UNIVERSITY OF CALGARY

Organizations and Communication Technologies:

A Study of Organizational Adaptation

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF MASTER OF ARTS

GRADUATE PROGRAM IN COMMUNICATIONS STUDIES

CALGARY, ALBERTA

JULY, 2000

ABSTRACT

The advances in communication technology have created a globe that is connected by high-speed networks that facilitate everything from an ecommerce purchase over the Internet, to a real-time satellite transmission. According to Gerstner (1999), "a technological revolution, centered around information is fundamentally altering the way we are born, we live, we learn, we work, we produce, we consume, we dream, we fight, we die" (p12). The new environment created by changing communication technology is increasingly turbulent and this creates new challenges and opportunities for organizations.

The relationship between an organization and its external environment is characterized by interdependence. As a result, the introduction of new communication technology into the environment can lead to organizational adaptation, in particular, organizational learning. This thesis examines an organization's adaptive response to the challenges created by communication technology in the environment.

The changes to communication technology in the environment have affected all areas of organizations; this thesis focuses on the function of external communication. External communication functions are located at the boundary between an organization and its environment. As a result, any changes to communication technology in the environment directly impact these boundary functions.

This research extends classical systems theory and studies the role of structural and cultural changes in an organization's adaptation to communication technology. The focus of this research is how the introduction of communication technology in the environment has affected external communication practices, how external communication functions have adapted to the changes in communication technology, and how external communication functions have adopted the new communication technology to deal with the changes in the environment.

To illustrate the characteristics of organizational adaptation to communication technology in the environment, this thesis includes a case study of the Calgary Stampede Organization. The case study research provides a rich example of how one organization and its external communication functions have adapted to the new environment. The results illustrate that organizations are facing an environment that is increasingly uncertain and turbulent and in this environment, the role of external communications in scanning and mapping has increased. Also revealed is the increasing role played by the Information Systems (IS) departments in scanning the external environment. The information collected by external communications and IS is increasingly important to all forms of decision making in the organization. The advances in communication technology have increased the use of the technology in external communications daily activities, although it has not replaced the more personal forms of communication including face to face and telephone. Finally, the case study illustrates the connection between and structural and cultural changes in an organization.

Acknowledgements

I wish to thank a number of people who supported me throughout the writing of this thesis.

To David Taras for his support and help in overcoming obstacles.

To Doug Brent for stepping in on short notice and offering a fresh perspective and new ideas.

To my family and friends in Calgary and across Canada, for supporting and encouraging me during the difficult times, and for listening to me when I needed to talk.

To Eric, for his patience, support, positive attitude and never-ending encouragement.

To the Lockwoods: Lois, Mike and Lindsay, for being my surrogate family and always giving me words of encouragement.

To my mom, for being my inspiration and mentor and instilling in me a desire to learn.

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CHAPTER ONE:
INTRODUCTION

Advances in communication technologies have affected all aspects of life; the combination of digital technology and high-speed global communication networks has left few corners of society untouched. These changes have transformed social, political and economic conditions (Gerstner, 1999, p.13). Organizations facing the global communications revolution must respond, or they will quickly be left behind.

The environment is in constant flux; conditions that organizations face today are vastly different from previous decades. The technology has led to a highly interconnected global economy, growth of transnational business, opportunities for international mergers, global job competition, and a new economy based on the trade in information. In an era of globalization, organizations face both opportunities and threats, conditions that were highlighted by events in the 1990s. The Asian financial crisis and the ripples it sent through the global economy demonstrated the threat of a highly connected world (Howard, 1999, p.10). On the other hand, the mergers of American companies with foreign ones including Amoco and British Petroleum, and Chrysler and Daimler Benz are examples of the opportunities in the new environment (Howard, 1999, p.11).

Communication technology is one of the driving forces behind these new conditions, but it is also a survival tool for organizations. To respond to the environment, organizations are integrating new communication technologies into their structure. Computers, Local Area Networks (LANs), Intranets, Internet web sites and email are all becoming necessary organizational tools. These tools facilitate the organization's internal activities and allow them to effectively monitor the external environment.

In a complex and unstable environment, organizations must be aware of the ongoing events, trends and changes in their external environment. Members of the organization who function at its boundaries are a crucial link to the environment. These boundary roles, including the formal organizational function of External Communications, are becoming more important for organizations. External communicators are increasingly adopting the new communication tools to perform their transactions with the environment.

Various communication scholars have studied the effects of communication technologies on organizations as a whole, but there is little research that looks specifically at the effects of new communication technology on an organization's external communication functions. External communication functions are critical to an organization facing the new technological landscape. As a result, it is important to initiate academic research that studies communication technology's role in an organization's external communications activities and how this is changing, what the effects of the new technology are and how organizations can integrate these new tools.

Much of the literature that studies the role of communication technology in external communications adopts a "How to Approach." This approach describes the practical application of communication technology in external communication activities, for example, how to create a web site, and how to use the Internet to search for issues. The goal of the present thesis research is to use the practical use of the communication

technology as a foundation to address the theoretical gap in this area of organizational communications literature.

This research is guided by the following question:

> *How can an organization adapt to new communication technologies in the turbulent environment and, in particular, how is technology used in external communications to interact with the new environment?*

Terminology

This question introduces a number of terms that must be defined, including organizations, adaptation, communication technologies, environment, "turbulent environment," and external communications.

Organizations

This inquiry centers on the activities of organizations, and how they deal with an uncertain and turbulent environment. Aldrich (1979) defines organizations as "goal–directed, boundary-maintaining, activity systems" (p.4). This study defines an organization according to systems theory. As a system, an organization has internal components that work together to form a whole and has a relationship of exchange with the environment. System outputs and environmental inputs continuously flow across the organization's boundaries. "Systems theory evokes the image of a complex, interdependent organization operating within a dynamic environment, ever engaged in a struggle to create order in the face of unpredictability" (Eisenberg, 1993, p.103). Although organizations have boundaries that divide them from the rest of the community,

these boundaries are permeable and organizations adapt to changes in the environment (Miles, 1980).

Adaptation

An organization is one component of a larger, more complex system that constitutes the larger social environment. Changes in one area of this larger system force other components to adapt. Elements within the larger system cannot remain static; they must be dynamic and flexible. In the adaptive process, an organization becomes more complex to deal with the challenges and opportunities it faces in the environment (Morgan, 1997:41). In this thesis we will examine several theories of adaptation, including organizational learning (Argyris, 1965; Schon, 1983; Williams, 1982), contingency theory (Aldrich, 1979; Galbraith, 1977), resource dependency and natural selection (Aldrich, 1979; Pfeffer, 1982). This thesis focuses on organizational learning, contingency theory and adaptive theories proposed by Emery, Trist (1965) and Weick (1979).

Communication Technology

A number of technological advancements have changed organizations' interaction with the environment. This thesis studies the changes to communication technology including the Internet, email, satellite transmission, databases, and CD ROM technology. The introduction of these tools within the external environment forces organizations to adapt and in the process, they integrate and acquire the tools for their own use.

Environment

An organization has both an internal and external environment. This study focuses on the external component, which includes technological, legal, political, economic, demographic, ecological and cultural conditions that affect organizations. This inquiry focuses on the technological conditions in the environment. In an open system, an organization and its environment are in a "state of interaction and mutual dependence" (Morgan, 1997, p.40). The organization depends on the environment for input, and the environment needs the organization's output. For an organization, this external context is a source of threats and opportunities that affect an organization's ability to survive (Miles, 1980, p.189).

Turbulent Environment

In their 1965 article *The Causal Texture of Organizational Environments,* Emery and Trist define the turbulent environment as unstable, complex and dynamic. They attribute the development of this environment to the growth of organizational size and concentration of power, the growing interdependence between various sectors of society, the increased use of scientific research and development, increased bureaucratization, and a revolution in communication technology. In a turbulent environment, it is difficult for an organization to achieve stability or plan for the future, as the environment is unpredictable and unstable (Miles, 1980, p.198).

External Communications

In an open system, external communications facilitate an organization's communication with its environment and monitor the information that flows across the its boundaries. This function falls under a number of names, including public relations, public affairs, media relations, corporate communications, and community relations. Academic theory that studies external communications falls under the title of Public Relations theory. For this reason, the terms external communications and public relations are used interchangeably in this study.

Ideal communication with the external environment is a two-way dialogue. External communications is a probe and monitor; it is sensitive to any changes in the environment. It is a "boundary-spanner, environmental scanner, an 'early warning' system" (Dozier, Grunig & Grunig; 1995, p.15). This function has an important role in an organization's adaptive process.

Value of this Inquiry

Now that the central question has been presented and its key terms defined, it is important to ask why this particular question was chosen. What is the value of this query to the field of Organizational Communications? This thesis is built on a foundation of theory and literature that has developed over roughly the past 40 years. This thesis applies existing theories to explore the current environment that an organization faces. In this new landscape, an organization's communication is not limited by space or time

constraints. Digital communication technologies have slowly been integrated into organizations and it is important to understand this process of adaptation.

This study responds to a gap in organizational communications literature. The conclusions and implications of this research are valuable to communication scholars and practitioners. It will provide academics and practitioners with a broader picture of how an organization can adapt to the new communication technology in the environment and the effects of the technology on external communications functions. By adopting a systems theory approach, the conclusions and implications of this research will demonstrate how an organization can undertake an adaptive process in the new technological environment. For scholars, this study is a starting point for further research into the effects of communication technology on an organization's external communications functions. For communication practitioners, this research will provide an example of how communication technology in the environment changes not only the daily communication functions and the larger strategic approach to external communications.

Methodology

To explore the effects of communication technology on organizations, a case study methodology has been selected. This is explained and defined in the fourth chapter. The Calgary Exhibition and Stampede was chosen as the site for the case study. This case study is used to answer how and why questions that develop from the main question of this thesis. For example, how does an organization recognize the changes in the

environment? How have organizations adapted? What processes were followed in this adaptation? How is technology employed in this adaptation? This case study explores the connection between technological changes in the environment and changes to an organization's structure and behavior. The case study data will be collected through interviews, observation, and the analysis of documents, archives and artifacts.

The Calgary Exhibition and Stampede was selected as the site for various reasons. Over the past few years this organization has focused its efforts on integrating technology into all organizational activities, including external communications functions. Due to the recent time frame participants are able to recall all stages of the process. In addition, the organization was willing to fully participate and provided the level of access necessary for an in-depth study.

Outline of Thesis's Chapters

Before the case study was conducted, a theoretical framework was developed and this is presented in chapters two and three. The second chapter outlines general organizational theories that include systems theory, theories explaining the relationship between an organization and its environment, and theories of adaptation.

The third chapter is a literature review that builds on the general theories in the second chapter. This chapter begins with a general discussion of the role of technology and in organizational change, and then narrows down to the specific effects of communication technology on organizations. The chapter then introduces theories of Public Relations.

The final section brings these two topics together and discusses the role of communication technology in Public Relations.

The methodology of the case study is explained in chapter four and the discussion and analysis of the data drawn from observations, interviews, and documents is presented in the fifth chapter. The final chapter uses the data analysis to provide conclusions and implications of this research, and possibilities for further research. As a single case study these findings are not be generalizeable, but they do provide insight into how an organization can deal with the changes to communication technologies in the external environment.

CHAPTER TWO:
THE RELATIONSHIP BETWEEN ORGANIZATIONS AND THEIR ENVIRONMENTS: A THEORY CHAPTER

This chapter reviews the literature and provides the theoretical background needed to explore the central question of this thesis, which is

> *How can an organization adapt to new communication technologies in the turbulent environment and, in particular, how is technology used in external communications to interact with the new environment?*

These theories guide the collection of relevant data to answer the central question. This chapter is central to this research project, as the theories it presents help draw meaning from the raw data collected during the case study. For example, the theories are the basis for interview questions about external communications and technology.

Several of the theories introduced in this chapter explore the relationship between an organization and its external environment, and how organizations define their environment. These theories include Weick's (1978) theory of the enacted environment, and Emery and Trist's (1965) theory of the causal texture of the environment and, in particular, their definition of the turbulent environment. The discussion describes the roles of communication technologies and external communications in responding to the turbulent environment.

The theories presented in this chapter apply General Systems theory to understand organizational behavior (Bertalanffy, 1968). Before the shift to systems theory, Organizational Communications research focused primarily on the internal structure of an organization and ignored the role of the external environment (Morgan, 1997, p.39). Systems theory broadened this narrow focus. A system is based on an interdependent relationship between an organization and its environment, and changes in that

environment affect the organization. But the flow of information is two-way, as are the effects and an organization can also affect its surroundings through its external behavior. This chapter also includes a critique of systems theory as it applies to the study of organizations, and introduces the "New Science" that extends systems theory to include dynamic and complex processed that classical systems theory ignores.

This chapter also addresses theories of organizational adaptation. The discussion investigates why an organization adapts and how the process is initiated; it also examines the roles of feedback and external communications in adaptation, and explores the role adaptation plays in the turbulent environment. A specific form of adaptation discussed is organizational learning.

OPEN SYSTEMS THEORY

General Systems Theory (Bertalanffy, 1968) defines two types of systems: open and closed. Organizational Communication theory applies the analogy of the open system to organizations to understand their behavior. In an open system, there is a continual exchange of information within the system itself, and between the system and its external environment. Continuous exchange with the environment is one of the defining features of an open system. Walter Buckley, cited in Eisenberg, notes, "this interchange is an essential factor underlying the system's viability, its reproductive ability or continuity, and its ability to change" (1993, p.103).

In an open system, there is a continual supply of input in the form of new matter and information. In a closed system, the boundaries are not permeable and there is no input or output, which leads to entropy. Entropy is the tendency for a closed system to slowly deteriorate and run down (Morgan, 1997, p.40). An open system's permeable boundaries avoid entropy, but also exposes the organization to the instability of the environment. The relationship between an organization and its environment demands that an organization is both dynamic and flexible. The organization has to detect and understand the events and trends in its environment and be flexible enough to adapt accordingly.

To understand how open systems theory can be applied to organizational behavior the various elements of a system must be defined and explained. Outlined below are brief descriptions of key terms including environment, boundary, interdependence, feedback, and adaptation.

Environment

A system has both an internal and external environment. The external environment includes all elements that interact directly or indirectly with the system, but do not fall within its boundaries. The external environment is a rich source of resources, information, and feedback that a system depends on for survival. The interdependence between an organization and its environment means that any changes in the environment will impact the system.

Boundary

The defining characteristic of an open system is the nature of its boundaries. They are "demarcation lines or regions for the definition of appropriate system activity, for admission of members into the system, and for other imports into the system" (Katz & Kahn, 1978, p. 65). An open system's boundaries are porous and allow the exchange of information and matter between the system and its environment. Within the system, members of the organization have their own goals or objectives, but they also work together towards a shared organizational purpose that is defined by the leaders of the organization.

Interdependence

The term "interdependence" describes the relationship between the various components of a system, and between a system and its environment. In most systems, these relationships are mutually dependent and symbiotic. Internally, the various elements in a system must function as a whole for the system to be effective. Externally, a system is dependent on its environment for a continual flow of new inputs and the environment depends on the system for its ongoing flow of outputs. This interdependence is maintained through an ongoing process of communication. The system, its components and environment communicate through input, output, and feedback loops. As a result of this interdependence, when there are changes in one part of the system the other components must detect this and adapt accordingly. To apply systems theory to organizational behavior, all internal and external components must be examined. To explain the actions of an organization, there must be a clear picture of the internal

elements involved, the surrounding environment and the interdependencies between these components.

Feedback

The communication between the internal elements of the system, and a system and its environment is achieved through feedback. This term has its roots in General Systems theory and Cybernetics (Bertalanffy, 1968). Cybernetics is a "theory of control systems based on communication between systems and environments within the system, and control (feedback) of the system's function in regard to environment" (Bertalanffy, 1968, p.21). Feedback is a loop back into the system that communicates the environment's reaction to a particular output. To achieve the desired environmental reaction, the system monitors the environment's response to a particular output and modifies its behavior to achieve its particular goals.

Adaptation

The term adaptation is drawn from organizational theories of population ecology and natural selection (Aldrich, 1979). When the environment changes and presents a system with either challenges or opportunities, the system must adapt to match these changes. Through an ongoing process of adaptation the system is prepared to respond to future challenges posed by the environment. The evolution of the system may include reorganizing its components, changing the various internal and external relationships, or changing the behavior of various components. When organizations face a turbulent environment that is increasingly complex and uncertain, evolution is the key to the

survival of the system. The system must match the environment's complexity by changing its structure and behavior. This follows Ashby's law of requisite variety, which argues that the internal diversity of a system must match that of its environment to respond to challenges and opportunities (Morgan, 1997, p.112). Organizational learning is one example of how a system can evolve to meet the challenges presented by the environment.

LIMITATIONS OF SYSTEMS THEORY: The Development of the "New Science"

The application of classical systems theory to organizations provides a particular view of how an organization functions. Unfortunately, like all theories, the use of systems theory in organizational communications has limitations. Systems theory sets out an extremely rigid structure and there is no room for the human elements of the organization. As Houston (1999) notes, systems theory reduces the various elements of a system to components that researchers can observe and understand (122). The lure of systems theory is appealing to a researcher but as Houston (1999) further states, systems theory is limited as dynamic processes in a system are "frequently examined by analyzing static, linear properties rather than dynamic elements that may produce complex processes" (122). As a result, when applying systems theory to organizations, the dynamic human elements are reduced to simple components. When studying organizations, systems theory has no means of analyzing complex interpersonal or cultural processes. As a result, the final analysis is incomplete and lacking the human element.

Systems theory has come to dominate a variety of fields, including communications. In response to the limitations of classical systems theory, a new science emerged in the 1980s that is based on the ideas of chaos, self organizing, self producing and complexity (Houston, 1999; Contractor, 1999; Miller, 1998). The new science seeks to address the limitations of classical systems theory and include the dynamic and complex processes and relationships that exist in a system. As Houston (1999) notes, the new science goes beyond

> The superficial and apparent order of the universe to reveal a hidden dimension, one that contains an underlying order and structure that is unobservable when reduced to its parts (125)

New science rejects classical systems theory's reliance on linearity, equilibrium and stasis and argue that it is only through chaos and disorder that a system can become more complex. As Horgan (1996) observes,

> Nothing novel can emerge from systems with high degrees of order and stability, such as crystals; on the other hand, completely chaotic, or aperiodic, systems such as turbulent fluids or heated gases, are too formless. Truly complex things-amoebas, bond traders and the like-happen at the border between rigid order and randomness (196).

The development of the new science approach is valuable to the study of organizational communications provides the researcher with theories to help observe, understand and explain the dynamic human elements of organizations. As a result, the analysis of an organization that follows the new science reveals the true nature of the organization, not a reduction of its dynamic elements into static components.

THE ORGANIZATION-ENVIRONMENT RELATIONSHIP

To understand an organization's behavior and structure, its environmental context must be explained. The connection between organizational structure and the environment is addressed by contingency theory which examines "how organizations can more closely conform their structures and processes to the nature and dictates of their confronting environment" (Miles, 1980, p.10). This theory is based on two main principles: (1) There is no best way to organize, and (2) Any way of organizing is not equally effective (Eisenberg, 1993, p.63). These principles were tested and supported in contingency studies by Burns and Stalker (1961), and Lawrence and Lorsch (1969). Burns and Stalker focused on how the patterns of management practices in organizations were related to elements in their environment (Lawrence & Lorsch, 1969, p.187). Lawrence and Lorsch (1969) wanted to find out what types of organizations were effective under different economic and technical conditions and how changes in an organization's environment affected its internal structure (p.4). Both studies supported the principles of contingency theory. All organizations are affected by different sets of environmental conditions; as a result, each situation requires a unique response. One organization's response to technological change in the environment will be different from that of another facing new government regulations. Contingency theory addresses this through its focus on "the fit between the form and its niche" (Aldrich, 1979, p.57).

Defining an Organization's Environment

An organization's environment can include "every event in the world which has any effect on the activities or outcomes" of the organization (Pfeffer and Salancik, 1978,

p.12). It is unrealistic to expect an organization to attend to every single event; certain events have a higher degree of priority for organizations than others. Events can have a direct, indirect, or no impact on organizations.

Robert Miles (1980) offers his categories of general and specific environments to classify the various events in an organization's environment. An organization's general environment includes technological, legal, political, economic, demographic, ecological, and cultural conditions (Miles, 1980, p.195). Changes in this environment are more apparent to the organization as they are connected to daily operations. Typically, organizations do not have daily contact with these conditions in the general environment and have to perform environmental scanning and monitoring to deal with them (Miles, 1980, p.195). External communications is a boundary spanner that detects changes or shifts in the general environment. This thesis focuses specifically on the technological changes in the general environment, in particular the advances in communication technologies.

The Enacted Environment

How can an organization process the vast amount of information and events in its environment? How does it create meaning for these events and assess their relevancy? Karl Weick (1979) proposes a model to explain the process of defining an organization's environment. His model combines organizational theories of population ecology and evolution, and it is composed of three stages: enactment, selection and retention (Weick, 1979). In the first stage, enactment, the organization creates a subset of the larger

environment by attending to only certain elements and ignoring others. This subset is what the organization responds to; the conditions they face are self-created through selective perception. "Organizations paint their own scenery, observe it through binoculars, and try to find a path through the landscape" (Weick, 1978, p.136). Once the environment has been enacted, the organization selects a meaning and explanation for it from a number of possibilities. The final stage of the model is retention; the organization only retains explanations that make sense and have worked for it in the past.

The process of retrospective sense making is the heart of Weick's model and is based on the question, "How can I know what I think until I see what I say" (Eisenberg, 1993, p.110). For an organization to effectively achieve its goals, it must understand the various elements in the environment and its relationship to these elements. With this knowledge, an organization can plan for the future by relying on its assessment of past and present interactions with the environment. For example, an organization's memory of past events that have negatively impacted its behavior and actions may guide future choices. Armed with this understanding an organization creates strategies that respond appropriately to the environment. An organization can achieve its goals by working within the constraints of the external environment.

One element of the environment this research focuses on is communication technologies. By including communication technology in its enactment of the environment, an organization is classifying the technology as an important issue to attend to. If an organization's enactment of the environment includes communication technologies, it

will be prepared with strategies and tactics to deal with changes in the technology. For example, an organization may develop an Internet web site, implement an internal and external email network, or adopt a technology protocol at all levels of the organization.

Causal Texture of the Environment

This research focuses on a particular type of environment: the turbulent environment. This key term was introduced by Emery and Trist (1965) in response to their observation that over time environments have become increasingly complex (Emery and Trist, 1965, p.21). Emery and Trist apply open systems theory to understand the linkages, connections and interdependencies in an organization's environment.

Emery and Trist introduce four types of causal textures that exist on a continuum. They argue that in a complex environment there is a high level of linkages both within an organization and among the elements in its environment. Emery and Trist use L11, L12, L21, and L22 to represent these interdependencies. "L" refers to the linkages, "1" refers to the system and "2" to the environment (Emery, 1977, p.4). L11 is the interdependencies within the system itself; L12 is the system's actions or planned actions in its environment; L21 is the goals and noxiants the system faces in the environment and the flow of information into the system. L22 is the "*causal texture of the environment,*" how processes in the environment causally determine each other independently of the actions of the organization imposed on the environment (Emery, 1977, p.4).

Emery and Trist's main concern is L22, the causal texture of the environment. The interdependencies in the environment are often invisible and difficult for an organization to detect or monitor. As a result, the interdependencies are a source of instability, uncertainty, and unpredictability. Out of their definition of causal textures, Emery and Trist describe four types of organizational environments. These four environments are arranged in a continuum and each marks an increase in the level of interconnection and rate of change. An increased level of interconnections means a single change can have a number of effects on and organization and it must understand and deal with a number of elements at once. An increase in the rate of change or movement creates uncertainty for an organization and it is difficult for it to plan future actions.

Emery and Trist (1965) define four causal textures, including (1) placid, randomized; (2) placid, clustered; (3) disturbed, reactive; and (4) turbulent field (p.24). The present research is concerned with the turbulent field, which has the highest level of interconnection and movement among its elements. To place this field in a context, the other fields in the continuum must first be described. The first type is the random, placid environment, characterized by its stability, low levels of interconnections and movement. Organizations in this field have a high level of control over their environment (Emery and Trist, 1965,p.24). Next on the continuum is the disturbed, placid environment, which is also relatively stable but some elements are arranged in clusters. As a result, the organization must recognize the clusters and deal with them as such, not as individual elements (Emery and Trist, 1965, p.25). The third field is the disturbed, reactive

environment, which is more complex than the previous two as it is a clustered placid environment that has two or more systems of the same kind (Emery, 1977, p.8).

Turbulent Environment

The turbulent environment is the final causal texture and is characterized as uncertain, dynamic, and unstable. Emery (1977, p.14) identifies five major trends that have created the turbulent environment, including an increase in organizational size and concentration of power, growth of interdependencies between sectors in society, increased use of scientific research and development by organizations, increased bureaucracy, and a revolution in communications (Emery, 1977, p.15). The role of this fifth element in the turbulent environment is the focus of this study. In this field, the high level of interconnection between environmental elements creates rapid changes, and increased unpredictability and complexity. In addition, "actions in other parts of the interconnected system, while largely invisible, can have impact on the organization's immediate exchanges" (Pfeffer and Salancik, 1978, p.64). Organizations must learn to deal with the turbulent environment, as it will continue to increase in its complexity (Emery, 1977; Terreberry, 1968).

It is difficult for organizations in this environment to understand, predict or control their surroundings and as a result, it is hard for organizations to make informed decisions. Often, decisions are made based on inadequate or incomplete information, a dilemma Williams terms the "crisis of knowing" (Williams, 1982, p.14). As Emery and Trist (1965) note, "the environment ceases to be a stable ground on which organizations can

play out their games and counter-games. With shifts in the ground the ground-rules change in unpredictable ways" (p.9).

Long range planning in the turbulent environment is futile, the environment is constantly shifting and plans quickly become irrelevant and outdated (Terreberry, 1968, p.595). To cope, the organization needs to understand the various elements in the environment, their interconnections and the possible effects on the organization. Although organizations must accept the unpredictability of the turbulent environment, the process of monitoring and understanding its environment provides a degree of control (Pfeffer and Salancik, 1978, p.65). If the organization can successfully assess the turbulent environment, it can match it through adaptation.

In 1977, Emery pointed to the role of communication technology in the turbulent environment, and since this point in time, the technology has advanced even further with the introduction of digital technology. It is reasonable to assume the developments in communication technology have increased their role in the creation of the turbulent environment. The technological developments have increased the speed and flow of information through both time and space. The result is heightened uncertainty, unpredictability and complexity of the environment.

However, it is important to critically examine Emery and Trist's ideas about the various types of environments. Their theory has clearly broken down the environment and defined it along an organized continuum. But, at ground level, in the real world of

organizations, the development of an organization's environment is not as clear-cut. An organization does not necessarily pass though all the levels of Emery and Trist's continuum, nor does an organization necessarily face and increasingly turbulent environment.

For example, a small organization that sells pencils would not face the same type of turbulent environment as a large organization that produced computer chips. When looking at the practical world, it appears that turbulence can exist in varying degrees. When applied to the real world, the theoretical notion of turbulence is not a monolithic, all-encompassing environment; it affects a select group of organizations in varying degrees.

HOW AN ORGANIZATION CAN RESPOND

In the turbulent environment, the exchange of information is almost instantaneous through a combination of high-speed networks and global satellite systems. Williams (1982) observes that "the increasing volume and speed of communication creates problems of information overload, leads to further intensification of interdependencies within and among societies, and heightens the sensitivities of parts of the social environment to one another" (p.4). The amount of information that an organization receives, classifies, categorizes and must attempt to understand has increased dramatically. In addition, the advances in technology have increased the number and complexity of interconnections in the environment and as a result, it is difficult to predict the impact of a particular trend on an organization (Williams, 1982, p.11). To deal with

the turbulent environment, organizations increase boundary-spanning activities and employ active adaptation techniques such as organizational learning.

In a turbulent environment, boundary spanning activities are used to continuously scan and monitor the environment for trends and changes. Facing these conditions, it is difficult for an organization to achieve its goals and objectives. Boundary spanning is one solution to the problem an organization faces in the turbulent environment.

External communications is a boundary spanner that performs scanning and monitoring for the organization. According to Miles (1980), boundary spanning activities are responsible for "representing and protecting the organization, transacting with external elements, information gatekeeping, and monitoring and scanning the environment for potentially important events and trends" (p.10). External communication makes sense out of the complex web of information an organization faces in its environment. The turbulent environment demands close attention; otherwise any organizational tactics, strategies, or operations are based on oversimplification of the environment and may intensify the problems that the organization is confronting (Miles, 1980, p.209). Boundary spanning activities seek to avoid this dilemma.

ADAPTING

An organization can respond to the turbulent environment with active adaptation, in particular organizational learning. Facing the conditions of a turbulent environment, organizations must explore and understand the changes in the environment, and be

flexible enough to respond appropriately (Morgan, 1997, p.44). Through adaptive behavior an organization can find a "balance or compatibility between strategy, structure, technology, the commitment and needs of people, and the external environment" (Morgan, 1997, p.49). In the process of adapting, the organization becomes more complex. The evolution of an organization to a more complex form distinguishes it from non-living systems (Terreberry, 1968, p.599).

How does an organization adapt to a turbulent environment? Theories of adaptive behavior apply open systems theory and the concept of feedback. Feedback is "a circular process where part of the output is monitored back, as information on the preliminary outcome of the response, into the input thus making the system self-regulating, be it in the sense of maintenance of certain variables or of steering toward a desired goal" (Bertalanffy, 1968, p.161). There are two types of feedback in a system: corrective or deviation counteracting feedback, and growth or deviation amplifying feedback (Eisenberg, 1993, p.102). Deviation-counteracting feedback re-establishes the levels of various elements that were defined as goals for the system and is also called morphostasis (Eisenberg, 1993, p.102). On the other hand, deviation amplifying feedback, or morphogenesis does not maintain a steady state or defined course, but looks for "new avenues of growth and development" (Eisenberg, 1993, p.102). Morphogenesis is central to organizational learning, but organizations need both forms of feedback to be effective in a turbulent environment. Deviation-countering feedback allows them to maintain stability on a chosen course, and deviation-amplifying feedback continually assesses if the organization can head in a new direction (Eisenberg, 1993, p.102).

Morphogenesis is the focus of this research as this form of feedback guides an organization's adaptation to the turbulent environment. This form of feedback "elaborates or changes a system's form, structure, or state" (Buckley, 1968, p.58). Buckley (1968), Morgan (1997) and others highlight three principles that guide an organization's morphogenetic behavior. Organizations temporarily adjust to changes in the external environment, direct themselves toward more congenial environments, and permanently reorganize to deal more effectively with the environment (Buckley, 1968, p.58; Morgan, 1997, p.90).

To adjust to a new environment, the organization must first recognize and understand the changes in its environment. Boundary spanning roles such as external communications are the "critical link between environmental characteristics and organizational structure" (Aldrich and Herker, 1977, p.228). Boundary spanning roles are central to the process of mapping the environment. External communications is one area of the organization that is responsible for gathering and processing information so the organization can perform morphogenesis.

In a turbulent environment, the importance of boundary spanning roles in an organization has increased (Aldrich and Herker,1977; Emery,1977; Terreberry,1968). The turbulent environment demands organizational adaptation, and boundary roles are crucial for their monitoring, scanning and information processing activities. As information gatekeepers they "can prevent organizations from becoming prematurely ossified and mismatched with their environment" (Aldrich and Herker, 1977, p.219).

ACTIVE ADAPTATION: ORGANIZATIONAL LEARNING

Organizational learning is a form of active adaptation, which is defined in opposition to passive adaptation. According to Williams (1982), "the difference between passive and active adaptation is the difference between concern with immediate survival in the social environment and pursuing radically different directions to transform the environment""(p.16). Active adaptation responds to the turbulent environment's complexity and uncertainty by providing an organization with the tools to implement an ongoing process of learning.

Two concepts central to organizational learning are single-loop and double-loop learning. Ashby (1960) first introduced these processes, but Chris Argyris and Donald Schon (1978) applied them to organizational behavior (Morgan, 1997, p.88). Single-loop learning is the "ability to detect and correct error in relation to a given set of operating norms" (Morgan, 1997, p.87). Boundary spanners are involved in this form of learning. On the other hand, double-loop learning is when an organization takes a 'double-look' at themselves and questions the relevancy of its norms, structures, and underlying assumptions (Morgan, 1997, p.87). This is a more sophisticated form of organizational learning where an organization is learning how to learn (Eisenberg, 1993, p.102). This is a difficult process to initiate and sustain in an organization, but it is necessary in a turbulent environment. Double loop learning occurs at both the strategic and operational levels. Morgan (1997) notes that many organizations implement double-loop learning at the level of strategies, but at the operational level they still employ single-loop learning

(p.88). This lack of congruence means the organization is not fully effective in the turbulent environment.

The process of organizational learning has a number of stages that lead to an understanding of the external environment. Organizations

> inquire into trends in the contextual and task environment, assess how emergent trends are likely to affect future prospects, determine desirable future directions, critically examine existing organizational design and present strategies, and develop shared understanding of how the organization should change to increase its potential for pursuing desirable directions. (Williams, 1982, p.163)

The first step of this process is undertaken by the boundary spanning roles that are sensitive to changes in the environment. They must recognize patterns and trends that signal impending changes so the organization can be prepared with an appropriate response. The learning organization must think about their organization in new ways so that it can "envisage and create new possibilities" (Morgan, 1997, p.91). The organization has to be creative in its responses to the changes in the turbulent field. This process demands that the organization maintain a clear map of its past, present and future: where it has been in the past, where it is now and where it wants to go in the future. This map is used to guide their behavior in the turbulent environment.

Organizational learning is not a simple process that can be taught in business seminars; it is a form of evolution that changes an organization's fundamental approach to its relationship with the environment. The process forces an organization to constantly reassess its "dominant values and ideals, (and) frameworks of understanding" (Williams, 1982, p.193). It must continually question the norms and frameworks it uses to map its environment. The process must be adopted by the organization as whole, not just certain individuals and it must be carried out at the various organizational levels. In addition, "those most affected by the change must be involved fully in all phases of the process leading to organizational redesign" (Williams, 1982, p.162). To be effective, learning must be integrated into the daily activities of the organization.

The organizational learning process veers radically from traditional management approaches. Traditionally, the focus has been on "fitting outcomes to expectations more than, or at least before, trying to fit expectations to outcomes" (Ramirez, 1983, p.730). This rigid structure is not successful in a turbulent environment that demands flexibility. Traditional forms of planning, management and research are still useful, but they must be guided by active learning. The result is a shift in the organization's approach to the environment, its place in it and the possibilities for the future.

Ramirez's distinction of higher and lower logical types explains how active learning can guide an organization's activities. These two types of logic are arranged in a hierarchy where "the higher logical type constrains and qualifies the lower logical type" (Ramirez, 1983, p.728). In active learning, the process of learning is the higher logical type that

guides the lower logical type of traditional planning, management and research. As a result, traditional management practices of the lower logical type are constantly questioned and tailored to match the demands of the turbulent environment. Schon (1983) has described this process as framing and reframing. Expectations are reframed based on current and future projected learning which allows an organization to anticipate change and be prepared with a response (Ramirez, 1983, p.732). This reframing of expectations to fit environmental changes is another example of organizational flexibility. The expectations of an organization must change as the environment changes or they quickly become outdated, unreasonable and unattainable.

To be a successful learning entity, an organization must be flexible in both its behavior and structure. Morgan (1997) describes this flexible structure as the encouragement of an "emergent" organization (p.94). This adaptive process is guided by an organization's vision, norms, values, and limits (Morgan, 1997, p.95). Organizational learning diverges from traditional approaches that define static targets for an organization to meet, targets which discourage double loop learning (Morgan, 1997, p.95). Without double-loop learning, the organization is not effective and will not adapt.

The theories introduced in this chapter are the foundation for the remainder of the thesis. The following chapter focuses on two of the key issues of the central question: communication technologies and external communications. The chapter reviews the literature in three areas: technology and organizational change, public relations theory, and the use of communication technology in public relations.

CHAPTER THREE:
COMMUNICATION TECHNOLOGY AND PUBLIC RELATIONS: A LITERATURE REVIEW

The central focus of this thesis encompasses three areas of literature that will frame the discussion: technology and organizational change, public relations, and communication technologies in public relations. This chapter reviews pertinent literature on each of these areas. The discussion of these literatures provides a framework for answering the question at hand, and background for analyzing the case study data.

The first part of this chapter focuses on theories of technology and organizational change. It introduces general theories of how and why an organization is influenced or affected by the introduction of a new technology in the environment. This section also encompasses a discussion of models describing the changes to information technology in the modern organizational environment and it describes specific types of organizational changes at micro and macro levels.

The second part of this chapter discusses the various theories and models academics have used to describe the practice of public relations (PR). Here, in particular, we will identify PR as a form of external communications that is crucial to an organization's survival in a turbulent environment.

The final section joins these two literatures through a discussion of how PR is affected by the introduction of communication technologies.

Terminology

Before the literature is introduced, the term "communication technology" must be discussed. Communication technologies fall into the broader category of information technology. Zmud (1990) defines information technology as "the application of computer and communications technologies in the acquisition, storage, analysis, distribution, and presentation of information" (p.95). Some examples of the technology include computers, including hardware and software; telecommunication, including fiber optics and satellites; videoconferencing; Internet; email, and artificial intelligence (Reddy, 1990,p.235).

The development of communication technology has affected a broad range of organizational activities. Organizational change in the face of technological advances is not a new phenomenon. The industrial revolution led to the automation of physical tasks, and now the information revolution is replacing human information processing activities with computers. Digital technology uses binary code to transform images, text, audio and video into a series of ones and zeros. This code can be transported anywhere through telephone lines, fibre optic cable or satellite transmission, and be reconstituted into its original at the point of destination. The advantages of digital technology include enhanced collection, storage, analysis, transmission, and encryption of information. In addition to new tools, the advances have introduced new knowledge and methodology (Goodman & Sproull, 1990; Reddy, 1990; Weick, 1990). The new technologies have introduced a broad range of tools and processes, but they do not always replace older ones; they may complement what already exists. For example, the development of email

has not replaced the use of traditional tools including the telephone and written correspondence. On the other hand, the use of computer categorizing systems in libraries has replaced traditional card catalogues. Technological innovation is an ongoing process and each new development is added to the existing mix.

I Technology
General Theories of Technology and Organizational Change

To understand how advances in communication technology have affected organizations, it is important to take a step back and look at the general effects of technology on organizations. This discussion will introduce the theory of technological determinism, Markus and Robey's (1988) three perspectives on technology and organizational change. The aim is to provide a framework that can help us understand the changes now being experienced by organizations. Following this general discussion, an examination of theories that to communication technology will be presented. This will include models developed by O'Reilly and Pondy (1979), Galbraith (1973), and Gerstein (1987). These models are particularly useful in describing changes that organizations go through when communication technologies are introduced.

The previous chapter introduced various organizational change theories including systems theory, contingency theory, organizational adaptation, and organizational learning. These theories provide a useful background for the present discussion by demonstrating how internal functions; roles and structures of an organization must adapt as the external environment changes. Communication technology is one element in the environment that has advanced rapidly since the 1960s. The literature illustrates that this

advance has been mirrored by a change in organizational structures and processes. To point out a direct causal relationship between these two streams of change is too simplistic and would fall into the trap of technological determinism. Technological determinism "assumes that the technology is a *determinant* of organizational change; that is each technology necessitates new organizational activities and structures and changes the features of already existing activities and structures" (Nass & Mason, 1990, p.46). Technological determinism does not acknowledge that technology is only one environmental factor that can initiate organizational change; it overlooks the role of economic, political, legal, demographic, ecological, social, and cultural elements in the environment (Miles, 1980; Pfeffer, 1982; Scott, 1990; Sproull & Goodman, 1990; Trist, 1977).

A number of different disciplines have studied the relationship between technology and organizational change, including organizational theory, management science, sociology and computer science (Markus & Robey, 1988). As a result there are a variety of approaches instead of a single cohesive framework. Markus and Robey have classified the approaches into three categories: technological imperatives, organizational imperatives, and emergent perspectives. These categories were developed from Pfeffer's "perspectives on action," that classify approaches to organizational theory (Pfeffer, 1982, p.5).

The first category, the technological imperative, adopts an approach of technological determinism and argues that technology has a direct impact on an organization by

determining or constraining its behavior (Markus & Robey, 1988, p.585). Pfeffer's (1982) original category is "external constraint or situational control," where external factors determine an organization's actions (p.8). This approach overlooks other possible factors in the environment, and denies the organization any forms of self determination or choice in adaptation.

Markus and Robey's second category, the organizational imperative is based on Pfeffer's (1982) category of "prospective, intendedly rational, created action" (p.5). Under this perspective, an organization meets specific goals by rationally choosing a particular action from a variety of options (Pfeffer, 1982, p.6). In this category, organizations have an "almost unlimited choice over technological options and almost unlimited control over the consequences" (Markus & Robey, 1988, p.587). Once again, this is a simplified view of organizational change as it overlooks the constraints and demands in the environment, for example those created by technology.

The final category, the emergent perspective views the use and consequences of technology as the result of complex social interactions (Markus & Robey, 1988,p.588). Pfeffer's (1982) original category is the "random, emergent process view of action" (p.9). This complex process involves interaction between various organizational and environmental factors (Pfeffer, 1982, p.9). Under this perspective, the changes effected by technology cannot be predicted as there are other environmental factors involved in the process. In addition, neither the technology nor the organization has complete control over the process of change, which result from a combination of "goals, actions, and

interactions" (Contractor and Eisenberg, 1990, p.150). This perspective is the most valuable to this research as it addresses the interplay between the turbulent environment and organizational choice.

Weick's notion of enactment is central to the emergent perspective process. An organization cannot attend to all the events and elements in the environment, it must choose a subset to act upon. The elements included in an organization's enactment are those that the organization will track and monitor. But, an organization is also affected by elements outside of their enacted environment, and as a result it must continually assess and change its enacted environment. As a result, an organization's enactment of the environment is not static; it is a dynamic process. It is created out of a set of patterns and behaviors that are continually produced, reproduced and revised (Scott, 1990, p.127).

The elements included in an organization's enactment of the environment can affect organizational structure. The introduction of technology into this process has an effect as it offers new tools that the organization uses to enact its environment. In addition, the introduction of a new technology either changes or reinforces existing organizational rules and patterns of communication, and this affects the structure (Weick, 1990, p.19). Technology alone does not create change; it is a result of the interaction between the technology and the formal and informal organizational structures. For example, if a technology challenges particular rules or procedures in the formal structure, the organization's structure may have to change.

Communication Technology and Organizational Change

Markus and Robey's (1988) classifications and Weick's (1979) view of the enacted environment are possible approaches to understanding the role of technology in organizational change. This section focuses specifically on the effect of communication technology on organizations. O'Reilly and Pondy (1979), and Galbraith (1973) offer two perspectives on this subject. In an organization, communication technology influences changes to information processing activities and ultimately to communication patterns and flows. Communication tools have changed the nature of an organization's internal and external communications activities. In an open systems view of organizations, the communication flow between elements is what binds the structure together.

The connection between technology and organizational change is not exclusive to communication technologies. Historically, the introduction of a new technology has effected changes in organizational behavior and structure. One explanation is that a technology is most effective when the organization's structure changes to meet its needs and characteristics, instead of forcing the technology to fit into an existing structure (Galbraith, 1973). For example, communication technology offers new tools for internal communication and the structure must be flexible enough to accommodate the demands of the new tools.

A variety of theorists have examined how the introduction of communication technologies has influenced organizations. O'Reilly and Pondy (1979) offer a model of organizational communication that includes organizational variables, communication

structure, process and outcomes. In this systems-based model, the elements of the organization are connected, and changes to one have a domino effect. The introduction of communication technologies affects each element of the organization.

The organizational variables in O'Reilly and Pondy's model include the information processing needs of the organization, which guide the development of the communication structure. The communication structure includes networks, roles, directionality, and information channels which in turn constrain the communication process. The communication process is composed of gatekeeping and boundary spanning functions and it leads to the development of the communication outcomes including group decision making processes and leadership roles.

Interdependence and interconnectivity define O'Reilly and Pondy's model. As a result, the introduction of communication technology in the environment and the organization has a number of effects at each level. With the introduction of communication technology, the organization's structure as a whole changes. Communication technology creates a greater demand for information processing; develops new communication channels and patterns; and introduces new tools for boundary spanners to monitor the environment.

Galbraith (1973) offers a second perspective on the effects of communication technology on organizations. A contingency theorist whose work falls into Markus and Robey's category of an emergent perspective, Galbraith applies Information Processing Theory to

study the relationship between an organization's structure and its information processing requirements. The Information Processing Model defines an organization as an information processing network whose key activities are information processing and decision-making (Galbraith, 1973, p.1977). This model includes tasks; rules, programs and procedures; hierarchy; and goals (Galbraith, 1973, p.9). Information processing is connected to each of these elements and the introduction of communication technology affects them all.

Galbraith offers strategies organizations can use to deal with the challenges and opportunities of the turbulent environment. These strategies include the use of resources, group and teamwork, vertical information systems, and lateral relations (Galbraith, 1973, p.15). In the new environment, an organization can alter how resources are allotted, for example it can invest in an up to date communication system and data processing software and hardware. The organization can also increase the use of teams and groups to accomplish tasks. Teams are self-supervising and responsible for decision making at their level of the hierarchy. The third option Galbraith introduces is to implement a vertical information system that supplies decision makers with continuous feedback so they can assess if structural adaptation is necessary (1973, p.17). The final strategy he offers is the creation of lateral relations, which change the communication and decision making patterns of the organization. This strategy "moves the level of decision making down to where the information exists rather than bringing it up to the points of decision" (Galbraith, 1973, p.18).

Galbraith's approach is valuable to this study as communication technology has increased levels of information to be processed, and reduced the length and demand of information processing tasks through computerization. As the levels of complexity, uncertainty and interdependence increase, organizations must perform more information processing activities (Scott, 1990, p.113). The adaptive strategies Galbraith proposes are well suited to the characteristics of the new technologies. For example, email and Intranets promote the use of lateral relations. Galbraith recognizes the roles of both organizational choice and environmental constraints in the adaptive process.

Communication Technology and Changes to Organizations: The Practical Level

The theories introduced in this chapter provide a framework for understanding how organizations are affected by the introduction of new technologies. How organizations perform tasks and what tools they use has changed dramatically. The goal of this section is to describe the organizational changes at a practical level. There are two main areas that are affected by the introduction of communication technology: information processing activities and communication patterns and networks. As systems with multiple components that gather input and create output, these two activities are central to organizations (Gerstein, 1987; Galbraith, 1973, 1977; O'Reilly & Pondy, 1979; Thompson, 1967). These changes to organizations can be viewed from the micro and macro levels, from the individual or the organizational levels.

At the micro levels of analysis, the introduction of communication technology into organizations has changed how individuals work and communicate. The changes are

related to tools such as computers, email, Internet, Intranet, and videoconferencing. Individuals are required to have a new set of skills to function in this new environment. In addition, they are in a process of ongoing learning as the technology is constantly changing and being updated. Communication patterns are also changing as the technology reduces face to face communication and increases electronic channels such as email. Meetings are being replaced with informal discussions through email and the use of videoconferencing (Thach & Woodman, 1994, p.39). One result may be a lower level of member motivation and satisfaction. One benefit of the technology is its eradication of time and space constraints. Individuals are not bound to a specific geographic location or time of day. According to Olson (1991), the new technology's characteristics of portability, time independence, location independence and flexibility has increased levels of remote work including telecommuting (p.8). Members of an organization can work from home or other locations at any time of day and have full access to information systems and other members of the organization. Communication with other members of the organization is asynchronous; messages are sent and responded to at the leisure of the individual. Is this overall reduction of face to face communication beneficial? There are certain non-verbal cues that are lost in an electronic message, which can lead to misunderstanding and miscommunication. In addition, there are concerns that a reduced level of contact with other members can have negative psychological consequences (Thach & Woodman, 1994, p.40).

The organizational changes can also be viewed from a macro level of analysis: the organization as a whole. At this level, the new technology has dramatically changed

organizational communication patterns. For example, email has increased communication between various departments and levels of hierarchy (Thatch & Woodman, 1994, p.38). One result of these shifting patterns is a change in the organizational decision making process. In the turbulent environment, decisions must be made frequently and efficiently. In addition, large amounts of information can be stored, and reconfigured to respond to a particular question (Huber, 1990, p.241). The new technologies aid decision making as they allow access to information from both inside and outside organizational boundaries. Armed with this improved access to information, members make more informed decisions. The technology also increases the participation of internal and external individuals who were not included in traditional decision making processes. For example, external experts can be contacted for feedback on particular questions (Huber, 1990, p.247).

Thatch and Woodman (1994) undertook a survey of the advances in information technology that have the potential to impact organizations and they reviewed the issues the technologies raise. Thatch and Woodman's survey revealed three trends in the new technologies that provide organizations with valuable opportunities, including, tools for individual work support, tools for group work support and enhanced global communications (1994, p.35). Tools that can enhance the organization at the individual level include the use of portable computers to create mobile workers, use of computerized personal agents and personal data assistants, and hyper-learning, which is using computer training programs to gain necessary skills (Thatch and Woodman, 1994, p.35). Group or teamwork is enhanced by GroupWare, a type of software that networks a team's

computers; and the use of real time online discussions and chats (Thatch and Woodman, 1994, p.36). Enhanced global communications offer a variety of tools for organizations including email, group videoconferencing, videophones, and desktop videoconferencing (Thatch and Woodman, 1994, p.38).

Thatch and Woodman's (1994) research indicates that there is a higher level of participation in decision making at all levels of the hierarchy. By using email and videoconferencing individuals can participate without the large time commitment required for face to face meetings. In addition, many decisions are made at the point where the information is in the hierarchy rather than sending it up to higher levels. In addition, once decisions are made the members are more informed through the use of Intranets and Electronic Bulletin Boards. Thach and Woodman (1994) argue that as a result, members have a more positive perception of organizational communication flows as information is more timely and accessible (p.38).

The changes to decision making and communication patterns are influencing organizations' hierarchical structures. The new environment demands a hierarchy that is flexible, not static. This demand for a flexible hierarchy is in response to the increasing complexity and dynamism of the environment (Reddy, 1990, p.248). Increasing self-supervision, computer monitoring and teamwork have all reduced the number of levels in the hierarchy (Gerstein, 1987, p.27).

At a more abstract level, changes in communication technology have led to changes in organizational culture. Culture is a part of the informal structure of an organization that is based on its communication patterns and behaviors. It is a set of shared values, beliefs, meaning, understanding, and sensemaking (Morgan, 1997, p.138). This collection of organizational behavior patterns is directly affected by the technology. As the culture of the organization changes it reflects the new forms and patterns of communication that the technology introduces (Gerstein, 1987). Technology, to be fully implemented, must become a central component of organizational culture. If members are not willing to accept the technology this will impede its integration into the organization.

II Public Relations

The central question points to a second body of literature, Public Relations (PR) theory, a form of external communications. PR is a subset of external communications and the academic literature in this area includes all the elements of external communication this study is concerned with. The practice of public relations has existed in one form or another for centuries, dating back to Aristotle and Plato's practice of rhetoric. This form of organizational communication is labeled under a variety of titles including corporate communications, issues management, product publicity, investor relations, financial communication, lobbying, public affairs, media relations, community affairs, crisis management, events management, and sponsorship (White & Mazur, 1995, p.12). Although there are a variety of names for PR practices, they all share similar roles in the organization. Is there a broad definition of PR that encompasses these various facets? The goal of defining PR is not to name all its elements, but to highlight its distinguishing

characteristics. The definition should include elements that are informative for both theory and practice (Long & Hazelton, 1987, p.6). Defining this term is not a simple task, and since the early 1970s scholars have produced a variety of definitions. Each definition of PR focuses on similar elements, but each reinforces the value of one over others. Grunig and Hunt's (1984) is the most popular definition: "the management of communication between an organization and its publics" (p.4).

Cutlip, Center and Broom's (1985) definition focuses more on the relationship between the organization and its publics. They define PR as "the management function that identifies, establishes, and maintains mutually beneficial relationships between an organization and the various publics on whom its success or failure depends" (Cutlip, Center & Broom, 1985, p.4). A final definition is offered by the First World Assembly of Public Relations Associations in their 1978 Statement of Mexico. This definition focuses on the activities of PR, they define it as "the art and social science of analyzing trends, predicting their consequences, counseling organizational leaders, and implementing planned programs of action which will serve both the organization and the public interest" (Gordon, 1997, p.60).

These three definitions share the common elements of management, communication, organization, and publics. Each definition points to the role of PR both in the organization and between the organization and its publics. The definition this thesis adopts uses these as a foundation, but focuses on different elements. Applying an open systems approach, I include PR under the broader term of external communications and

define it as a component of an interconnected system that is responsible for communicating, scanning and monitoring the internal and external environments to achieve organizational goals within external constraints. This definition focuses on the role of PR in the organization's adaptive subsystem. This definition will be explored through a discussion of PR's role as a boundary spanner. The various definitions presented illustrate that PR can be viewed in a number of different ways, but its essential elements are constant. PR is an integral component of organizational management and is a critical point of contact with the external environment.

Academic Research and Public Relations

This section of the literature review will presents models that explain and describes the role of PR in an organization. It review systems theory and discusses the models of Grunig and Hunt (1984); Hazelton and Long (1987); Cutlip, Center and Broom (1984); Bell and Bell (1986); Aldrich and Herker (1977), and dialogic communication (Eisenberg & Goodall, 1993; Kent & Taylor, 1998; Pearson, 1989). These models share a common framework, but each focuses on different elements and examines the role of PR from a different perspective.

Public Relations is an applied social science included under Organizational Communications. This is a part of the broader field of Communication Studies which is a young academic field. The transition of PR from a set of practices, to a profession and accepted academic discipline has been a slow process. Academic theory in PR was initiated in the 1970s and today it is still at an early stage of development. Many of

fundamental models and theories of PR are drawn from other areas of the social sciences and humanities including psychology, social psychology, economics, sociology and political science (Cutlip, Center & Broom, 1985; Grunig, 1992; Prior-Miller, 1989; Terry, 1989).

Although a dominant theory does not exist in PR, there is a dominant stereotype of the profession. This stereotype claims PR's communication tactics "manipulate publics for the benefit of organizations" (Grunig, 1989, p.18). This view is rooted in PR's history when practices were defined by a one way flow of communication from the organization to the public. The manipulation and persuasion of the public does still exist, but the practice has also adopted a more democratic and dialogic communication. In addition, in an ever-changing turbulent environment, PR plays an important role in adapting an organization's structure and goals to external constraints. As environmental uncertainty increases, the role of PR in scanning and monitoring the environment becomes crucial to an organization's survival (Aldrich & Herker, 1977; Terreberry, 1968).

PR is "an infant scholarly field" that has fought a crisis of identity since its inception (Grunig, 1989, p.18). One reason for this is that much of the literature focuses on the "How To" aspects of practice instead of academic research and theory. In addition, the academic literature focuses on gathering and analyzing data rather than building theories (Grunig, 1989, p.23). For these reasons, the goal of academics is to develop a solid theoretical framework that explains the various roles, processes, structures and behaviors involved in the practice of PR. The everyday practices of the profession are important to

this process as they are the starting points for theory development; they are part of the common body of knowledge that is the basis of academic work. There is a symbiotic relationship between theory and practice. Any theory that is constructed will eventually help practitioners understand the various processes at work in their profession and help them explain, predict and control the communications process (Long & Hazelton, 1987, p.4).

As with all theories, PR theories are based on a shared body of knowledge. Grunig and Hickson (1976) outline the elements that should be included in PR theory's stock of knowledge. They point to aspects of organizational structure and behavior, behavior of individuals in the environment, elements of communication theory such as message construction and reception, the nature of the relationship between an organization and its public, and the historical background of PR (Grunig & Hickson, 1976, p.32). The dominant approach in PR scholarship is open systems theory (Aldrich & Herker, 1977; Bell & Bell, 1976; Cutlip, Center & Broom, 1985; Grunig, 1992; Long & Hazelton, 1987). The systems theory perspective defines PR as a component at the boundary of an interdependent system.

Models of Public Relations

An open systems approach to PR focuses on its role in organizational input and output activities and interactions with the environment. This perspective offers a normative theory of PR and it emphasizes the importance of holism, interdependence, adaptation, and communication (Grunig, 1989, p.38). PR's position in the system is at the boundary

where the lines between the system and the environment are blurred and there is a high level of interaction. PR is a facilitator, filter and mediator between the environment and the system. Its role is to maintain a balance between the constraints of the environment and to strategically adjust the organization's behavior and goals to its changing environment. This is accomplished through an ongoing process of scanning, monitoring, and communicating with the environment. These activities define PR as a central element in a system's adaptive subsystem, which is responsible for morphogenesis (Bell & Bell, 1976; Cutlip, Center & Broom, 1985; Dozier & Grunig, 1992; Grunig, 1992). PR must adopt a proactive approach to communication so the organization is in a moving equilibrium with changing environmental conditions (Cutlip, Center & Broom, 1985, p.192). This approach is the basis for the majority of academic work in PR, including the theories of Grunig and Hunt; Long and Hazelton; Cultip, Center and Broom; Bell and Bell; and Aldrich and Herker, which this chapter introduces.

There are a variety of system based theories and models that are used in PR research. The use of models is important to PR as they connect what appear to be unrelated events, and facilitate the application of the theory in a practical setting (Hazelton & Long, 1987, p.5). Grunig and Hunt (1984) present the most popular set of models. Their research of past and present PR practices led to the development of four distinct models. The models are press agentry / publicity, the public information model, the two way asymmetrical model, and the two way symmetrical model (Grunig & Grunig, 1992, p.288). These four are divided into two categories: symmetrical and asymmetrical communication. The first three models are asymmetrical communication, and the remaining model is clearly

labeled as symmetrical. Asymmetrical communication is a one way process that seeks to manipulate the public without changing the behavior of the organization. On the other hand, symmetrical communication is a balanced approach that engages in an ongoing dialogue with the public. Dialogue is used to "manage conflict, improve understanding, and build relationships" (Grunig, 1992, p.39).

The first model, press agentry and publicity, was practiced in the middle of the 19th century and it views the public as a mass waiting to be persuaded and manipulated by organizations. This form of PR does not seek to create a dialogue and its goal is to reach the public through any possible means.

The second model is the public-information model in which PR practitioners disseminate positive information to the public and avoid anything negative. They do not lie to the public, but deception is achieved through the omission of negative facts. Like the first model this is an asymmetrical approach to communication as there is no two way flow of information.

The third model of PR is the two way asymmetrical approach. Edward L. Bernays, the father of PR, practiced this form of communication. In this model the goal of communicating with the public is to determine how they can be manipulated without having to change the behavior of the organization (Grunig, 1989, p.29). This form of PR does not establish a dialogue with the public.

The final model is the two way symmetrical practice of PR. This model is an open systems view of PR that varies significantly from the previous three as it seeks to create a meaningful dialogue with an organization's publics. Ongoing dialogue is used to facilitate communication and understanding with the organization's publics, not to manipulate them (Grunig, 1992, p.289). All four of these models are practiced today, but Grunig points to the two way symmetrical model as the form of excellent communication that all PR practitioners should strive towards. This form of PR uses "bargaining, negotiating, and strategies of conflict resolution to bring about symbiotic changes in the ideas, attitudes, and behaviors of both the organization and its publics" (Grunig, 1989, p.29). The emphasis on ongoing dialogue with the external environment is a theme that will be repeated in the other models this chapter introduces.

The remaining models of PR are all based on an open systems view of organizational communication. Long and Hazelton (1987); Cutlip, Center and Broom (1985); Bell and Bell (1986); and Aldrich and Herker (1977) all view PR as a component of a larger interconnected system. The first systems based model is Long and Hazelton's Public Relations Process model. This model is composed of the environmental supersystem, organizational subsystem, communication subsystem, and the target audience subsystem (Long & Hazelton, 1987, p.9). The environmental supersystem contains five dimensions: legal, political, social, economic, technological, and competitive; these all provide input into the subsystems. These are similar to Miles' (1980) classification of the general environment. Before input from these domains can enter a subsystem, it must first pass through the gatekeeper: the PR process. The role of PR in each subsystem is slightly

different. In the organizational subsystem the PR decision making process monitors the input, identifies possible problems, performs research and analysis, and searches for solutions to potential problems (Long & Hazelton, 1987, p.10). The role of PR in this system is to closely monitor both the organization and its environment to ensure that organizational goals can be met. It is one function of the organization that is involved in the management and direction of organizational adaptation.

In the second subsystem of communication, the role of PR is slightly different. In this subsystem, PR is a boundary spanner between the organization, environment and target audience subsystem. As a boundary spanner, PR is involved in the production, encoding and delivery of messages to the publics.

The final subsystem is the target audience. This subsystem is the recipient of PR created messages from the communication subsystem. This process involves a feedback loop from the audience to the organization, which leads to either maintenance or adaptation of organizational behavior. This model of subsystems indicates the communication patterns between organizations, environments and the audiences.

Cutlip, Center and Broom (1985) present the third system based model in their text Effective Public Relations. In this open systems model, PR is responsible for monitoring the environment – organization relationship and adapting organizational behavior when necessary. This role is similar to Grunig and Hunt's (1984) two way symmetrical model. Through a process of dialogue, PR maintains a balance between organizational goals, the

public's needs, and environmental constraints. Balance in the system is maintained through organizational adaptation to changes in the social, political, technological or economic variables in the environment (Cutlip et al., 1985, p.196).

The fourth model also adopts an open systems approach. Bell and Bell (1986) present two distinct modes of PR that identify and assess its function within an organization. Their model is composed of the functionary and functional modes. The functionary mode is a form of asymmetrical communication where PR does not have any role in the decision making process of the organization. This mode is similar to Grunig's public information model, as the role of PR is to supply the environment with information about the organization and disregard any feedback from the environment (Bell & Bell, 1986, p.52). In this mode, practitioners are not involved in the decision of "what" is said, they are merely vehicles for "how" it is said (Bell & Bell, 1986, p.53). The absence of ongoing dialogue with the environment causes serious problems for the organization, especially when the environment is increasingly turbulent and uncertain. For example, threats and opportunities presented to the organization go unnoticed and may result in serious repercussions.

In contrast with the functionary mode is the functional mode. This second mode adopts an open systems approach to PR and defines it as central to the organization's adaptive subsystem. Based on its monitoring and scanning of the conditions in the environment, PR can influence how an organization chooses to adapt (Bell & Bell, 1986, p.53).

The open systems approach that has been applied in the previous three models is also incorporated into Aldrich and Herker's (1977) model of Boundary Spanning roles. Boundary spanners are located at the perimeter of the organization and they are the first points of contact with the environment. These roles represent the organization, scan and monitor the environment, protect the organization from environmental threats, process information and act as gatekeepers, and communicate with environment (Miles, 1980, p.320). As a boundary spanner, PR has a number of responsibilities that are related to its role in the adaptive subsystem. PR scans the environment and searches for both opportunities and constraints that will affect the organization. Their monitoring activities track changes in the environment over time.

In addition to these functions, PR is involved in information processing. As boundary personnel, PR practitioners must interpret the relevancy of information for the organization, and decide if it should be communicated to decision makers (Aldrich & Herker, 1977; Miles, 1980). As a boundary spanner, PR balances the goals and behaviors of the organization with the constraints in the environment (Aldrich & Herker, 1977, p.221). In a turbulent environment, this boundary spanning role is crucial to an organization's survival (Aldrich & Herker, 1977; Miles, 1980; Terreberry, 1968; Thompson, 1967; Trist, 1977). PR's boundary spanning activities enable an organization to deal effectively with the high volume of information flowing across its boundaries and the intense rate of change and uncertainty in its environment.

A final approach to examining PR is the application of dialogic communication theory. This is a general approach to communication, not one particular method or technique (Pearson, 1989, p.124). Dialogue is equitable, open, honest, understanding, genuine, and co-operative communication (Eisenberg & Goodall, 1993; Kent & Taylor, 1998; Pearson, 1989). It is not a means to an end, but an end in itself (Eisenberg & Goodall, 1993; Kent & Taylor, 1998; Pearson, 1989). The participants do not engage in a dialogue to serve their own ends; the dialogue itself is the end goal. This theory is what stands behind the notion of symmetry found in Grunig and Hunt's (1984) two way symmetrical model of PR. It is an ongoing interaction that establishes a mutually beneficial relationship. The role of dialogic communication has increased with the introduction of communication technology.

III Public Relations and Communication Technology

Up to this point, the discussion has explored communication technology and organizational change, and PR. This section links these topics together. In the 20th and 21st century the widespread use of new communication technologies has led to a direct connection between technology and Public Relations. The new forms of technology are slowly being adopted and integrated into the everyday practices of PR. How does this shift affect PR theory? Unfortunately, the majority of articles focus on the "How To" aspects of the technology and do not address the larger theoretical issues involved (Bobbitt, 1995; Delahaye Paine, 1998; Evans & Pavlick, 1998; Gerstner, 1998; Herrington, 1998; Holtz, 2000; Janal, 1998; Kent, 1998; Mckeone; Wilson, 1996). As previously discussed, this is an ongoing problem in PR scholarship; practical articles

outweigh academic ones. Kent and Taylor (1998) point out the importance of applying communication theory to the use of communication technology in PR. This section, and this thesis as a whole is attempting to fill this gap in the literature. The following discussion will examine how communication technology's characteristics fit into the existing models and theories of PR; it will also discuss the changes to PR practices. The goal is to provide a complete picture of the effects of communication technology on organizations by combining theory and practice.

Overall, the integration of communication technologies into PR does not alter existing systems based models and theories. The use of communication technology has not changed the fundamental functions of PR, but it has altered how the tasks are carried out. A large part of PR's role is information processing for the organization's adaptive subsystem and digital technology has altered these tasks dramatically. It has increased the speed of dissemination, access and feedback (Esrock & Leichty, 1998, p.308). The new technologies have introduced a new channel of information; PR must be technically capable of accessing, scanning and monitoring this new channel. If PR does not adapt to these external changes it must deal with the threats and challenges of issues that have developed without its knowledge. PR's scanning and monitoring activities are undertaken to continuously update its snapshot of the environment. If PR is not technically capable of examining the new channels of information, it will not have a complete picture of external conditions. It is not necessary that the organization's internal functions adapt immediately to environmental conditions, but it is necessary for those located at the boundaries.

What is the result of integrating the new technology into PR's boundary spanning activities? The technology offers PR a new set of tools to carry out its tasks. Two functions of boundary spanners are scanning and monitoring. These information processing activities are enhanced by new tools such as online databases, Internet tracking, online forums, and electronic Bulletin Board Systems (BBS). Electronic databases allow an issue to be identified and monitored efficiently (Heath, 1998; Thomson, 1995). The online databases provide convenient access to newspaper and magazine periodicals; press releases, trade journals, and archives from professional associations, special interest groups and government departments (Thomson, 1995, p.105). Scanning and monitoring activities are enhanced even further with the use of software that searches for particular key words and phrases chosen by the user. This information gathering can take place while individuals perform other tasks and any matching information is sent to their email account (Thomsen, 1995, p.111).

Thomsen (1995) studied the use of online databases in issues management, one of the functions of public relations. Through focused interviews with 17 public relations practitioners in 12 US based organizations, Thomsen examined the use of databases for scanning, monitoring and tracking trends in the environment (1995, p.107). The results of Thomsen's study indicate that online databases are a growing source of information for public relations professionals. Online databases offer access to information before it is printed in the mainstream media and the study's respondents combined the use of databases with information from newspapers, calls from reporters, information from

associates in other organizations, trade publications, memos from colleagues, and direct requests for information (Thomsen, 1995, p.109). Thomsen's study concluded that databases are a useful tool for public relations professionals as they offer a wide range of current information and public relations professional can actively seek and respond to issues before they threaten the organization.

The value of the new communication technology tools is the variety of information available, and the speed and efficiency with which it can be accessed. At this point boundary spanners continue to monitor traditional communication channels through media monitoring and clipping services. The information online may be more timely, but often it is a summarized version of what appears in traditional channels. The value of the technological approach is that issues can be intercepted earlier, allowing the organization to understand and develop a solid position on the issue (Heath, 1998, p.277). Although the information gathering process can be automated, the remaining functions of the boundary spanner are virtually unchanged. The information must still be analyzed, interpreted and summarized. The technology can not replace these processes; they continue to rely on the information processing capability of the human brain.

Newsgroups and BBS's are another growing source of information and support for PR professionals. Thomsen (1996) studied the use of PRForum, a subscription based newsgroup for public relations professionals. The researcher collected messages posted on PRForum over a 15-day period in 1995 and coded them for form, function and content (Thomsen, 1996, p.118). Thomsen also posted a questionnaire on the newsgroup and he

received 41 responses. Thomsen's research concluded that the newsgroup was a supportive community that PR professionals used for advice and questions about various PR related issues. 46% of the messages were related to questions about the Internet, including online marketing methods, development of web pages, general Internet information, using the PRForum, defining Internet related terms, email, listserves (Thomsen, 1996, p.123). Thomsen's research concluded that PR professionals used this resource to exchange information, debate issues affecting the profession, and to "cultivate and foster a sense of self-validation " as a PR professional (Thomsen, 1996, p.129). The value of Thomsen's research to this thesis is the evidence that PR professionals are using the new communication technology tools in their daily tasks.

Of all the new communication tools, the Internet is the most frequently discussed. During the rise of its popularity in the early 1990s futurists predicted that it would revolutionize how the world communicated. It has not met all the expectations, but it does offer a variety of useful tools to PR practitioners. One of its most valuable characteristics is its potential to create a dialogue with the public. For example, the use of email by PR practitioners can enhance their communication with stakeholders in the environment. Email provides the user with an asynchronous connection to members of the organization and public. Email has the same effects on PR as the other parts of the organization, including the reduction of face to face communication, fewer meetings, demand for new skills, and the potential for remote work. For PR it has changed how a number of tasks are accomplished, but in some instances it does not replace more traditional communication channels. One of PR's functions is relationship building and

to create a close connection it is necessary to speak on the telephone or meet face to face. Although email can be useful for the efficient transfer of data, it is not as personal as other forms of communication.

The creation of a corporate web site also has value for PR practices. When used properly, a web site can support dialogic communication by creating an ongoing feedback loop between an organization and its stakeholders. Like other forms of new technology, the Internet does not replace more traditional relationship building tools; it is added to the existing mix and complements them. The Internet can promote dialogue through the use of strategically developed web sites, email, online forums, real time question and answer sessions and an overall focus on the quality of the content and not simply technical wizardry and graphics.

To create a dialogue an organization must integrate its web site into a strategic communications plan. Kent and Taylor (1998) argue that the majority of web sites are not used strategically and practice monologic rather than dialogic communication (p.325). Kent and Taylor (1998) outline four principles of dialogic communication for the use of web sites on the Internet including the dialogic loop, usefulness of information, generation of return visits, and intuitiveness or ease of interface (p.326).

The first principle , the dialogic loop, highlights the importance of posting information on the organization's web site that the public wants or needs (Kent & Taylor, 1998, p.326).

To create a dialogic loop, the organization's web site must have highly visible email addresses and other contact information. In addition, when an email message is sent, the organization must respond promptly.

The second principle is the usefulness of information. Kent & Taylor explain that an organization's web site must include information of value to all users, for example general or historical information about the organization. Any specialized information for specific stakeholder groups should be well organized and easy to find (Kent & Taylor, 1998, p.328).

The generation of return visits is Kent and Taylor's (1998) third principle; web sites should be up to date and interesting for visitors. Kent and Taylor suggest "updating information, changing issues, special forums, new commentaries, on-line question and answer 'experts' to answer questions for interested visitors" (1998, p.329).

Kent and Taylor's fourth principle is the intuitiveness, or ease of using the interface. They argue that a web site should be easy for users to navigate and understand. Web sites should include indexes and focus on textual content instead of complex graphics. As Kent and Taylor point out, "the focus of the sites should be the organization, product, or information located there, and not on the 'bells and whistles' that accompany it. Just because you can make a whirling, flaming logo, does not mean that you should" (p.330).

The final principle Kent and Taylor discuss is the rule of conservation of visitors. Organizations should be careful when using links on their web site as links take visitors away from the organization's site and the users may not return (p.330). If links are used they should be chosen carefully and organizations should include a clearly marked path to return to the original site (p.330).

Kent and Taylor offer practical tools to help an organization create a dialogue with the public. If organizations do not adhere to the five principles Kent and Taylor discuss, they will be practicing Grunig and Hunt's (1984) one way asymmetrical public information model of communication. The organization's web site is reduced to an electronic brochure. On the other hand, a strategic approach uses a web site to provide a variety of publics with valuable and current information, and mechanisms to voice their questions, concerns or problems. One possible explanation for this misuse of the Internet is that because of its narrow demographics, organizations do not see it as a far reaching communication vehicle. An average user is commonly defined as a white professional male between 20 and 30 years old. Ovaitt (1995) argues that this demographic is changing as individuals are becoming more familiar with the technology and access is increasing (p.19). For example he notes that there is an increase of retired people online as they have the time and desire to learn about the technology (Ovaitt, 1995, p.19).

Providing the public with mechanisms for feedback does not create a dialogue. An organization must have members who have knowledge of PR practices and the technology. Increasingly, PR professionals are required to have technical skills to

perform their activities. If the organization has the technical knowledge a dialogue can be established. For example, if a member of the public emails a question to the organization PR practitioners must be able to reply promptly with an appropriate answer. Tools that promote dialogue are email, electronic bulletin boards and real time question and answer sessions. Organizations can promote these events as opportunities for the public to engage in dialogue with members of the organization. This approach is often used in academia, but is not as common for other organizations (Kent & Taylor, 1998, p.329).

One specific form of public relations is issues management. Esrock and Leichty (1998) focused on this area of public relations and undertook a study that examined how large corporations are using the Internet to present themselves as socially responsible citizens and to advance their own policy positions (p.305). The researchers selected a random sample of *Fortune* 500 companies and analyzed their web sites. The researchers found that 90% of the companies had a web site and out of this number, 82% of the web sites addressed at least one issue of corporate responsibility (Esrock & Leichty, 1998, p.312). For example, 60% of the sites addressed community involvement, 52% addressed education, 48% addressed charity, and 44% addressed children (Esrock & Leichty, 1998, p.313). This information was posted in the form of press releases and annual reports, which led the researchers to believe that public relations practitioners are "intimately and routinely involved in web site development" (Esrock & Leichty, 1998, p.314). In addition, the researchers concluded that very few organizations used their web site to "proactively correspond with publics, and even fewer used the medium as a tool to

advance their own position on policy issues" (Esrock & Leichty, 1998, p.315). In addition, their research revealed that organizations are not seeking to create a dialogue with the public, they are using the Internet as a one way media channel (1998, p.317). The conclusions drawn by Esrock and Leichty are valuable to the current thesis research. Esrock and Leichty's research focuses the specific use of organizational web sites to promote corporate responsibility; and their study provides background information for the current thesis research that is looking at the broader use of the Internet in public relations.

On the Internet, there are no gatekeepers deciding which issues appear on the agenda. This provides organizations with the opportunity to set their own agenda and focus attention on the issues that concern them (Esrock & Leichty, 1998, p.309). An organization's messages can reach the public directly, without being filtered or summarized into a fifteen-second soundbite. Esrock and Leichty (1998) argue that this will lead to "empowered publics" who can engage in an informed and democratic dialogue with organizations (p.306). Esrock and Leichty (1998) see this as an opportunity for organizations to demonstrate corporate responsibility by addressing various public policy questions (p.309).

In Conclusion

This literature review has focused on three separate areas: technology and organizational change, Public Relations, and technology in Public Relations. It has described the general changes in organizations influenced by technology, introduced the various

models of Public Relations and connected these two literatures together. The integration of new technologies into organizations has widespread effects at both micro and macro levels.

The widespread use of information technologies in organizations, and in particular Public Relations, demands a theoretical approach. It is necessary that Public Relations literature go beyond a "How To" approach and develop theories that address the use of communication technology in PR. As a boundary spanner, it is necessary that PR understands and integrates the new forms of technology, or its interaction with the environment will not be complete. The basic functions of PR have not changed with the developments in technology, but the tools that are used are changing. In addition, the increasing turbulence in the environment demands that PR play a central role in the organizations. Overall, technology benefits PR and enhances its role in the organization.

CHAPTER FOUR:
METHODOLOGY

A case study was chosen as the most appropriate research tool to answer the central question of this thesis. As a reminder, the central question is:

> *How can an organization adapt to new communication technologies in the turbulent environment and, in particular, how is technology used in external communications to interact with the new environment?*

The case study design combines multiple sources of data including interviews, direct observation, and documents and archives that are related to communication technology and external communication. This chapter will explain why a single case study was chosen, how it was carried out, and the importance of theory in a case study. Also included is a description of the research site, why it was selected, and the specific research tools employed in this study. The final portion of this chapter discusses how the data were analyzed, including a description of Donald Schon's (1983) guidelines for research on Organizational Learning.

Case Study Methodology

The research question this thesis poses is well suited to the use of a case study. Yin (1994) identifies three conditions that point to the use of a case study as the research tool of choice: (a) an explanatory research question, (b) little investigator control of actual behavioral events, and (c) a focus on contemporary as opposed to historical events (p.4). The focus of this thesis meets all three of these criteria.

To begin with, the research question being asked seeks to investigate a number of "how" questions. For example, how do organizations adapt, how do they learn, how do they use technology to adapt, and how is the technology used in external communications. A case

study can answer these "how" questions by seeking to explain how an organization can adapt to the changing technological landscape of the turbulent environment.

A case study is also desirable when the researcher has little control over the phenomenon's behavior or actions (Yin, 1994, p.8). This thesis studies the adaptive process the Calgary Stampede organization initiated before the on site research began.

A third criterion for a case study is the degree of focus on contemporary events (Yin, 1994, p.8). This particular thesis is concerned only with contemporary events; it investigates current forms of organizational adaptation to new communication technologies. The only interest in past events is how they have contributed to the current adaptive behavior.

A final reason a case study is well suited to this thesis is that case studies allow the study of a contemporary phenomenon when it is difficult to clearly mark the boundaries between the phenomenon and its context (Yin, 1994, p.13). In this thesis, the context of the turbulent environment surrounding the adaptive behavior of the organization is central to any conclusions or explanations. The changes to communication technology in the context are the catalyst for the adaptive behavior of the organization.

Importance of Theory in Case Studies

A discussion of theory is an essential element of case study research. Theories lead the researcher to ask the right questions, and to provide background information on other

research in the same area. As a result theory must be developed before on-site research takes place. In this thesis, the relevant theories were outlined and discussed in chapters two and three. These theories provide the basis for five characteristics of complex organizations in a turbulent environment which guided the development of interview questions, determined which processes to observe, and defined which documents and archives to collect.

The five characteristics outlined below reflect the central theoretical focuses of the study. They "direct attention to something that should be examined within the scope of the study" (Yin, 1994, p.21). The use of characteristics in case study research reinforces the need develop a comprehensive theoretical framework prior to on-site research. In this particular case study five characteristics guided the development of the data collection process.

The first characteristic is that *organizations are part of an open system and changes to new communication technologies in the external environment necessitate that organizations adapt to these changes.* This characteristic is linked to the ideas presented in systems theory and contingency theory.

The second characteristic is that *advances in communication technologies create uncertainty and turbulence in an organization's external environment.* This characteristic is linked to Emery and Trist's (1965) notion of the turbulent environment.

The third characteristic is that *the role of external communications in monitoring scanning and mapping the external environment has increased in the turbulent environment.* This characteristic points to the role of boundary spanning in a turbulent environment that was introduced in the literature review.

The fourth characteristic is that *advances in communication technology have increased the use of technology in external communications activities.* This is an idea discussed by various theorists introduced in the literature review.

The final characteristic is that *an organization in a turbulent environment must become a learning organization and continuously assess its norms, values and limits, and change them when necessary.* This final characteristic is connected to theories of organizational learning.

Research Design: Single Case Study

The role of the case study in this thesis is to "confirm, challenge, or extend" the existing theory (Yin, 1994, p.38). The choice of a single case study was based on a number of factors. The main reason for this choice was time constraints. Due to the short duration of the master's thesis research it was decided that a single case study was appropriate. The goal of this research is to provide a focused analysis of the relationship between an organization and its external environment. If multiple case studies were attempted, the research would not have the depth required by the question and desired by the researcher. Unfortunately, the use of a single case study does create limitations for this research. The

main limitation is that the final conclusions cannot be generalized to a larger population, but are limited to this particular case study. Although generalizations cannot be made, this research offers valuable insight into one organization's processes of learning and adapting to new communication technology in the turbulent environment.

Research Site

The research site chosen for this case study is the Calgary Exhibition and Stampede. This Calgary-based not-for–profit organization was established in 1882 (Annual report, 1998,p.1). The organization's basic purpose is "to preserve and enhance the agricultural legacy of Alberta and... to fulfill the appropriate aspects of the agricultural, trade, entertainment, sports, recreational, and educational needs of Calgary and Southern Alberta and where appropriate, those of Alberta and Western Canada" (Annual report, 1999,p.1). The Stampede offered a unique research site, as it is a traditional, long-standing organization facing the challenges and opportunities of the new technological environment.

The organization is divided into ten business units including Agriculture, Human Resources, Corporate Development, Operations, Administration, Public Affairs, Racing and Rodeo, Food Services, Gaming, and Sales/Facilities. Any revenue these divisions generate is reinvested into facilities and improvements to the Stampede Park. The organization's primary revenue-generating activities include the 10-day Calgary Stampede event, and the rental of its facilities throughout the remaining 355 days of the year. The structure of the organization includes a volunteer board of directors, a General

Manager, three Assistant General Managers, and ten senior mangers that run each of the business units.

These aspects of the Calgary Exhibition and Stampede organization made it particularly suitable as a case study site: first, the organization faces a number of challenges in the turbulent environment. Since 1996, the organization has implemented a variety of strategies to deal with the changes to communication technology including the development of a corporate web site, internal and external email and the connection of almost all organizational members to a shared computer network. These changes have affected all business units. For example, the organization's uses the Internet to post racing results, to support online applications for employment, to order electronically from suppliers, to post general organizational information, and to enable public registration for various agricultural events. Clearly, the Calgary Stampede has begun to adapt to its environment and it continues to seek out further areas of growth. The adaptive behavior of the organization is one reason it was selected for as a case study site.

Second, the Calgary Stampede is currently in the process of integrating communication technology into their organization. My initial conversations with a member of the organization revealed that it began the implementation of technology in 1996, and the process was ongoing. This provides an opportunity to observe the technological changes first hand.

Third, the organization has a broad range of external communication functions. The Calgary Stampede has distinct Public Affairs, Sales, and Sponsorship divisions that deal with a wide variety of stakeholder groups. Overall, the Calgary Stampede offered an opportunity to observe an organization adapting to the turbulent environment. In addition, the organization was receptive and agreed to fully participate in the research and provide the level of access to documents and organizational members necessary for this study.

Research Tools

Multiple qualitative research tools were employed to collect data for this case study. Qualitative tools were chosen because they provide an in-depth understanding of the processes and behaviors in the organization that quantitative tools would not offer. The specific tools chosen include face-to-face tape-recorded interviews with selected employees of the organization, observation of activities related to the central question, and the collection and analysis of relevant documents, archives and physical artifacts. These tools were chosen to allow for data triangulation in the stage of data analysis. As Yin suggests, "any finding or conclusions in a case study is likely to be much more convincing and accurate if it is based on several different sources of information" (Yin, 1994, p.93). The goal of this approach is to converge the multiple sources of evidence into one single line of inquiry.

Interviews

The first tool employed was a series of interviews with selected members of the organization. Organizational charts were gathered and analyzed to choose a purposive sample. The organizational charts indicated the members' business unit and position. Respondents were chosen based on their involvement in technology and external communication. Six interview participants were drawn from Sponsorship, Sales, Public Affairs, Administration and Information Services (IS). The organization's email and phone list was consulted to contact ten respondents and six agreed to participate in the research. With the consent of the participants, the interviews were tape-recorded and later transcribed for analysis.

For this case study the focused interview was chosen, a form of interview that is short. The interviews followed a set of questions based on the five characteristics previously introduced. The interviews were conducted in a conversational manner and included questions that were broad and open-ended with the goal of gaining an in-depth understanding of the processes and behavior within the organization (Appendix A). The questions were designed to explore the relationship between the changes to communication technology in the environment and adaptive behavior and response of the organization.

The interviews began with a brief description of the research question to provide the respondents with a context for their answers. The questions were tailored to match the respondent's position in the organization, or their technical specialization. For example,

questions posed to members of the IS department focused on the technical aspects of the organization's adaptation.

Observation

A second research tool employed in this case study was direct observation. Certain behaviors and processes were observed to support the interview data. The goal of the observation was to find evidence of adaptive processes, to evaluate how decisions about technology are made, and what types of technology are being integrated into the organization and external communication functions.

The researcher observed two meetings of a group defined as the Technology Group (TG) on November 19, and December 8, 1999. These two meetings were chosen as they fell into the time frame of the on-site research, and their agendas included issues surrounding the Internet. These two meetings provided first-hand observation of the decision making process implemented by the organization to deal with changes to communication technologies in the environment.

Rather than following a formal template, the observations were recorded through detailed notes about items that were considered relevant to the central question of the research. Topics that were noted included the Internet site and its use by the Public Affairs department for external communications, and plans for future development of the site. The goal was to look for data that reflected the five characteristics that guided the research.

Document Analysis

Finally, the researcher collected documents, archives and physical artifacts for analysis. The documents collected are related to the organization's implementation of a decision making process for technological changes within the organization. They include a study that initiated the decision to implement a formal decision making process for technological change, minutes of meetings about technology, and various other internal administrative documents (Appendix B). These documents were used to corroborate the evidence gathered during the course of the interviews.

Archival records were also collected including organizational charts to understand the internal structure and guide the choice of interview participants, lists of organizational members with their email addresses and phone numbers, the organization's annual reports for 1998 and 1999, and copies of newsletters for internal personnel and external volunteers. The final source of information was the organization's corporate web site. The web site was assessed according to Kent and Taylor's (1998) five principles of dialogic communication (Appendix C). The question under exploration is concerned with the organization's use of new communication technologies, and as a result the organization's Internet web site is relevant to this study.

Data Analysis

Once the data were collected the researcher followed a systematic data analysis process. The data to be analyzed included the transcribed interviews, observation notes from the

TG meetings, the web site, and various documents. The anonymity of the participants was ensured through the removal of all names, position titles and references to gender. The data was analyzed and classified into general categories based on the six characteristics and reoccurring themes in the data. The data was then physically cut into bits and physically placed into general categories. Each category was then studied, each bit analyzed and an overall summary was written for each category. The categories were then analyzed for reoccurring themes. A diagram was then created to identify the cross-references and linkages among the various categories. Once a clear picture of the data was created, it was linked back to the five characteristics that guided the data collection. This final stage connected the case study data to the theories presented in chapters one and two.

Organizational Learning Research

In addition to the methods described above, the analysis of the data followed a research strategy that is specific to research into organizational learning as described by Donald A. Schon (1983) in his article "Organizational Learning." His article outlines guidelines for assessing organizational learning processes. The application of Schon's approach indicates if there has been a shift in the organization's approach to technology or the processes it has in place. Schon's guidelines focus the researcher's attention to the "espoused policies, procedures, and programs...what members of the organization believe to be the norms, strategies, and assumptions that inform organizational behavior; and...the actual pattern of practice" (p.123).

CHAPTER FIVE:
DATA ANALYSIS AND DISCUSSION

INTRODUCTION

The data gathered for the Calgary Stampede case study was based on five characteristics of complex organizations in a turbulent environment that are based on the theories discussed in chapters one and two. Each characteristic points to a specific theory or group of theories that provide insight into the central question of this thesis.

The five characteristics are drawn from systems theory or communication theories built on the foundation of systems theories. As a result, the data the five characteristics reveal is valuable, but overlooks the dynamic and complex processes in the organization, including the organizational culture and interpersonal relationships. For this reason, the data analysis supplements the five characteristics with a discussion of how the Calgary Stampede's culture and interpersonal relationships affects its adaptation to communication technologies.

CHARACTERISTIC #1

Organizations are part of an open system and changes to new communication technologies in the external environment necessitate that organizations adapt to these changes.

This characteristic of organizations will frame the analysis of the case study data. The Calgary Stampede's environment is changing and communication technologies are slowly being integrated into the organization's daily operations and overall structure. In 1996, the Calgary Stampede commissioned a consultant to undertake a review of its communication technology and to recommend how the organization could adapt to new technologies in the environment. The consultant generated a series of reports during

1996, including a Computer and Information Systems Review, Information Management Strategy, Stampede IT Steering Committee Mandate, Information Technology Priority Recommendations, and a Network Analysis and Recommendations.

Since 1996, this series of reports has guided the organization's adaptation to the environment. The reports' recommendations are helping the organization match the changes in its environment. For example, the reports recommended that the organization establish a decision making process to look specifically at communication technology issues. The Calgary Stampede followed this recommendation and set up a steering committee that dealt strategically with communication technology issues.

CHARACTERISTIC #2

The advances in communication technology have created greater uncertainty and turbulence in an organization's environment.

As predicted by Emery and Trist (1965), the Calgary Stampede's environment is increasingly turbulent. This turbulence is marked by its increase in uncertainty, unpredictability and the rapid speed of information flows. The organization's environment is in constant state of flux and all the interview participants provided examples and descriptions of this new environment. For example, one participant noted that

> *The number of ways that you can get information have increased so much that you have to be instantaneous... You have to be able to react very quickly.*

Another participant observed that

The methods of communicating have grown exponentially and we have to keep up with it by having the technology to go along with it.

The presence of new communication technology in the turbulent environment has created new communication channels where information travels at high speeds around the globe. For example, the Internet is a channel used to share information worldwide, facilitate asynchronous communication and enable commercial transactions.

The Calgary Stampede organization recognizes that it must respond quickly to the turbulent environment. If it does not it will not be efficient or effective. This is especially true for all forms of external communication. For example, the Public Affairs department recognizes that in a turbulent environment it cannot engage in any forms of long range planning. This is one participant's observation of creating a plan in the new environment:

You can do one, to show general direction, but it better be a very fluid document that you are willing to change. It is only good the day that you write it.

Through a continual process of monitoring and scanning, a map of the organization's environment is created and its future plans are continually re-evaluated.

CHARACTERISTIC #3

The role of external communications in monitoring, scanning and mapping the external environment has increased in the turbulent environment.

As the environment grows increasingly turbulent and communication channels expand, the organization must initiate ongoing scanning and monitoring activities. The

information gathered during scanning and monitoring activities is used to create a map of the environment that guides the allocation of resources and pinpoints any future problems for the organization. At an individual level, the members of the Calgary Stampede organization involved in external communications recognize that the environment is changing and that the organization must also change. As one respondent stated, the organization has

> *the opportunity to fall into the 21st century by putting the necessary structures into place. We have right now the opportunity to be very state of the art and if we don't go forward with those visions we will be left behind.*

In particular, the Public Affairs department has responded to the turbulent environment with flexibility and increased scanning and monitoring activities. This division recognizes the importance of diligently tracking trends and responding quickly to any threats or opportunities they identify. For example, in 1996 it was the Public Affairs department that recognized the need to develop a web site, and this department has controlled the site's development. The decision was based on feedback from various stakeholder groups, and trends in the fair industry and the business community.

The scanning and monitoring activities of the organization's various external communication departments pay close attention to any feedback from the environment. The feedback from the Calgary Stampede's environment led the interview respondents to identify a number of specific pressures in the environment that demand organizational adaptation. For example, the respondents pointed to a need to fully communicate with

the environment by integrating new communication technologies. For example, the Internet provides a new channel for communicating with the public and the organization recognizes the growing demand to use the Internet.

In addition, the feedback from external stakeholders also indicated a their desire to access general information on the organization's corporate web site and to be able to email any questions or concerns to the organization. The Calgary Stampede's web site and external email system have adapted to meet this demand.

Feedback from external stakeholders also indicated a demand for e-commerce, for example, the ability to purchase tickets for events and Calgary Stampede merchandise online. At the time of this study, E-commerce applications, including shopping cart technology, were goals the organization was working towards.

Feedback from external stakeholders, and competitors in the fair industry and the business community also demanded that the organization adapt to new communication technologies in the environment. For example, the Sales division has recognized a shift in competitors' use of advertising dollars; increasingly, competitors are spending advertising money on the creation of informative and interactive web sites that complement traditional media advertising.

The respondents indicated that competitors' use of new communication technology is pressuring the organization to adapt. For example, the Sales division is looking to develop a greater presence on the corporate web site to match the competitor's use of the

Internet. Increasingly, competitors in the fair and facilities industries are investing money in a web presence that enhances the traditional use of annuals, directories and periodicals. One respondent recognized the demand for adaptation and commented that

> *They are saying how significantly people have to change, not by choice but because of web sites and the Internet and how they have to change the way that they do business and how they spend their advertising dollars. If you are not on the web you might as well be dead has been a comment that we have heard.*

Another respondent argued that the feedback from the environment indicated that external stakeholders do not accept anything

> *but the most modern. It is just like each subsequent movie that comes out has to outdo the one before it in terms of special effects or it just doesn't cut it. That is what the world is looking for.*

Public Affairs noted an increasing demand from external stakeholders for the integration of new communication technologies into the organization, including access to general information online and communication through email. Public Affairs noted the changes to technology in the environment, and passed the summarized information on to the rest of the organization.

Public Affairs has continued to monitor the advances in Internet technology and have helped guide the organization's adaptation. For example, the initial web site focused primarily on the dissemination of basic information in text format. As capabilities for

programming and computer graphics advanced, Public Affairs suggested that the site incorporate these new tools.

Recently, the Public Affairs department identified the value of integrating E-commerce capabilities into the organization's web site. The Public Affairs department recognized the value of adding shopping cart technology to the existing web site. This was in response to a demand from stakeholders for online service. The department's initial discussions of E-commerce have led the organization to consider the broader possibility of E-business. E-business would integrate a number of administrative and organizational tasks into the organization's web site and this issue is being discussed in the Technology Group (TG).

The tracking and monitoring activities of the Public Affairs department is complemented by the boundary spanning activities of the Information Systems (IS) department. This department adds a broader view to the information gathered by Public Affairs. As one respondent in the IS department noted, this department could complement the boundary spanning activities of the Public Affairs department;

> *They are only pulling off pieces of the pie; they are not seeing the whole IT area. They don't read about it everyday. I read about it everyday. I read about it; I study it; I go to seminars. I am immersed in it. They only pick up the pieces that they hear about.*

At the Stampede, IS no longer focuses solely on the internal systems of the organization, it is concerned with how the organization as a whole can adapt to changes in the environment.

The feedback from external stakeholders also points to a demand for access to new communication technologies in the Calgary Stampede's on-site facilities. The recent construction of a new City of Calgary Convention Center has also pushed the Calgary Stampede to integrate communication technology into its facilities. The organization has responded to this competition by fully wiring its new convention center for multimedia tools and Internet access. The organization assessed this particular demand from the environment and concluded that to maintain a positive and productive relationship with stakeholders, and to be a strong competitor in the Calgary marketplace, the organization would have to adapt.

The information gathered by the organization's scanning and monitoring activities leads the organization to create a map of its environment. This map guides the organization's navigation in a complex and uncertain turbulent environment. Since 1996, when the Calgary Stampede commissioned a consultant to assess the organization's use of communication technology, the organization has identified communication technology as an important issue to address. The series of 1996 reports provided a variety of recommendations that focused the organization's attention on the external demand for organizational adaptation to communication technology. The establishment of the ITSC was the first attempt to address the issue of technology in the environment. The

subsequent evaluation and creation of the TG increased the number of members and resources involved in communication technology decision making.

At the time of the case study, the focus of the TG was to improve the organization's web site and expand it to include more than general information about the 10 day Calgary Stampede event. For the organization, various Internet applications, including E-commerce and E-business were seen as exciting opportunities to expand its communication and transactions with key stakeholder groups.

At this point in time, the organization has focused on the use of the Internet for E-commerce and E-business, and has ignored more sophisticated applications such as video conferencing and real time on-line forums. Each division of the organization is represented in the TG and increasingly they are assessing how technology can be integrated into their daily operations, and how the technology can be used to solve problems. For example, the Sales and Facilities division sees the web site's potential for advertising the Calgary Stampede's facilities, and the Public Affairs division is seeking to develop Ecommerce capabilities. The divisions involved in external communications are focusing on the potential of the Internet for reaching their goals.

CHARACTERISTIC #4

The advances in communication technology have increased the use of technology in external communication activities.

One member of the organization argues that external communications has *incorporated modern technology at the insistence of communication.* The divisions involved in external communications interact directly with the technologically advanced environment, and as a result, there is a growing need for these divisions to use the new communication technology tools. Various external communicators noted the demand to integrate the new technology into their daily activities,

> *I would say that in the communications area there is not one aspect of what we do that has not been affected by technology. Probably more so in the past five years than any other point in history.*
>
> *We would be dead in the water, whereas for accountants, no, but they have to at some point. But for us we have to be leading edge, we have to be right on that very edge.*
>
> *We have to be efficient with the way we communicate... in our job you want to get to the greatest number of people in the most efficient way possible with the best information that you can. So technologies obviously play a much bigger role here.*

The divisions of the Calgary Stampede that are involved in external communications, including Public Affairs, have a higher level of interaction with the communication technology tools than the rest of the organization and they have gained specialized skills and knowledge. As a result, they are not as traditional as the other divisions and they are more open to changes in technology. The rest of the organization accepts the communication divisions' increased use of the technology. As one participant comments,

> *One of the credits to this organization is that they have not tried to instill that traditionality in areas...just for the sake of doing it. No one has come down and said I don't like this new fangled thing; I want to go back to, no one says that. They may not agree with it but they know that it is a necessity and they may not like it, but they know that it is a necessity.*

Increasingly, members of all external communications divisions at the Calgary Stampede use email and the Internet to communicate with the organization's environment. Initially, the departments were resistant, but they now realize the efficiency that the tools create. As one respondent notes, the technology is becoming an essential business tool,

> *For example take X, their department could not see the benefit of using email, but as soon as they got it and started using Internet email all of the sudden their communication changed. They no longer use the phone or faxing; they are now using email to communicate with their clients.*

One specific area of the Public Affairs department is Media Relations. This area has integrated the new communication technology tools, but still relies heavily on face to face and telephone communication. Various respondents explained why more traditional forms of communication were preferred over email and the Internet,

> *I love using email, but for certain things I still prefer the personal contact. I even hate telephones...In email there is a lot of chances for misunderstanding. You don't know the tone, you don't know the emotion behind it. The other problem is that you send it off to the address but it may end up somewhere else. This has happened to us before.*

> *I still speak on the phone as much as I can because I like the personal interaction. It is more for information that I use the technology. If I want to have a conversation or a discussion of some kind with the media rather than emailing back and forth I would much rather still talk on the phone.*

Although the new channel is not useful for all tasks, the respondents indicated that the technology has improved the dissemination of information and the creation of in-house documents. Respondents highlighted the value the technology added to their daily communication activities, for example,

> *We do use a lot of technology here. For example if I send out a press release I can fax it directly from my computer... We also use a lot of email.*
>
> *We have a scanner, can create posters from here, brochures from here. Almost every publication that we need to have done, except if it is a huge volume and then we send it out to a printer. We can compose it here and have it laid out with our technology.*

For all areas of external communications the use of the new tools helps them perform their jobs. The various members have come to accept and rely heavily on the new technologies.

Sponsorship and Sales have also incorporated new communication tools, but they still rely heavily on traditional forms of communication. These departments see the value in face to face and voice communication and feel that electronic communication is not as useful for establishing meaningful relationships with external stakeholders. Various members explained why the traditional forms of communication were preferred over new electronic channels, for example,

> *We try to avoid using email too much with the sponsors because face to face and voice to voice interaction is very important. We need to keep in contact with them on a personal basis and know what their needs are. Often email is easily ignored or does not get to them... There are all the challenges of electronic mail.*
>
> *In the area of sponsorship you are trying to get big bucks out of somebody's pocket and you had better use a slightly different approach because if they feel that they are being treated on an impersonal level it might be a little hard to get that money out.*

The participants indicated that the technology was useful for the basic transmission of information that followed a conversation, but for an initial conversation its asynchronous nature led to misunderstandings and frustration for both participants. On the other hand, synchronous communication tools allow the participants to bounce ideas back and forth, and quickly assess if messages are being decoded properly. In addition, a number of the respondents disliked email's impersonal nature and said they preferred more personal forms of communication. As various respondents noted,

> *I have started on letters that I send to sort of use the sort of standard ending, if you have any questions please call me and I always now put please call me or email me. People will still 9 times out of 10 phone.*
>
> *We do use email in the case of a sponsor asking us a simple question and we need to get back to them with the answer they seek. We use email for that. There tends to be a lot of phone contact, personal contact if possible.*
>
> *People like talking to us and getting information first hand rather than the informal technical stuff you transmit by email...I have been openly asking for emails and I get very few emails from outside people.*

The interview respondents noted that the main reason they did not use the new technology for all communication with the environment was that the stakeholders preferred communication that was more personal, including telephone and face to face conversations.

Of all the external communication divisions at the Calgary Stampede organization, the Public Affairs department has changed most dramatically; its members prefer to

communicate with the environment electronically, rather than through traditional channels. For example, the web site is used to disseminate general information about the organization and the 10-day Calgary Stampede event. This has led to a reduction in the number of brochures and other printed materials. Most standard requests for information are now completed through email instead of the telephone. The Public Affairs department is highly reliant on the new communication technology tools. As one respondent states,

> *I conduct entire meetings on the web, the Internet... Not everybody buys into this, the philosophy that the communications department has here at the Stampede. But I am a believer in the virtual concept of offices. I really think that as nice as it is to meet with someone it is a very inefficient use of time... Maybe necessary in a people type business and you can't lose sight of it, but in terms of really trying to get the job done there are far better ways to do it.*

The Public Affairs department has a different approach to new communication technology that the rest of the organization. One explanation is that the divisions high level of interaction with the environment demands that it follow any trends in communication tools. In addition, Public Affairs also deal with a different stakeholder group than Sponsorship or Sales. The majority of Public Affairs' contact with the environment consists of requests for general information about the 10-day Calgary Stampede event.

Organizational Web Site

During this case study, the organization was initiating Phase Two of its web site development. When the researcher assessed the web site, it was still undergoing changes and was not complete. Overall, the web site adheres to four out of five principles

discussed by Kent and Taylor (1998); the site provides useful information, has qualities that will generate return visits, has a relatively easy to use interface and attempts to keep visitors from straying from the site. On the other hand, the site does not focus on creating a dialogic loop with the public; the contact information for the organization, including email, fax, telephone and address are not prominent on the site. To find contact information, the user has to search through various scroll down bars. In addition, the web site does not include frequently asked questions, online forums, or online question and answer sessions.

Phase Two of the web site development has increased the amount of both general and specific information about the organization and the web site, but there is no table of contents, index, or search engine to help the user navigate around the site. Although more information is provided that in the organization's older site, central focus of the site continues to be the 10–day event Calgary Stampede event; for example the introduction to the site includes graphics and sounds promoting "the greatest outdoor show on earth."

Skills and Knowledge

The use of new communication technologies by members of the Calgary Stampede's external communications divisions including the Internet and email demands that members acquire a new set of skills and knowledge. Without the necessary skills or knowledge members cannot perform their jobs effectively; for example, members must have an understanding of how to use email and learn the conventions of this new channel. As one respondent notes,

> *There is the whole issue of confidentiality of information, the appropriate use of email. We run into problems like that all the time. A lot of people are not accustomed to email. Since I have gotten here the actual use of email, when it is appropriate, when it is not appropriate, when do you send to the group, when do you not, what is the form of communication; is it formal, informal, how formal do you need to keep it, what kind of structure you need to follow. That is definitely a problem.*

It takes time for members to understand the new channel and its particular conventions and protocol.

For the organization to be effective in the new technological environment, it is essential that all members of the organization have the same skill and knowledge set. As a result, it is important to create training programs. The Stampede acknowledges this need and has conducted an assessment of the training that is needed.

> *During the Year 2000 testing of some of the business applications, it was noted that some users (particularly new ones) showed a lack of understanding of the application and how it related to the business process. Some of these systems are quite complex and formal user training should be undertaken to maximize the benefits and use of these systems.*

The members of the organization's external communication divisions have a specific set of skills and knowledge that has developed out of their increased daily use of the technology.

CHARACTERISTIC #5

An organization in a turbulent environment must become a learning organization and continually assess its norms, values and limits, and change them when necessary.

A learning organization is a highly sensitive entity that makes necessary changes to meet the challenges and opportunities in the turbulent environment. The case study indicates three areas where the organization exhibits characteristics of a learning organization: the development and implementation of a new decision making process, the changes to the organization's hierarchy and the changes to the organizational culture.

Decision Making Process

The Calgary Stampede's creation of the Technology Group departs from its traditional approach to decision making. The Calgary Stampede's creation of a new decision making process is a clear example of adaptation to the changes to communication technology in the environment. Following the 1996 recommendation that the organization establish a decision making process for information technology, the Calgary Stampede created the Information Technology Steering Committee (ITSC). The ITSC involves the upper levels of the hierarchy, the senior manager of each division. The goal of the ITSC was to involve the upper levels of the hierarchy in the direction and strategy for the integration of communication technology in the organization. One respondent explained the rationale behind the structure of the decision making structure,

> *We were looking for a steering committee and also a steering committee that had clout. So we were looking to get the important people in the organization together and get them thinking about how technology should be utilized in the organization.*

A technology specialist guided the senior managers through the more technical aspects of the communication technology issues. The goal of the ITSC was to gain the support of

the organization's decision-makers and have this attitude of acceptance trickle down through the rest of the organization. One of the goals was to change the organization's traditional culture that resisted changes to communication technology. Various respondents explained why the upper levels of the hierarchy needed to be involved in the decision making process,

> *It is not going to be long term effective unless you have someone in an upper management position pushing on the senior executives and senior managers to focus more on the issues.*
>
> *I think that if we had a bigger mandate from the top, if he said that we are going to try to utilize technology, people you look at technology and try to figure out how it is going to help you achieve your business goals, we might be more focused that way.*
>
> *For some initiatives, for example the Y2K project, that should have senior management, if not executive sponsorship. Without it a project of that nature will fail. Internet, the Internet project should have executive sponsorship. Focusing and changing our systems to the Internet is something that should be mandated and sponsored by an executive right at the top.*

The members of the ITSC are at the level of the organization's hierarchy where traditional decision making has occurred. During the ITSC's two-year life, it became apparent that the traditional decision-making structure was not effective. Over time it became clear that decisions regarding communication technology required a certain level of skills and knowledge about the technology that the senior managers did not have. Without the hands-on experience with the tools, the members of the ITSC could not make informed decisions. The demand for particular skills and knowledge in the decision makes process forced the organization to rethink its traditional notions of where decision making power rested in the hierarchy.

After two years the organization assessed the ITSC and as a result, a two tiered decision making system was created. The Technology Group (TG) was established as the group who would research and discuss new communication technologies and come up with recommendations for the organization. The group's recommendations are passed on to the ITSC for approval or rejection. In this two step process, the ITSC no longer requires the hands on skills or knowledge about the technology.

Hierarchy

The shift from the ITSC to the TG is an example of how the Calgary Stampede has adapted its structure to meet the demands of the turbulent environment. The changes to the organization's hierarchical structure follow the predictions made by a number of theorists (Gerstein, 1987; Huber, 1990; Reddy, 1990; Thatch & Woodman, 1994). As a decision making body, the TG has a high level of control and power. This group decides which recommendations to pass on to the ITSC. It is at the level of the TG that the strategic direction for the Calgary Stampede is established.

The creation of the TG has increased the participation of various hierarchical levels in the decision making process, as predicted by Thatch and Woodman (1994). Decisions are no longer the sole responsibility of senior managers in traditional positions of authority and leadership. The members of the TG have contact with the technology on a daily basis and the skills and knowledge this has created is central to the decision making process.

The TG's members are individuals who have not traditionally held decision-making power in the organization. Galbraith (1977) describes this process as lateral relations and it is one of the strategies he offers for dealing with environmental changes in technology. This strategy shifts the decision making process down to where the skills and knowledge reside rather than bringing this information up to the more traditional points of decision (Galbraith, 1973,p.18). One member explains why this change in decision making patterns was necessary,

> *The people with the knowledge are not the ones with the authority. You have to figure out more innovative ways of making a decision and trying to communicate that to people with the authority so that they are comfortable with it.*

The TG – ITSC process increased the participation of individuals with the necessary skills and knowledge about the technology, yet still maintained the decision making power held by the upper levels of the hierarchy. In addition, the application of lateral relations has led to an increase in the communication between the various levels of the Stampede's hierarchy, and the increased use of teams and groups (Galbraith, 1977;Gerstein, 1987; Thatch & Woodman,1994). The use of lateral relations created a higher level of co-operation between departments than previously existed. The departments now work together to find the best strategy for integrating technology into the organization.

If the organization realizes its goal of E-business, it will have to assess the way it approaches business. For a traditional organization such as the Calgary Stampede, the shift to E-business will mark a radical change in their approach to all areas of the organization. E-business is an application of communication technology that will affect

all areas of the organization, not just the departments involved in external communications.

GOING BEYOND SYSTEMS THEORY: INTERPERSONAL RELATIONSHIPS AND ORGANIZATIONAL CULTURE

An important element of the Calgary Stampede organization that classical systems theory's mechanistic approach overlooks is the role organizational culture plays in the adaptive process. The culture of the organization is dynamic and affects all aspects of the organization. In this particular case study, the Calgary Stampede's culture influenced how, why and when the organization adopted communication technologies. The Stampede's organizational culture has been created through a combination of its structure, historical roots, and area of business. The organization's culture is traditional, and fosters division and separation between the organization's ten departments.

The traditional nature of the Calgary Stampede's culture is related to its deep roots in the Alberta agricultural community. In addition, the organization was established in 1882, and its long history has created a culture that is traditional and resistant to change. As one respondent observes,

> *If someone was not pushing the organization we would probably still be coming to work in wagons.*

A number of organizational members come from an agricultural background and have worked in the organization for a long period of time. Many of the organization's members did not use communication technologies in the workplace until the organization

adopted communication technologies on a large-scale basis 1996. When technologies such as email and an organizational web site were first introduced, members of the organization were resistant and did not want to change how they performed their tasks. One member explains the fear of change and says,

> *They like traditional, they think that by moving away from traditional you are moving away from your roots and heritage (culture, 16)*

Another member explains that for the organization the dominant sentiment was that if the organization was successful without the use of communication technologies, why change? This member was involved in the push towards the adoption of technology and he explained that

> *We really had to do a lot of selling. Some were bringing in pretty good result, and when you have results, it is that old, "if it ain't broke don't fix it." So maybe that is passive, but sometimes less risky. You can't blame them in any way; it is just the way that it evolved. It was a matter of awareness about technology and that we can communicate through a different medium other than telephone and voice messaging.*

To be able to bring communication technologies in to this traditional culture, members of the organization needed to learn how communication technologies could help them perform their daily tasks. For example, this member explains why a department resisted the use of technology:

> *Like agriculture, go and talk to them. Is putting a computer going to help you get the cow on the weigh scale faster? The answer to that is no. It may help them get the results in faster and tabulate the results faster, but does it get the cow in the weigh scale? No. Does it actually wash them , bathe them, feed them? No.*

The resistance to communication technologies is also apparent on the level of the individual member. As a result, it is difficult to fully integrate communication technologies into the organization. As one member states: *People are used to the way it used to be done.* Another member explains how various members reacted to the integration of communication technologies:

> *On an individual basis we still see the effects of it. There are varying reactions depending on where they were in their willingness to accept change and also possibly their mindset and where they were. I have in fact some people who still resist it (culture, 8)*

Other members note that although the organization has begun to adapt to communication technologies, there is still a high level of resistance at the level of individual members:

> *They are highly resistant... Some of the resistance will be very legitimate.*
>
> *In so far as embracing technology it has been a tough sell.*
>
> *My boss for example was raised in an environment that was typewriters and carbon paper, not computers and email. Technology to him is almost an obstacle.*
>
> *I don't think that we have changed anyone that drastically, they are still tentative.*

But as the members of the organization begin to use the technology in their daily tasks, some members becoming less resistant toward changes to communication technology. As one respondent notes,

> *I guess any time you change, especially in an organization as old as the Stampede people are used to the way it used to be done. Even with databases people we report to like the directors or senior managers were used to seeing the old reports; there was a sort of learning curve. You know they are going to look a little bit different now but it is easier and more accurate to get the information.*

Although members are learning more about the value of communication technologies, it is a slow process. As one participant said about her senior manager,

> *Technology to him is almost an obstacle, but he definitely does see that technology is driving the business and how we will progress in the future by investing in it.*

As the individual members become less resistant to changes in technology the organization's culture also changes. In addition, although individual members may not be comfortable with the use of the technology in their daily activities, they realize the environmental demand for organizational adaptation.

The organization's adaptation process continues to be affected by those members of the organization with decision making authority and power who are resistant to change. For the technology to become part of the Stampede landscape it must first be accepted and embraced by all levels of the organization. As one respondent pointed out, technology *is not embraced by the top dog here and therefore it does not flow down.* As a result, the Calgary Stampede's adaptation to communication technologies has been a long process where each step towards the full integration of technology is a hard fought battle.

On the other hand, the organization's traditional culture has bred skepticism in the members that may protect the organization from blindly adopting the newest technological trend or gizmo. In some ways, the organization's resistance to change is not a negative force, it is a positive force that allows the organization to adapt slowly and

adopt a more strategic approach that aligns the new technologies with long standing business goals and objectives.

The organization's culture also reinforces division and separation, which is created out of the organization's structure of ten distinct business units. With the changes to communications technologies in the environment, and the Calgary Stampede's subsequent efforts to adapt, the dominant characteristics of the organization's culture have started to change. The organization's culture of division has meant that in the past the organization's ten divisions paid little attention to the actions of the other divisions. This individuality of the business units has influenced the organization's integration of communication technology. Various members noted the obstacle this creates:

> [historically] *it was very departmentally focused and one function focused.*
>
> *I think that we have huge challenges in terms of the controlling, managing and all of that of our IT environment and moving it forward as a single entity. We have 10 divisions and they all have their own strategies and they use technology in their own ways. We tend to go on different tangents.*

With ten business units all pursuing their own agendas, the organization's culture has created an adversarial relationship fed by levels of competition and resentment. This aspect of the culture is highlighted by the integration of communication technologies. It is difficult to create a seamless communications network when the various divisions have different types and levels of technology and do not see the value of being interconnected.

The creation of the TG process addresses this problem by bringing all ten divisions together to make decisions about the integration of communication technology into the organization. The creation of the TG and the co-operation it has created has started to change the division between the organization's business units. But, the Calgary Stampede's deeply rooted culture will take time to adapt. Gerstein (1987) argues that as an organization integrates communication technology the patterns of communication change and the culture will eventually reflect this. In this organization, it is clear that changes to the structure of the organization created by the integration of technology have led to a shift in the organizational culture.

When the organization first integrated technologies into the organization's structure individuals felt a form of culture shock. For example, the use of email radically changed their daily tasks. Initially, the members of the organization were hesitant to use the technology, but as time passed they learned to accommodate it. In turn, the organization's culture has slowly become more open to changes in technology.

Finally, the lack of cohesiveness between the various departments has led to an identity crisis that defines the organization's culture. The organization does not know how to classify itself as it performs such a wide variety of tasks.

> *When people find out that I work for the Stampede the number one question is what do you do for the rest of the year?*
>
> *We are not the Calgary Stampede year round and then the Calgary Exhibition and Stampede for 10 days. This is dealing with our image globally. What we are referring to ourselves as, what we are calling ourselves. Should we be something different for the 10-day fair? In our listings and periodicals we are the Calgary*

Exhibition and Stampede. Does this indicate that we have facilities for rent? ... There is ignorance in the city, let alone globally.

The Technology Group: Interpersonal Dynamics in the Organization

Although systems theory has merits, when applied to a case study it forces the data into rigid categories. Traditional systems theory does not allow the richness of case study data to be explored. In viewing an organization as a system with components, and internal and external environments, the idiosyncrasies and human elements of an organization are ignored. The value of the Calgary Stampede case study is that it provides an example of how the process of adaptation works at ground level. The case study data that is beyond the rigid scope of system theory displays how human behavior can affect an organization's adaptive process.

Organizations are made up of individual members that interact. As a result, the organization is affected by personality conflicts, territoriality issues and other interpersonal communication problems.

The human elements of the Calgary Stampede organization that affect the adaptive process are clearly visible in the TG process. This group and the issues that it faces reveal the problems that are found in the larger organization. In this group there are clear divisions, on one side is PA and on the other are the remaining departments. This division within the organization is fed by the behavior and attitude of the PA department that reinforce the department's central belief that they are technologically superior to the rest of the organization.

The goal of the TG decision making process is to bring all the departments together to create and implement a strategic direction for the organization's use of technology. In practice, the PA department has separated itself from the rest of the organization. Although the PA department does send a representative to the TG meetings, they feel their role is to provide advice and guidance, not to work at the same level as the other departments. As one member of the PA explains,

> *We have something that we can offer to that group* (TG) *and if we take off our Public Affairs hats and put on our corporate hats, it is in the best interest of the whole company for us to have input into the system... So there is still an advantage, but the advantage is not for us in Public Affairs.*

PA feels that they are more technologically advanced and as a result, superior to other departments when it comes to technology. They feel that they have a higher level of knowledge and expertise in the area of communication technologies. Rather than sharing this knowledge with the rest of the organization, they choose to do their own thing and alienate the rest of the organization. The head of the PA explains that with a process like the TG,

> *You are becoming inefficient. There is going to be some segment of the group that are going to be moving at a different speed and by virtue of the group you could slow those groups because they are part of the process.*

It is clear that the PA department is separating itself from the rest of the organization because it does not want to be held back. A member of the departmnt explains that if they do have the latest technology they

Would be dead in the water, whereas for accountants, no, bu they have to change at some point. But for us we have to be leading edge, right on that very edge.

Although it is important for communicators to strategically use communication technologies, it is still important that they recognize the needs of the rest of the organization. As a single department within a larger organization, PA should be working alongside the other departments to achieve shared organizational goals. This division and low level of co-operation has affected the organization's ability to strategically implement communication technology.

PA distinguishes itself from the rest of the organization, for example through the language of "us" and "them,"

> *We are very technologically advanced in terms of our computer systems, where they are quite behind the times*

The PA's attitude of technological superiority is evident to the other departments and various members expressed their frustration. For example one member of the IS department notes

> *They* (PA) *have the idea that they are technologically savvy. They also have the idea that MACs are superior. So they have a superiority complex... They have a mindset that they are very savvy and advanced, but they don't understand the whole picture. I have tried to help them see the whole picture but I have given up.*

It is clear that in this organization, the control of new technology is connected to the overall group image of the PA department. A high level of technological knowledge is

part of the PA's subculture. This department distinguished itself from the rest of the organization by pointing to its higher level of hardware and knowledge.

The result of PA's separation from the rest of the departments, is that the organization is not working as a cohesive unit. However, even though systems theory might label this organization as dysfunctional, it still runs a successful and profitable business. This highlights the reality that at ground level organizational systems are not perfect, and they do not have to be to survive.

The Web Site

The PA's lack of co-operation and co-ordination with the rest of the organization has affected the ability of other departments to achieve their objectives. For example, the PA's control of the web site has excluded other departments from having any input into the information posted on the web site. The web site was initially developed by the Public Affairs department in 1996 to promote the ten-day Calgary Stampede event. Since the initial development, the various other divisions have asked to post information on the site. For example, the Sales division asked to include information about the facilities on the site; PA asked them to wait. After one year, the Sales department was still waiting for their information to be posted. One member of the Sales department described the attempts to get involved with the web site as *very disappointing and very frustrating.* This member explains that the Sales department has

> *been held at bay, and we have been told for a very long time now that it is coming, it is in progress...So a year to date we still have nothing more on the web site than we did a year ago*

As a result of this type of behavior, the various departments resent PA's blatant disregard for the needs of the rest of the organization. In this conflict, PA is clearly trying to maintain its control and territorial rights over the web site and its development.

The focus of PA's use of the web site is to promote the ten days of the Calgary Stampede event. As a result, three years after the site was first created, the focus is still on the ten-day event, and the areas of the organization involved in the remaining 355 days of the year are marginalized. A member of the IS group criticizes PA's approach and notes that

> *My approach would have been to involve the whole organization right from the start. Pick your one mountain or hill that you want to hit first and then grow from there. Theirs has been more of: we are going to do our own thing first and then we will put pieces in as we go. It strategies do not work well that way, not unless you understand the whole picture.*

Although the ten-day event is a large source of revenue for the organization, the rental of the facilities and the on-site services bring in the other half of the organization's revenue. The web site's focus on the ten-day event ignores this fact. This is an important issue and one member observes that

> *I see that half of our audience is being addressed, and the other half are our business customers and general customers who deal with us for everything but the Stampede.*

It is clear that the PA's attempts to exclude other departments have a negative impact on the organization as a whole. By excluding large segments of its environment, the organization does not use the Internet's greatest communication characteristic, its ability to establish meaningful dialogue. One respondent realized this problem and stated that they

> *sometimes wonder about how we are communicating to the outside world about how we operate. If you go on the web site you can't find our central phone number, you can't even call us.*

The goal of the organizations web site is not to create feedback loops with the environment that would establish a dialogue with the public, but to create a one way flow of information. The organization approaches the web site as an electronic brochure that focuses on graphics and technical wizardry rather than the quality of the content. As one member observes, the web site is the organization's

> *brochure to the world on the Internet. So we were presenting to the world what it the Stampede, whatever we would have in printed literature we presented through the web.*

It is clear that the web site is only meeting the needs of the PA department. One member of the Sales department describes the use of the web site,

> *You get three pages deep and you still do not know that we have facilities for rent. And good luck finding it. I am very critical of what it is now because we* (Sales department) *are nowhere to be found. Hopefully that will change and there can be some continuity between the ten days of Stampede and the other 355 days.*

In addition to the PA's superiority complex, this department views itself as separate from the rest of the organization; this follows the organization's dominant culture. For example, the PA department uses Macintosh computers and the rest of the organization uses PCs. As a result, email communication and document sharing between PA and the rest of the organization is difficult. The head of PA observes that

> *For instance, one of the things that came out of the IT group when it first started was why are you guys on Macs and we are all on PCs. There are a couple of reasons. Number one is that it is a superior system and I don't care what anybody says. Number two, it is far better for graphics. Number three, and this is the biggest reason, I am not bound by the technology of the group... If we were tied to that technology because we were tied to the whole group, we would lose our technological advantage.*

Although the use of Macs is necessary for dealing with graphics, the PA department uses this situation to define "us" and "them." In response to the reasons offered by PA, a member of IS argued that

> *I don't think they comprehend the IT thing. Honestly, they use Macs for email, surfing the net and using Microsoft Office. I can give them that on a PC... Only two people use it for graphics and those graphics programs are all available on PC as well. So their system on a MAC platform is based on a very loose justification but I am not going to fight a battle with them*

In response to the problems posed by PA's actions and behavior, the remaining departments use the TG as a forum for co-operation and discussion. The TG allows the departments to work together to find common ground for communication technology, and to avoid duplication of work. All departments, apart from PA, are working strategically to discover what is best for the organization as a whole, not just individual departments. One member explains the problem the TG is trying to address,

> *The case of our organization is just do whatever you want, buy whatever you want, purchase systems wherever you are, purchase applications to meet a specific need, whether that means that it has been duplicated three times in the organization or not.*

IS's Role as a Boundary Spanner

According to PR and systems theory, the Public Affairs department should play a central boundary spanning role in the Calgary Stampede's adaptive process. In theory, this department's role is to gather information from the environment, summarize it, pass it on to the rest of the organization and then guide the organization's adaptation to this new information. But, at the Calgary Stampede the Public Affairs department does not pass on the information it gathers from the environment, the department hoards the information for its own use. This is clear in its ongoing control of the web site.

As a result, to remain effective the system has to re-organize to fill the gap created by PA's self-centered actions. At the Calgary Stampede, the IS department has become an important boundary spanner for the Calgary Stampede organization. The information that IS gathers from the environment and passes onto the rest of the organization is driving the TG and the strategic direction of the Calgary Stampede organization. In this case, the organizational culture that fosters division and separation between the departments has led to a shift in the structure of the whole system.

Although PA claims that they are technologically superior to the rest of the organization, one member challenges PA's beliefs and argues that

> *They are only pulling off pieces of the pie; they are not seeing the whole IT area. They don't read about it everyday; I read about it everyday. I read about it; I study it; I go to seminar; I am immersed in it. They only pick up the pieces that they hear about... they only see a single focus application and the entire Internet puzzle is more involved than that.*

The growing role of IS in the organization is threatening the control formerly held by PA. PA's decision to integrate E-commerce into the web site has reduced its control of the

web site. For E-commerce to be implemented, the entire organization has to be involved in the decision making process. As a member of IS notes,

> *In order for it to be effective, it has to involve all of our internal systems and there are going to be ties to all of them. We have to get our internal systems working together for our external systems to work. You are going to take a little piece at a time but you are going to have to have it in some overall comprehensive strategy.*

As a result, the issue has been brought to the TG and IS has an increasingly important role in its development. In the TG, the IS representative brings the relevant issues to the attention of the TG, provides the technical expertise needed to make informed decisions and guides the decision making process.

Summary

Overall, it is clear that as the Calgary Stampede organization has changed its structure to integrate technology, the culture has also shifted. Changes to the organization's culture begin at the individual level. Members of the organization have slowly adapted to the use of technology in their daily tasks and have become less resistant to changes to technology. This attitude affects the overall culture of the organization. The data points to the important role the organization's culture has played in the adaptation process, an idea that takes us beyond classical systems theory. At the ground level a system is not a mechanistic structure composed of clear-cut components and information flows. By acknowledging the crucial role of culture in the organizational system, we add the human element to traditional systems theory.

CHAPTER SIX:
CONCLUSIONS AND IMPLICATIONS

What the Literature Revealed

The various bodies of literature that formed the foundation of this case study began with a broad perspective on organizational adaptation to environmental changes and then focused on the particular nature of adaptation to new communication technologies. The primary literature established that an organization is a system that has a interdependent relationship with its environment.

Emery and Trist (1965), and Terreberry (1968) defined the environment as increasingly turbulent, and pointed to communication technology as one element adding to this turbulence. The uncertainty and unpredictability of this type of environment demands that an organization adapt, and in particular, that it implement the active adaptive technique of organizational learning.

This thesis applied these general theories to understand how changes to communication technologies have affected the external communication functions of an organization. The literature predicted how an organization would respond and behave in this changing environment. The goal of the case study was to examine in depth the changes to the boundary spanning roles of external communications and to assess the characteristics connected to the literature.

In addition, the literature pointed to the limitations of systems theory and the value of understanding the role of organizational culture in the adaptive process. The case study

indicates that moving beyond classical systems theory and including human elements of organizations provides a more realistic picture of how organizational systems function.

The literature explored the past changes in the environment and this case study sought to extend the theories introduced in chapters two and three by applying it to the current context of communication technologies. The choice of the Calgary Stampede proved to be a fruitful ground for this application as it only formally initiated its adaptation in 1996. The results of this case study support the theories presented in chapters two and three, provide new insight into the process of adaptation, and introduce exciting possibilities for further research.

Contributions from Case Study: What literature does the case study support?

Overall, the case study of the Calgary Stampede illustrates the five characteristics of complex organizations in a turbulent environment that guided the research methodology. In addition, the case study reinforces the value of moving beyond classical systems theory and adopting a 'New Science' approach.

The case study supports the perspective of contingency theory, and in particular, the argument that when an organization's environment changes it must adapt its behavior accordingly. This issue is addressed in the first characteristic: *organizations are part of an open system and changes to new communication technologies in the external environment necessitate that organizations adapt to these changes*. The analysis of the case study data supports this through evidence that the Calgary Stampede is adapting to

its environment. It also indicates that this is an ongoing process. The organization must adapt at the level of structure and culture. As the organization adapts its structure to incorporate new technologies, the roles of the various departments have also shifted to include new responsibilities, for example the new role of the IS department. This structural change has been followed by a shift in the organization's culture; the resistance to change is lessening and there is a higher level of communication and co-operation between the departments.

The data also illustrates the second characteristic: *the advances in communication technologies have created greater uncertainty and turbulence in an organization's external environment.* The nature of the Calgary Stampede's environment supports Emery and Trist's, and Terreberry's prediction that the environment is growing increasingly turbulent. All the respondents expressed a concern for the growing uncertainty and unpredictability of the environment. The increasing turbulence was also a concern expressed in various documents. In a turbulent environment, the process of adaptation is necessary for survival, a fact supported by the case study.

However, the case study did indicate that turbulence affects different departments in different degrees. At the Calgary Stampede, the perception of a turbulent environment was connected to the level of interaction with the external environment. For example, the PA and IS departments, with their high level of interaction with the external world, perceived a high level of turbulence. On the other hand, the Sponsorship department did not note the same degree of turbulence. This supports the idea that turbulence is not an

all-encompassing, monolithic concept, but one that can occur in varying degrees depending on one's location in the organization.

In the turbulent environment it is also clear that the role of boundary spanners has increased. This supports characteristic number three: *the role of external communications in monitoring, scanning and mapping the external environment has increased in the turbulent environment.* For the Stampede, all forms of external communication and the IS department are crucial to the identification of potential opportunities and challenges that must be addressed. These points of contact are responsible for monitoring, scanning and assessing the rapid changes in the ever-changing environment.

I initiated this study with a focus on the external communication functions of the organization. As the case study progressed, the increasing role of IS as a boundary spanner was revealed. This finding reflect a structural change that has resulted form the technological changes in the environment. Due to the increased complexity of technology, IS's role in organizational decision making has increased and this has shifted the decision making power in the organization. Certain decisions now require the either the buy-in or advice of the IS department. Certain external communication departments at the Calgary Stampede are reluctant to accept the new role of IS, but the increasing use of technology in the organization demands the creation of mutually beneficial relationships between IS and all other departments.

The fourth characteristic is also supported by the case study data. This characteristic states that *the advances in communication technologies have increased the use of technology in external communications activities.* The data that responds to this characteristic indicated that although the technology has become a part of daily external communication activities, it has not replaced the traditional communication tools. The integration of the new technology into the organization has affected the communication patterns and behaviors of external communicators; these members have increased their use of electronic communication tools. However, they still rely heavily on traditional communication channels. The new technology does not duplicate the subtle non-verbal and verbal nuances of face to face and voice communication. For external communicators, the new electronic tools are not as effective for establishing a meaningful relationship with members of the environment. This case studied clearly illustrates that although the new communication technology has caused certain problems, it can also be used to solve these problems.

The literature indicated that the best response to a turbulent environment is organizational learning, a form of active adaptation. The fifth characteristic addresses this issue: *an organization in a turbulent environment must become a learning organization and continuously assess their norms, values and limits and change them when necessary.* The case study data indicates that there are instances of organizational learning at the Calgary Stampede, but overall, it appears that the organization is at the initial stages of organizational learning. The research indicates that in the area of communication technology, the Stampede has begun to critically assess its operating norms, values,

structure and assumptions (Schon, 1983). As this is a recent development, the organization has been slow to adapt to external changes. The shift from the ITSC to the TG does indicate that it is questioning the decision making structure, but this process is not ongoing or established in the organization. The instances of organizational learning in this case study demonstrate that the organization has the potential to integrate learning into all areas of the organization in the future.

The organization's capacity for organizational learning is also evident in the members' ability to adapt to shifts in the organization's culture. As the culture becomes less traditional and less resistant to technological change, the members have learned to accept this shift and begun to embrace the use of technology in their daily tasks.

In addition to the general theories of the relationship between an organization and its environment, this thesis introduced a body of literature that examined the effects of communication technology changes on the organization. The case study focused on the changes to an organization's structure, communication patterns and behavior, culture, external communication and use of strategy. The integration of technology has affected the Stampede's organizational structure, exemplified by the adoption of lateral relations for decision making. The hierarchy and distribution of decision making power has changed with the integration of the new technologies. Participation in this process has also increased. The creation of the TG involves members who were previously excluded from the decision making process.

Overall, the case study data illustrated the five characteristics that guided the case study research. The case study also extended classical systems theory to include elements of the organization at ground level, including organizational culture. Very little attention was paid to role of organizational culture in the adaptive process and this is a limitation of classical systems theory. This case study indicates that the Calgary Stampede's culture plays a large role in determining both the rate and effectiveness of its adaptation to the new technologies.

For example, the organization's traditional culture created a skepticism towards new technologies and a high level of resistance to changes to technology. Although members of the organization viewed this cultural resistance as negative, it can also be defined as a positive motivator that has led the organization to adopt technology slowly and to align the new technology with existing organizational goals and objectives. The case study indicates that the organization's traditional culture was an asset to strategically integrating technology.

The organization's culture also affected the changes to its structure. The organization is does not have one monolithic culture, there is a shared culture, but each department has its own subculture. For the Calgary Stampede the subcultures have led to structural changes. For example, the PA's subculture that negatively affects its ability to be an effective boundary spanner for the organization has shifted the structure and created a new role for IS as an organizational boundary spanner. This link between cultural and

structural changes is not identified by classical systems theory. This case study indicates how classical systems theory can be extended to include factors such as culture.

The connection between structure and culture is two directional. The subculture of a department can affect structural changes and shifts in the organization's structure can lead to cultural changes. For example, the integration of technology into the organization's structure affected the level of resistance in the traditional culture of the organization.

Implications of the Calgary Stampede Case Study

The case study data, combined with the theories outlined in chapters two and three, points to a number of issues raised by this case study and illustrates how one organization has responded to the challenges created by advances in communication technology.

Overall, this case study reinforces the value of going beyond the boundaries of classical systems theory and studying how a system functions at ground level. This type of approach uses classical systems theory as a foundation, but includes the complexities and intricacies created by human interaction. For example, this particular case study highlighted the complex role of culture in an organization's adaptation to communication technology.

This case study provides an example of the symbiotic relationship between an organization's structure and culture. When there are changes to either element, the other

also changes. As a result, if one looks at structural or cultural changes in isolation, the findings are not complete. These elements must be studied together, as they are so closely intertwined.

The initial focus of this research was to focus on the function of external communications. As the research progressed it became clear that there was a new boundary spanning role for IS that was an important piece of the puzzle. In the end, this case study provides an example of IS's new boundary spanning role in the organization, and the need for co-operation between IS and external communication departments. A more cooperative relationship between these two departments would lead to a more efficient and effective integration of communication technologies as IS's activities can complement those of external communications.

Both IS and external communications play important roles in the adaptive subsystem, as they possess specialized sets of skills and knowledge. Combining these sets will lead to a more comprehensive strategic approach to technological change. External communication departments understand the organization's communication needs, goals and strategies, it has some knowledge of the communication technology tools that would facilitate and improve the organization's communication with its environment. On the other hand, the IS department has the technical expertise that external communicators need to realize their goals. In a turbulent environment, these two boundary spanners must work together in a mutually beneficial relationship.

For Further Research

This single case study applied existing theories to the current environment that organizations face. It provides a picture of how one organization has started to adapt to the changes in communication technologies that have altered its landscape. Additional case studies in this area would provide a broader picture of organizational adaptation to this particular element of the changing environment.

This case study reveals two interesting elements that further research could investigate. First of all, it indicates a growing need for a symbiotic relationship between IS and external communication departments. IS's role as a boundary spanner is increasingly important in a technological environment and it would be valuable to study this area more closely using organizational communication theories as a guide. A second issue that deserves further attention is the role of culture in an organization's adaptive process. The Calgary Stampede case study indicates that culture plays an important role in the rate and nature of an organization's adaptation. Research that extends classical systems theory further and investigates the relationship between culture and structure would provide further insight into the process of adaptation.

REFERENCES

References

Aldrich, Howard. E. (1979). Organizations and environments. New Jersey: Prentice-Hall.

Aldrich, Howard & Diane Herker. (1977). Boundary spanning roles and organization structure. Academy of Management Review, 2, 217-230.

Argyris, Chris. (1965). Organization and innovation. Illinois: Richard D. Irwin & The Dorsey Press.

Argyris, Chris & Donald Schon. (1978). Organizational learning: a theory of action perspective. Reading, Massachussetts: Addison-Wesley Publishing Company.

Ashby, W.R. (1960). An introduction to cybernetics. London: John Wiley.

Bahlmann, Tineke. (1990). The learning organization in a turbulent environment. Human Systems Management 9(4),249-256.

Bell, Sue H. & Eugene C. Bell. (1986). Public relations: functional or functionary? Public Relations Review (2)2, 47-57.

Beniger, James R. (1990). Conceptualizing information technology as organizations, and vice versa." In Fulk, Janet & Charles Steinfeld. (Eds.), Organizations and communication technology (pp29-45). Newbury Park, Sage.

Bobbitt, Randy. (1995). An internet primer for public relations. Public Relations Quarterly, Fall (40)3, 27-32.

Botan, Carl H. (1989). Theory development in public relations. In Botan, Carl H. & Vincent Hazelton Jr. (Eds.) Public Relations Theory (pp99-110). New Jersey: Lawrence Erlbaum Associates.

Botan, Carl H. & Vincent Hazelton Jr. (Eds.). (1989). Public relations theory New Jersey: Lawrence Erlbaum Associates.

Broom, Glen; Martha Lauzen & Kerry Tucker. (1991). Public relations and marketing: dividing the conceptual domain and operational turf. Public Relations Review 17(3), 219-225.

Buckley, Walter. (1967). Sociology and Modern Systems Theory. New Jersey: Prentice-Hall Sociology Series.

Burns, T & G.M. Stalker. (1961). The management of innovation. London: Tavistock.

Calgary Stampede SaddleBAG (Fall, 1999). Official Newsletter of the Calgary Stampede.

Calgary Stampede Annual Report (1998)

Calgary Stampede Annual Report (1999)

Child, John. (1987). Information technology, organization and the response to strategic challenges. California Management Review. Fall (30), 33-50.

Contractor, Noshir (1999). Self-organizing systems research in the social sciences: reconciling metaphors and the models. Management Communication Quarterly. August, 13 (1), 154-166.

Contractor, Noshir S. & Eric M. Eisenberg. (1990). Communication networks and new media in organizations. In Fulk, Janet & Charles Steinfeld. (Eds.), Organizations and communication technology (pp143-172). Newbury Park, Sage.

Crowley, David & David Mitchell. (1994). Communication theory today. California: Stanford University Press.

Culnan, Mary J & M. Lynne Markus. (1987). Information technologies. In Jablin, Federic; Linda Putnam; Karlene Roberts & Lyman Porter (Eds.). Handbook of organizational communication: an interdisciplinary perspective. (pp420-443). Newbury Park: Sage Publications.

Cutlip, Scott M. (1995). Public relations history: from the 17th to the 20th century: the antecendents. New Jersey: Lawrence Erlbaum Associates.

Cutlip, Scott M.; Allen H. Center & Glen M. Broom. (1985). Effective public relations. New Jersey: Prentice-Hall.

Delahaye Paine, Katherine. (1999). The 21st century communicator's toolbox - available today. Communication World, 16, 20-22.

Dozier, David M. & Larissa A. Grunig. (1992) The organization of the public relations function. In James E. Grunig (ed.). Excellence in public relations and communications management (pp395-418). New Jersey: Lawrence Erlbaum.

Dozier, David, M.; Larissa A. Grunig & James E. Grunig. (1995). Manager's guide to excellence in public relations and communication management. New Jersey: Lawrence Erlbaum Associates.

The Dusty Trail (October, 1999). Calgary Stampede Internal Employee Newsletter.

Eisenberg, Eric M. & H.L. Goodall, Jr. (1993). Organizational communication: balancing creativity and constraint. New York: St. Martin's Press.

Emery, Fred. (1977). Futures We Are In. Martinus Nijhoff Social Sciences Division: Leiden, the Netherlands.

Emery, Fred & E.L. Trist. (1965). The causal texture of organizational environments. Human Relations, 18(1),21-32.

Esrock, Stuart L. & Greg B. Leichty. (1998). Social responsibility and corporate web pages: self-presenting or agenda setting. Public Relations Review, 24(3),305-319.

Evans, James M. & Marie G. Pavlick. (1999). They need us as much as we need them. Communication World, 16, 17-19.

Fox, William M. (1995). Sociotechnical systems principles and guidelines: past and present. Journal of Applied Behavioral Science. 31(1), March,91-105.

Fulk, Janet & Charles Steinfield (Eds.). (1990). Organizations and communications technology. Newbury Park: Sage Publications.

Galbraith, Jay. (1977). Organization Design. Massachusetts: Addison-Wesley Publishing Company.

Ibid (1973). Designing Complex Organizations. Massachusetts: Addison-Wesley Publishing Company.

Gallant, Shari L. (1993). Public relations in a turbulent environment: in search of a model. Research Project for University of Calgary, Faculty of General Studies.

Gibson, Dirk. (1991). The communication continuum: a theory of public relations. Public Relations Review, 17(2),175-183.

Gerstein, Marc S. (1987). The technology connection: strategy and change in the information age. Massachussets: Addison-Wesley Publishing.

Gerstner, John. (1999). The other side of cyberspace. Communication World, 16, 11-16.

Getz, Donald. (1997). Event Management and Event Tourism. New York: Cognizant Communication Corporation.

Gibson, Dirk C. (1991). The communication continuum: a theory of public relations. Public Relations Review, 17(2), 175-183.

Goodman, Paul S., Terri L. Griffith & Deborah B. Fenner. (1990). Understanding technology and the individual in an organizational context. In Paul S. Goodman, Lee S. Sproull & Associates. (Eds.) Technology and organizations (pp45-86). San Franciso: Jossey-Bass Publishers..

Goodman, Paul S., Lee S. Sproull & Associates. (Eds.).(1990). Technology and organizations. San Franciso: Jossey-Bass Publishers.

Gordon, Joye C. (1997). Interpreting definitions of public relations: self assessmenr and a symbolic interactionism-based alternative. Public Relations Review, 23(1),57-66.

Gray, James H. (1985). A brand of its own: the 100 year history of the Calgary Exhibition and Stampede. Saskatchewan: Western Producer Prairie Books.

Grunig, James & Ronald Hickson. (1976). An evaluation of academic research in public relations. Public Relations Review, Spring (2)1, 31-43.

Grunig, James & T. Hunt. (1984). Managing public relations. New York: Holt, Rinehart & Winston.

Grunig, James (1989). Symmetrical presuppositions as a framework for public relations theory. In Botan, Carl H. & Vincent Hazelton Jr. (Eds.). Public relations theory (pp17-44), New Jersey: Lawrence Erlbaum Associates.

Grunig, James E & Larissa A. Grunig (Eds).. (1989). Public Relations Research Annual. New Jersey: Lawrence Erlbaum Associates.

Grunig, James E. & Larissa A. Grunig. (1989). Toward a theory of the public relations behavior of organizations: review of a program of research. In James E. Grunig & Larissa A. Grunig (Eds.). Public Relations Research Annual (pp27-63). New Jersey: Lawrence Erlbaum Associates.

Grunig, James. (1991). Public relations research: a legacy of scott cutlip. Public Relations Review, 17(4),357-376.

Grunig, James. (Ed.).(1992). Excellence in public relations and communications management, New Jersey: Lawrence Erlbaum Associates.

Grunig, James E. & Larissa A. Grunig. (1992). Models of public relations and communications. In James E. Grunig (Ed.) Excellence in public relations and communications management (pp285-326). New Jersey: Lawrence Erlbaum.

Grunig, James E. & Jon White. (1992). The effects of worldview of public relations theory and practice. In James E. Grunig (Ed.) Excellence in public relations and communications management (pp31-64). New Jersey: Lawrence Erlbaum.

Grunig, Larissa. (1992). How public relations/communication departments should adapt to the structure and environment of an organization...and what they actually do. In James E. Grunig (ed.) Excellence in public relations and communications management pp467-482.. Lawrence Erlbaum: New Jersey.

Hallahan, Kirk. (1993). The paradigm struggle and public relations practice. Public Relations Review, 19(2),197-205.

Harlow, Rex. (1976). Building a public relations definition. Public Relations Review, Winter,(2)4,34-42.

Hazelton, Vincent Jr. & Carl H. Botan. (1989). The role of theory in public relations. In Botan, Carl H. & Vincent Hazelton Jr. (Eds.) Public relations theory (pp3-16) New Jersey: Lawrence Erlbaum Associates.

Heath, Robert. (1998). New communication technologies: an issues management point of view. Public Relations Review, 24(3),273-288.

Heath, Robert. (1999). The vision of academic research: the next generation of public relations studies. Paper presented to International Interdisciplinary Public Relations Research Conference, University of Maryland: June.

Herrington, Jeff. (1999). Bells and whistles are ok – but facts are better. Communication World, 16, 23-25.

Holtz, Shel. (2000). Integrating technology with the traditional. Communication World, 17, 18-21.

Horgan, J. (1996). The end of science: facing the limits of knowledge in the twilight if the scientific age. Reading, MA: Addison-Wesley.

Houston, Renee. (1999). Self-organizing systems theory: historical challenges to new sciences. Management Communication Quarterly. August, 13 (1), 119-134.

Huber, George P. (1984). The nature and design of post-industrial organizations. Management Science, August (30)8,928-951.

Huber, George P. (1990). A theory of effects of advanced information technologies on organizational design, intelligence, and decision making. In Fulk, Janet & Charles Steinfeld. (Eds.), Organizations and communication technology (pp237-274). Newbury Park, Sage.

Janal, Daniel. (1999). Thirty essential steps to take right now to prevent online crime. Communication World, 16, 34-36.

Jelinek, Mariann. (1977). Technology, organizations and contingency. Academy of Management Review January, 2(1),17-26.

Jorgensen, Danny L.(1989). Participant Observation: A Methodology for Human Studies. California: Sage Publications.

Katz, Daniel & Robert L. Kahn. (1978). The Social Psychology of Organizations. New York: John Wiley & Sons.

Kent, Michael L. (1998-99). Does your web site attract or repel customers: three tests of web site effectiveness. Public Relations Quarterly Winter (43)4,31-33.

Kent, Michael & Maureen Taylor. (1998). Building dialogic relationships through the world wide web. Public Relations Review 24(3),321-334.

Kirby, Sandra L. & Kate McKenna. (1989). Experience, research, social change: methods from the margins. Toronto: Garamond Press.

Lawrence, Paul R. & Jay W. Lorsch. (1969). Organization and environment: managing differentiation and integration. Illinois: Richard D. Irwin.

Lawrence, Paul R. & Jay W. Lorsch. (1970). Studies in organization design. Illinois: Irwin-Dorsey series in behavioral science.

Laszlo, Ervin. (1972). The relevance of general systems theory: papers presented to Ludwig von Bertalanffy on his seventieth birthday. New York: George Braziller.

Lindlof, Thomas R. (1995). Qualitative communication research methods. California: Sage Publications.

Livingstone, Donna. (1996). Guy Weadick and The Calgary Stampede: cowboy spirit. Vancouver: Greystone Books.

Lockwood, Lois (1996) A culture of innovation: a grounded theory approach to understanding innovation in organizations Project for University of Calgary, Faculty of General Studies.

Long, Larry & Vincent Hazelton Jr. (1987). Public relations: a theoretical and practical response. Public Relations Review Summer(2),3-13.

McGrath, Joseph E.; Joanne Martin, & Richard A. Kulka. (1982). Judgement calls in research. California: Sage Publications.

McKenna, Regis. (1991). Relationship marketing: successful strategies for the age of the customer. Massachusetts: Addison-Wesley Publishing.

McKeone, Dermot. (1989). How computers can help PR professionals to manage information more effectively. International Public Relations Review 12(4),28-31.

Macnamara, Jim. (1991). Public relations in the marketing mix: a 'macro' approach. International Public Relations Review, 14(1), 33-41.

Markus, Lynne M. & Daniel Robey. (1988). Information technology and organizational change: causal structure in theory and research. Management Science. May, (34)5,583-597.

Mericle, Mary F. (1980). The external environment: effects of change on environmental dynamism and complexity. In Daniel Katz, Robert Kahn & J. Stacey Adams. The study of organizations(pp59-64). San Francisco: Jossey-Bass Publishers.

Mickey, Thomas J. (1998). Selling the internet: a cultural studies approach to public relation. Public Relations Review 24(3),335-349.

Miles, Robert. (1980). Macro organizational behavior. California: Goodyear Publishing Company.

Miller, Katherine. (1998) Nurses at the edge of chaos: the application of 'new science' concepts to organizational systems. Management Communication Quarterly August, 12 (1), 112-127.

More, E.A. & R.K. Laird. (1985). Organisations in the communications age Sydney: Pergamon Press.

Morgan, Gareth. (1997). Images of Organization. London: Sage Publications.

Nass, Clifford & Laurie Mason. (1990). On the study of technology and task: a variable-based approach. In Fulk, Janet & Charles Steinfeld. (Eds.), Organizations and communication technology (pp143-172). Newbury Park, Sage.

Olasky, Marvin N. (1989) The aborted debate within public relations: an approach through kuhn's paradigm. In James E. Grunig & Larissa A. Grunig. (Eds.) Public Relations research annual (pp87-96).: New Jersey: Lawrence Erlbaum Associates.

Olson, Margrethe H.(1991). Information technology and the where and when of office work: electronic cottages or flexible organizations? In Roger Clarke & Julie Cameron (Eds.). Managing information technology's organisational impact (pp3-14). Amsterdam: North-Holland.

O'Reilly & Pondy. (1979). Organizational communication. In S. Kerr (ed.) Organizational behavior (pp119-150). Columbus, Ohio: Grid.

Ovaitt, Frank. (1995). Wired strategist and the ten thousand dimensional web. The Public Relations Strategist Winter,1(4),17-22.

Oxley, Harold. (1987). The principles of public relations. London: Kogan Page Limited.

Pearson, Ron. (1989). Beyond ethical relativism in public relations: coorientation, rules and the idea of communication symmetry. In James E. Grunig & Larissa A. Grunig Public relations research annual (pp67-86). New Jersey: Lawrence Erlbaum Associates.

Pennings, Johannes M. & Arend Buitendam. (1987). New technology as organizational innovation. Massachussets: Ballinger Publishing Company.

Pfeffer, Jeffrey. (1982). Organizations and organization theory. Massachusetts: Pitman Publishing.

Pfeffer, Jeffrey & Gerald R. Salancik. (1978). The external control of organizations: a resource dependence perspective. New York: Harper and Row Publishers.

Prior-Miller, Marcia. (1989). Four major social-scientific theories and their value to the public relations researcher. In Botan, Carl H. & Vincent Hazelton Jr. (Eds.) Public relations theory (pp67-82). New Jersey: Lawrence Erlbaum Associates.

Ramirez, Rafael. (1983). Action learning: a strategic approach for organizations facing turbulent conditions. Human Relations, 36(8),725-742.

Ready, Douglas A. (Ed.). (1995). In charge of change: insights into next-generation organizations. International Consortium for Executive Development Research: Massachusetts.

Reddy, Raj. (1990). A technological perspective on new forms of organizations. In Paul S. Goodman, Lee S. Sproull & Associates. (Eds.)Technology and organizations (pp 232-253). San Franciso: Jossey-Bass Publishers.

Schon, Donald A. (1983). Organizational learning. In Gareth Morgan. (Ed.). (1983). Beyond method: strategies for social research. Beverly Hills: Sage Publications.

Scott, W. Richard. (1990). Technology and structure: an organizational-level perspective. In Paul S. Goodman, Lee S. Sproull & Associates. (Eds.)Technology and organizations (pp 109-143). San Franciso: Jossey-Bass Publishers.

Shani, A.B. Rami & James A. Sena. (1994). Information technology and the integration of change: sociotechnical system approach. Journal of Applied Behavioral Science June (30)2,247-270.

Shannon, Claude E. & Warren Weave.r (1959). The mathematical theory of communication. Illinois: The University of Illinois Press.

Sproull, Lee S. & Paul S. Goodman. (1990). Technology and organizations: integration and opportunities. In Paul S. Goodman, Lee S. Sproull & Associates (Eds.)Technolgy and organizations (pp 254-266). San Franciso: Jossey-Bass Publishers.

Terreberry, Shirley. (1968). The evolution of organizational environments. Administrative Science Quarterly 12,590-613.

Terry, Keith E. (1989). Educator and practitioner differences on the role of theory in public relations. In Botan, Carl H. & Vincent Hazelton Jr. (Eds.) Public relations theory (pp281-298). New Jersey: Lawrence Erlbaum Associates.

Thach, Liz & Richard W. Woodman. (1994). Organizational change and information technology: managing on the edge of cyberspace. Organizational Dynamics Summer,30-46.

Thompson, James D. (1967). Organizations in action New York: McGraw Hill Book Company.

Thomsen, Steven R. (1995). Using online databases in corporate issues management. Public Relations Review 21(2),103-122.

Thomsen, Steven R. (1996). @ work in cyberspace: exploring practitioner use of the PRForum. Public Relations Review 22(2),15-131.

Vaill, Peter B. (1996). Learning as a way of being: strategies for survival in a world of permanent white water. San Francisco: Jossey-Bass Publishers.

Von Bertalanffy, Ludwig. (1968). General systems theory: foundations, development, applications. New York: George Braziller.

Weick, Karl, E. (1979). The social psychology of organizing. California: Addison-Wesley Publishing Company.

Weick, Karl. (1990). Technology as equivoque: sensemaking in new technologies. In Paul S. Goodman, Lee S. Sproull & Associates. (Eds.)Technology and organizations (pp 1-44). San Franciso: Jossey-Bass Publishers.

Werther, William J.; Evan Berman & Eduardo Vasconcellos. (1994). The future of technology management. Organizational Dynamics Winter,20-32.

White, Jon & Laura Mazur. (1994). Strategic communications management England: Addison-Wesley Publishing.

White, Jon & David Dozier. (1992). Public relations and management decision making. In James E. Grunig (Ed.) Excellence in public relations and communications management (pp91-108). New Jersey: Lawrence Erlbaum.

Williams, Trevor A. (1982). Learning to manage our futures: the participative redesign of societies in turbulent transition. New York: John Wiley & Sons.

Wilson, Ryan. (1996). Life on the internet. International Public Relations Review June (19) 1,10-14.

Woods, Lee. (1995). A taxonomy of public relations communications functions? International Public Relations Academic Review, 2 (june), 1-3.

Yin, Robert. (1994). Case study research: design and methods. London: Sage Publications.

Zmud, Robert W. (1990). Opportunities for strategic information manipulation through new information technology. In Fulk, Janet & Charles Steinfeld. (Eds.), Organizations and communication tech

APPENDIX A: Sample Interview Questions
(Public Affairs Department)

Can you provide me with a brief description of your department and your role in the department?

What communications technology issues are being addressed by the Stampede Organization?

What communications tools has the Public Affairs department implemented to respond to the changes in the environment?

Has the introduction of these new tools created any new problems that Public Affairs must respond to?

Why did your department decide to create a Web site and is there a process for evaluating it?

Why was the ITSC first initiated and how did it evolve into the Technology Group?

How have the changes to communications technology affected how your department communicates with its stakeholders?

The function of Public Affairs has a close relationship with the new communications technology and you have to deal with its effects on a daily basis. Has this awareness of the technology affected your role in decision making within the organization as a whole?

APPENDIX B: Documents and Archives Collected

Documents

ITSC Policy Procedures and IT Planning:
Strategy and Vision
Policy and Procedures for IT

ITSC Minutes and Presentations

Internal Memos

IT Priority Recommendations, 1996

IT Management Strategy, 1996

IT Steering Committee Mandate, 1996

Computer and Information System Review, 1996

Internet Evaluation and Guidelines, 1997

IT Management Strategy, 1999

Information Technology Report, 1999

Information Technology Recommendations, 1999

Archives

The Dusty Trail, October, 1999. Newsletter for Calgary Stampede employees

Calgary Stampede SaddleBAG, Fall 1999.. The official newsletter for volunteers and friends of the Calgary Stampede organization.

Calgary Stampede employee email and phone list

Departmental structure charts for the following departments: Administration, Public Affairs, Corporate Development.

Calgary Stampede organizational structure chart.

Annual reports from 1998, 1999

APPENDIX C: Assessment of Calgary Stampede's Web Site
(www.calgary-stampede.com)

This assessment is based on Kent and Taylor's (1998) article "Building Dialogic Relationships Through the World Wide Web"

I. Dialogic Loop
   a) Is the organization's email address prominent?
   b) Is other contact information included on the site (phone, fax, mailing address)?
   c) Where is the contact information located?

II Usefulness of Information
   a) Does the site include general and/or historical information about the organization?
   b) Is there a search engine or index?
   c) Is the audience specific information organized and easy to find?
   d) Is there information about all of the organization's 10 business units?
   e) Can users sign up for mailing lists and discussion groups so they can receive information automatically?

III Generation of Return Visits
   a) Is the information on the site up to date?
   b) Are there special online forums?
   c) Are there online question and answer sessions?
   d) Are there "Frequently Asked Questions"?
   e) Is there downloadable or mailed information?
   f) Is there specialized information that can be requested by email or regular mail?

III Intuitiveness/ Ease of Using the Interface
   a) Is there a table of contents?
   b) Is the information organized hierarchically?
   c) Is the focus on the textual content or the graphics?
   d) Does it take a long time to download various pages?
   e) Do users have the option of requesting a text only version of the site?

IV The Rule of Conservation of Visitors
   a) Are there links to other sites?
   b) What are the links?
   c) Are the users given a clear path to lead them back to the Calgary Stampede site once they have followed a link?