vital to the success of this study. Please spend a few minutes completing the survey below, and return it in the enclosed self-addressed envelope.

Your responses will be confidential and they will be recorded so that individual identification is not possible. If you have questions about the nature of this study, I will be happy to talk with you. I can be reached at (415) 949-4608. Questions can also be directed to Dr. Dennis Wilcox, Ph. D., Graduate Coordinator, at (408) 924-3268. Thank you for your cooperation.

Sincerely,

Stacy L. Damron
M.S. Degree Candidate
Department of Journalism and Mass Communication
San Jose State University

APPENDIX C
QUESTIONNAIRE

Fifteen statements are listed below. Please indicate your level of agreement or disagreement with these statements using the scale provided. Please fill in the blank to the left of each statement with a whole number from the agreement scale below. If you don't know the answer for a particular statement, please mark "8".

When answering the following questions imagine a crisis situation that would pose a genuine threat to your company's "bottom line". Your answers should reflect your organization as it is, not as you think it should be.

1	2	3	4	5	8
Strongly	Somewhat	Neither	Somewhat	Strongly	I don't
Agree	Agree	Agree nor	Disagree	Disagree	know
		Disagree			

- _____ 1. My company is organized in a way that allows its management and employees to respond quickly in the event of an unexpected threat.
- _____ 2. My company does a good job of planning ahead for potentially threatening situations.
- _____ 3. In my organization's view, it is important to keep on the good side of the media if the company is involved in a potentially harmful situation.
- _____ 4. Employees at my company have access to the crisis management resources and tools necessary to perform their part in the event of a company crisis.
- _____ 5. My company's overall behavior in responding to most crisis situations is to take action as quickly as possible.
- _____ 6. My organization would not panic in the event of a sudden crisis because it is prepared.
- _____ 7. My company has provided instructions about how employees should respond if a news reporter were to ask them about something happening at the organization.

- ___ 8. At my organization, employees are encouraged to be alert for environmental changes.
- ___ 9. Overall, my organization's employees are informed about any crisis management resources the company may have.
- ___ 10. My organization makes resources available to its employees, which allows them to respond to a crisis in a responsible way.
- ___ 11. The crisis management plans, tactics, and tools available at my company are adequate to deal with most crises my organization might encounter.
- ___ 12. If a major crisis hit my firm and the "60 Minutes" news team showed up to investigate the situation, my company's management would respond openly and honestly.
- ___ 13. My company actively looks out for threatening situations that could evolve into crises.
- ___ 14. The key people involved in implementing my company's crisis management procedures are well-informed about their responsibilities under the plan.
- ___ 15. My company has developed specific communication strategies to be used in the event of a crisis.

Please indicate your responses to the six questions below by circling one number on the scale underneath each question. As before, please mark "8" if you don't know the answer to a particular question.

16. How well-informed are your company's managers about your organization's crisis management plans and tactics?

1	2	3	4	5	8
Very	Somewhat	Neutral	Somewhat	Very	I don't
Well-			Well-		Uninformed
Informed	Uninformed	know			
	Informed				

17. How accessible to key personnel are most of your company's resources and tools for dealing with crisis?

1	2	3	4	5	8
Very	Somewhat	Neutral	Somewhat	Very	I don't
Accessible	Accessible		Inaccessible	Inaccessible	know

18. How quickly could your company respond to a major unexpected crisis?

1	2	3	4	5	8
Very	Somewhat	Neutral	Somewhat	Very	I don't
Quickly	Quickly		Slowly	Slowly	know

19. How important would your organization consider regular media contact to be during a crisis situation?

1	2	3	4	5	8
Very	Somewhat	Neutral	Somewhat	Very	I don't
Important	Important			Unimportant	know
Unimportant		know			

20. How accurately would your organization perceive and evaluate a potential crisis situation?

1	2	3	4	5	8
Very	Somewhat	Neutral	Somewhat	Very	I don't
Accurately	Accurately		Inaccurately		know
	Inaccurately		know		

21. In general, how well-prepared do you think your company is to respond to an unexpected crisis?

1	2	3	4	5	8
Very	Somewhat	Neutral	Somewhat	Very	I don't
Prepared	Unprepared	Prepared	know	Unprepared	

22. Please circle the category that best reflects the number of people employed by your company.

1-25	26-100	101-500	501-1,000	1,000+
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ADDITIONAL COMMENTS:

THANK YOU VERY MUCH FOR YOUR TIME AND ASSISTANCE

APPENDIX D
SAMPLE FOLLOW-UP LETTER

Dear _____:

My name is Stacy Damron and I am a graduate student at San Jose State University. I recently sent to you a survey, that together with your response, will play a pivotal role in the completion of my thesis. The purpose of this study is to explore how businesses, both big and small, prepare for potential crisis situations. However, to date I have not received the necessary responses required to begin compiling results.

I have enclosed another copy of the survey for your convenience. Please take a few minutes to complete it and return it in the enclosed self-addressed envelope. Your response is vital to the success of this study. If you are unable to complete this survey please direct it to the appropriate personnel. Thank you for your time.

Sincerely,

Stacy L. Damron
M.S. Degree Candidate
Department of Journalism and Mass Communication
San Jose State University