A DESCRIPTIVE ANALYSIS OF SPEECH COMMUNICATION IN AN ORGANIZATION: THE TEXAS DEPARTMENT OF PUBLIC SAFETY AS A SYSTEM

THESIS

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L W M

August, 1975

CHAPTER I

INTRODUCTION

Communication, organization, and system are three traditional concepts that maintain a relevant and essential place in the realm of organizational communication. When the organization is defined as "a social system in which each person is a variable who reacts to his associates and is himself the cause of the reactions of others,"[1] it is evident that organizational communication maintains an indispensable place within the organization's framework. Interactions occurring between people are dependent upon communication and have a major role in the total effectiveness or ineffectiveness of the system as a whole. In the analysis of an organization, two vital factors involved are system and communication. Recently these factors have been combined to form a relatively new area of study that is rapidly making headlines in communications research. This area has been termed organizational communication and although there is a diversity of opinion as to how it should be defined, three specific characteristics are commonly accepted:

1. Organizational communication occurs within a complex open system which is influenced by and influences its environment.
2. Organizational communication involves messages, their flow, purpose, direction and media.

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[1]Ernest Dale, Management: Theory and Practice (New York: McGraw-Hill Book Company, 1969), p. 180.

3. Organizational communication involves people, their attitudes, feelings, relationships and skills.[2]

Based on these propositions, the following definition was adopted for this study: "Organizational communication is the flow of messages within a network of interdependent relationships."[3]

An essential element in organizational communication studies is the organization; therefore for purposes of this project, the Texas Department of Public Safety has been chosen to fulfill this position. Although all organizations are substantially different in respect to size, structure, and purpose, Max Weber stated that one basic characteristic is that they tend to be bureaucratic. Weber, founder of the bureaucractic model, defined bureaucracy as "the large organization with fixed positions linked together in a hierarchical pyramid, with specialization and division of labor, and with established rules and regulations governing behavior."[5] Based on this definition, the Department of Public Safety can be viewed as a bureaucratic organization. Its organizational chart specifically reveals levels of command and authority which automatically determines its formal channels of communication. Consequently, it was resolved

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[2]Gerald Goldhaber, Organizational Communication (Dubuque, Iowa: William C. Brown Company, 1974), p. 11.

[3]Ibid.

[4]Within the context of this thesis, the Texas Department of Public Safety will be referred to as the DPS. These terms will be used interchangeably.

[5]William Whyte, Organizational Behavior: Theory and Application (Homewood, Illinois: Richard D. Irwin, Inc., 1969), p. 6.

that this organization would lend itself well to a study of speech communication because it functions as an open, highly structured system. The communication system of the Department of Public Safety is of great importance to the organization's effectiveness because communication is "the essence of organized activity and is the basic process out of which all other functions derive."[6] Therefore, this study focused on the immediate patterns of communication that are functioning to accomplish the goals of the organization and to carry out its operations.

The study of the organization as a functioning unit within a complex society has generated a great amount of interest. A general perspective of how organizations have been examined can be obtained by viewing the three basic theories of organization: Traditional, Human Relations, and Systems.

The Traditional approach, commonly known as the classical or scientific management approach, received its initial thrust from Taylor, Emerson, Gantt, Gilbreath, and Cooke.[7] Their research in

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[6]Edwin Fleishman, Studies in Personnel and Industrial Psychology (Homewood, Illinois: The Dorsey Press, Inc., 1961), p. 394.

[7]See Frederick Taylor, Scientific Management (New York: Harper and Row, 1947); Harrington Emerson, The Twelve Principles of Efficiency (New York: The Engineering Magazine Company, 1913); Henry L. Gantt, Work, Wages and Profits (New York: The Engineering Magazine Company, 1911); Lillian Gilbreth, The Psychology of Management (New York: Sturgis and Walton Company, 1914); Morris Cooke, Our Cities Awake (New York: Doubleday, Doran and Company, 1918).

scientific management brought to the forefront the importance of planning, increasing work efficiency, and securing satisfactory performance levels. Due to the development of this approach, the emphasis of industrial management was focused on structure and technology.[8]

A new development of organizational theory later emerged as the Human Relations approach. This approach was in contrast to the traditional theory because it introduced the human element into organizational studies. It placed emphasis on the worker and on methods of improving worker satisfaction and morale. Among other human relationists, Maslow, Mayo, McGregor, Roethlisberger, and Whitehead[9] stimulated the development of this approach. In opposition to scientific management, this theory recognized the organization as a social system encompassing individuals, informal groups, and inter-group relationships.[10]

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[8]Albert K. Wickesberg, Management Organization (New York: Meredith Publishing Company, 1966), p. 124.

[9]See Abraham Maslow, Motivation and Personality, 2nd ed. (New York: Harper and Row, 1970); Elton Mayo, The Human Problems of an Industrial Civilization (New York: The Macmillan Company, 1933); Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, 1960); Fritz Roethlisberger and William Dickson, Management and the Worker (Cambridge, Massachusetts: Harvard University Press, 1939); Tom Whitehead, The Industrial Worker (Cambridge, Massachusetts: Harvard University Press, 1938).

[10]Derek S. Pugh, David J. Hickson, and Christopher R. Hinings, Writers on Organizations, 2nd ed. (Baltimore, Maryland: Penguin Books, 1971), p. 130.

The final and most contemporary development of organizational theory is Systems approach. This approach has also been termed general systems, social systems, and modern systems. The distinctive quality of this theory is that it represents a "quest for [organizational] universals at a level of analysis unapproached by previous theories."[11] A number of authorities working in diverse fields of specialization have contributed to the development of the systems theory. A few of the more contemporary men are Bowditch, Hare, Huse, Johnson, Kast, Luthans, and Rosenzweig.[12] The most unifying strand of the systems approach has been the effort made to look at organizations in their totality: studying the relationship of the parts of an organization to the whole system, and viewing the interdependent nature of these relationships has been its primary focus.[13]

From the previous examination of the three organizational

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[11]William Scott and Terence Mitchell, Organizational Theory: A Structural and Behavioral Analysis (Homewood, Illinois: Richard D. Irwin, Inc., 1972), p. 54.

[12]See Van Court Hare, Jr., Systems Analysis: A Diagnostic Approach (New York: Harcourt, Brace and World, 1967); Edgar F. Huse and James L. Bowditch, Behavior in Organizations: A Systems Approach to Managing (Reading, Massachusetts: Addison-Wesley Publishing Company, 1973); Richard Johnson, Fremont Kast, and James Rosenzweig, The Theory and Management of Systems (New York: McGraw-Hill Book Company, 1963); Fremont Kast and James Rosenzweig, Organization and Management: A Systems Approach (New York: McGraw-Hill Book Company, 1970); Fred Luthans, Contemporary Readings in Organizational Behavior (New York: McGraw-Hill Book Company, 1972).

[13]Scott and Mitchell, p. 55.

theory approaches, the Systems theory was chosen as a basis for analyzing the Department of Public Safety. This method of analysis made it possible to relate speech communication to the organization by comparing the different types of communication patterns to the different organizational stages of development. With the increasing interest now being given to the study of organizations as complex systems, it was relevant and in line with contemporary research to pursue this type of study.

Hitherto, the discussion has been concerned with the analysis of the organization focusing on the Systems theory. Now the attention must turn to speech communication. Traditionally scholars viewed communication in the form of basic models. Three of the more commonly known models devised by Shannon and Weaver, Berlo, and Ross[14] present an initial perspective into the process of communication. These models reveal the communication process to be comprised of a number of interacting variables; one of which is the network variable.[15]

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[14]See Claude Shannon and Warren Weaver, The Mathematical Theory of Communication (Urbana, Illinois: University of Illinois Press, 1949), p. 98; David Berlo, The Process of Communication: An Introduction to Theory and Practice (New York: Holt, Rinehart and Winston, Inc., 1960), p. 14; Raymond Ross, Speech Communication Fundamentals and Practice (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965), p. 8.

[15]Frank Dance and Carl Larson, Speech Communication: Concepts and Behavior (New York: Holt, Rinehart and Winston, Inc., 1972), p. 19.

The network component has been considered by many scholars as a vital and essential element in communication. Several speech communicationists such as Goldhaber, Redding, Sanborn, Smith, Thayer, and Wickesberg[16] have delved into the study of communication networks. Only recently have studies in communication and information flow been applied to organizations. Within the framework of the organization, the network variable refers to specific communication patterns that are prevalent. These patterns may be horizontal, vertical, or diagonal. From the vast storehouses of research on communication networks, Gerald Goldhaber's definition and division of this component was adopted for this study. He developed the idea that this element of the process of communication is an indispensable contribution to the total production of the organization. In agreement with Goldhaber, Heise and Miller concluded that "communication patterns are a significant influence on organizational effectiveness."[17]

In summary, the speech communication component to be used in

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[16]See Gerald Goldhaber, Organizational Communication; Charles W. Redding and George A. Sanborn, Business and Industrial Communication: A Source Book (New York: Harper and Row, 1964); Richard Budd and Brent Ruben, eds., Approaches to Human Communication (New York: Spartan Books, 1972); Lee Thayer, Communication and Communication Systems: In Organization, Management, and Interpersonal Relations (Homewood, Illinois: Richard D. Irwin, Inc., 1968); Richard Huseman, Cal Logue, and Dwight Freshley, Readings in Interpersonal and Organizational Communication (Boston, Massachusetts: Holbrook Press, 1969).

[17]Fleishman, p. 394.

the analysis has been limited to the network variable. Goldhaber's theory went beyond a limited study on networks; he incorporated this communication variable within the framework of complex organizations.

Purpose of the Study

Organizational communication is an innovative area of study that is developing steadily. The combination of organization, system, and communication have stimulated new areas of thought and exploration in the research of the social sciences. An interest concerning new methods of communication within complex organizations has increased rapidly. Consequently, the purposes of this study were:

1. To discover how the Texas Department of Public Safety functions as a system and operates as an organization.

2. To define the organizational and speech components used in the analysis, and examine the relationship that exists between the two.

3. To observe the different types of communication patterns that might occur within the various types of system states or stages of development of the Department of Public Safety. Thus, this paper will be an organizational communication study.

Research Design

This paper, a descriptive study of speech communication within an organization, examines two primary areas: (1) the subsystems of the organization and (2) the network component. The guidelines set

forth by Kast and Rosenzweig for the analysis of an organization as a system have been adopted for this study. These men have developed a systems theory which regards the organization as an open socio-technical system with five primary subsystems.[18] The examination of the second area of interest was based on Goldhaber's analysis of the network variable as being comprised of horizontal and vertical communication patterns.[19] The following explanation provides for a more comprehensive understanding of these two areas.

Systems analysis was the methodology applied in this study. This type of analysis is a procedure used for dividing a system into its components. Kast and Rosenzweig's system analysis focused on the organization as a total system comprised of the following subsystems: (1) goals, (2) technology, (3) structure, (4) psycho-social system, and (5) management.[20] Due to the limitations on this study, the analysis will be limited to the three most applicable and relevant subsystems: goals, psycho-social system, and management.

Goals

The subsystem "goals" of an organization may vary from written to unwritten, implicit to explicit, and agreed upon to non-agreed upon.

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[18]Kast and Rosenzweig, p. x.

[19]Goldhaber, p. 114.

[20]Kast and Rosenzweig, p. x.

Psycho-Social System

This subsystem is comprised of motivation and role.

Motivation

Maslow established that motivation can vary from the basic physiological needs of food, clothing, and shelter to the highest need of self-actualization.[21]

Role

Kubie established in his transactional analysis that basically there are four different roles of human behavior. These behaviors vary from a stable perception of oneself and of others to an unstable perception.[22]

Management

Likert categorized types of management into management systems. These systems revealed that management can vary from one ruler to several decision-making groups or from autocracy to democracy.[23]

In summary, the organizational components included in the analysis were the goals, the psycho-social system, and the management as displayed in the Department of Public Safety.

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[21]Maslow, pp. 35-47.

[22]L. S. Kubie, "The Neurotic Process as the Focus of Physiological and Psychoanalytic Research," Journal of Mental Science 104 (1958):143.

[23]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, 1961), pp. 222-236.

The second area of examination is not concerned with organizations but with communication that occurs in these organizations. Speech communication is comprised of a number of interacting elements, but the component most applicable to this study was the communication patterns. Therefore, the speech component for the analysis was the network variable.

Communication Network

Goldhaber stated that communication within the framework of organizations may be characterized as being formal or informal. He further explained that there were various dimensions of communication networks that resulted in definite communication patterns. The degree to which communication is formal or informal is not of great significance in this study, but the communication patterns are of prime importance. These patterns were stated to be of vertical and horizontal types.[24] Therefore, these communication patterns were studied in relation to the goals of the Department of Public Safety, the psycho-social system of the organization, and the management within the organization.

Justification for the Study

Today speech departments of major colleges and universities are moving toward areas of study where people are actively involved

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[24]Goldhaber, pp. 113-122.

in the communication process; that is, towards areas dealing with interpersonal communication, organizational communication, and business communication.[25]

This thesis was a study in the area of organizational communication. Recently articles have been published presenting a rationale for studies done in this area. The November, 1974, issue of The Speech Teacher states:

> First, organizational communication is a legitimate area for theoretical consideration. The organization, with its unique traits, is a fundamental context for communication; since it represents a significant portion of human communication behavior, an analysis of it can broaden major understanding of communication in general. Furthermore, the study of organizational communication offers a bridge between theory and practice.
> Second, there is a trend for communication graduates to seek non-teaching jobs or consulting opportunities, and training in organizational communication prepares students for diverse job opportunities.
> Third, organizational communication is a significant area for action research.
> Fourth, organizational communication courses are frequently service courses which establish a broad base from which to draw students.
> Fifth, organizational communication is in demand.[26]

This thesis represents the first attempt at studying any facet of communication in the Texas Department of Public Safety. From studying the communication flow, pertinent information was discovered about the major channels of communication. The results from the analysis could be used as a guideline for new improvements of the

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[25]Charles Perrow, Complex Organizations: A Critical Essay (London: Scott, Foresman and Company, 1972), p. 199.

[26]Cal W. Downs and Michael W. Larimer, "The Status of Organizational Communication in Speech Departments," The Speech Teacher 23 (November 1974):326-327.

Department's speech communication system. This analysis of the DPS as a system might stimulate new avenues for future research. There is a growing demand for research in the area of organizational communication and the more this need is met, the greater the chances that new courses in management and communication might develop at Southwest Texas State University.

Limitations of the Study

The Department of Public Safety is a law enforcement organization dedicated to serving the State of Texas. Obviously, it would be a difficult task to comprehensively study the communication system of the total organization. Therefore, certain limitations were drawn in order to place this study within workable dimensions. The organizational chart of the DPS explicitly revealed the structured hierarchy within the organization. From this chart, the scope of the management levels were narrowed.

1. The three major divisions of the DPS are the Chief of Criminal Law Enforcement, Chief of Administration, and Chief of Traffic Law Enforcement. The latter division was chosen for this study.

2. Included under the Traffic Law Enforcement Division are six Regions. Region III, which includes Corpus Christi and San Antonio, was chosen only because of the proximity to Southwest Texas State University.

3. Included under Region III are District "A" and "B".

District "B" was chosen because it encompassed the San Antonio area.

4. In District "B", there are seven areas each containing one sergeant and approximately thirteen patrolmen. Areas 1, 3, and 7 were used in the analysis also because of proximity to Southwest Texas State University. This first limitation has narrowed the Department of Public Safety to one Division, one Region, one District, and three areas. Within this framework, the study has encompassed a substantial representation of the DPS as a functioning system.

The second limitation was in reference to the analysis. Any complete analysis of any complex organization should consider the five basic subsystems: (1) goals, (2) technology, (3) structure, (4) psycho-social system, and (5) management. Since the focus of this study was on the speech communication element within the organization, not all of these subsystems were directly applicable. The subsystems most relevant and pertinent were the goals, the psycho-social system, and the management. These three subsystems were used as the organizational components for the analysis.

Communication is such an ambiguous term that it too must be limited. Speech communication has been defined and analyzed in many different ways. One way has been through the use of models. From a selection of models, the component most applicable to this study was the "network." The network variable of speech communication was viewed by several theorists and, from these, Goldhaber's approach was selected for two reasons:

First, it views the communication network as having downward, upward, and horizontal communication patterns. This study concentrated on the downward communication, the upward communication, and the horizontal communication that occurred within the organizational goals, psycho-social system, and management.

Second, Goldhaber's approach focuses on the speech communication that occurs within an organization. Many approaches deal with speech communication and organization separately, and some focus on one or the other. Goldhaber is interested in the organization itself and deals with speech communication as a major element within the operation of the organization.

These limitations place this study within a workable framework for the analysis.

Plan of Development

Chapter II presents a selected survey of the existing research in the areas of organizational theory and speech communication. The Traditional, Human Relations, and Systems approach of organizational development are reviewed; speech communication is examined by means of several contemporary investigations.

Chapter III establishes the theory-building requirements for this study. The term "system" is defined and discussed along with the five basic subsystems of an organization and the three main patterns of communication. The laws of interaction are introduced and the propositions are designated.

Chapter IV reveals the empirical indicators and the hypothesis for the study. The method used for sampling and the qualifications for determining how each subsystem is measured is discussed.

Chapter V presents the data that was obtained from the responses to a questionnaire sent to the three different levels of management within the Department of Public Safety. These results made it possible to assign each component to its proper system state and eventually discover the overall state of the organization and its communication system.

Chapter VI contains a summary of the study and an interpretation of the results based on the analysis. Suggestions for future organizational communication projects in the Department of Public Safety are presented.

CHAPTER II

REVIEW OF THE LITERATURE

The two concepts inherent in the term "organizational communication" are the nucleus for the review of the literature. The purpose of this chapter is to present a substantial representation of the relevant research and basic doctrines of organizational theory and speech communication.

Organizational Theory

A survey of the development of organizational theory will center on three approaches: Traditional, Human Relations, and Systems.

Traditional

The rise of the industrial revolution created two types of managerial problems: technological and human. Between 1856 and 1915, the major interest of scientific management focused on the technological problems. The traditional theory of scientific management advocated a more rational and efficient performance in industry. This approach was basically concerned with standardizing human effort at the operative level for the purpose of increasing the organization's production.[1] Harlow Person, Morris Cooke, and Dan Braum synthesized the following definition which revealed scientific management to be "a concept and mental attitude toward achievement,

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[1] Encyclopaedia of the Social Sciences, 1934 ed., s.v. "Scientific Management," by Harlow S. Person.

which exercises basic systematic techniques for discovering and establishing objectives, plans, standards, methods and control of an enterprise, all within the laws of each situation and in an environment of high morale, and thereby exemplifies the best use of human and material energy."[2] Scientific management is said to be firmly grounded by three men: Frederick Taylor, Henri Fayol, and Max Weber.

Frederick Taylor, who came to be known as the father of scientific management, was the original leader in the systematic study of industrial organizations.[3] The thrust of his approach enlarged the concept of technology within the organization. The underlying principle of scientific management centered on standardizing and controlling human productivity through the medium of time and motion study.[4] Leland Jenks stated that Taylorism "aimed at reducing costs in the machinery industry by systematic shop control and by worker benefits calculated not only to yield co-operation but to encourage moral improvement in the men."[5] Frequently, this approach has been

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[2]Henry P. Dutton, "A History of Scientific Management in The United States of America," Advanced Management Journal 18 (October 1953):9.

[3]Stanley Powers, F. Gerald Brown, and David Arnold, eds., Developing the Municipal Organization (Washington, D. C.: International City Management Association, 1974), p. 26.

[4]Sudhir Kakar, Frederick Taylor: A Study in Personality and Innovation (Cambridge, Massachusetts: Massachusetts Institute of Technology Press, 1970), p. 3.

[5]Leland H. Jenks, "Early Phases of the Management Movement," Administrative Science Quarterly 5 (December 1960):421.

called a "physiological organization theory" because it centralized on a range of relatively simple physiological tasks and emphasized a limited number of variables.[6] This theory of organization overruled any other element that was not concerned with control, precise allocation of authority and responsibility, and increasing work efficiency.[7]

In the early twentieth century, a new emergence in scientific management was brought forth by the influence of Henri Fayol. Fayol, the advocate of administrative management, established that management was in dire need of governing principles, rules, and guidelines for higher organizational levels. He developed a program of fourteen points for the purposes of analyzing administrative behavior. He believed that as one began to advance to higher states of power and authority in the organization, the managerial ability became of great importance; therefore, his focus was on the administrative level in organizations.[8]

Several of Fayol's administrative management concepts can also be seen in Max Weber's theory of bureaucracy. Weber, a German economist and sociologist, had a desire to construct an "ideal"

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[6]Joe Kelly, Is Scientific Management Possible? (London: Faber and Faber LTD, 1968), p. 18.

[7]William Whyte, Organizational Behavior: Theory and Application (Homewood, Illinois: Richard D. Irwin, Inc., 1969), p. 5.

[8]Harold Koontz and Cyril O'Donnell, Principles of Management: An Analysis of Managerial Functions (New York: McGraw-Hill Book Company, 1955), pp. 24-25.

organization for the industrial society. In Weber's opinion, bureaucracy was that "ideal" organization, and he upheld it as being the most effective means for managing the large scale organization:

> the purely bureaucratic type of administrative organization . . . is, from a purely technical point of view, capable of attaining the highest degree of efficiency and is in this sense formally the most rational known means of carrying out imperative control over human beings. It is superior to any other form in precision, in stability, in the stringency of its discipline, and in its reliability.[9]

This brief observation of the traditional theory of organization revealed that management at that time concentrated on the principles of scientific management. The role of communication within scientific management was basically concerned with the structure and technology of the organization. The communication inherent in this organizational theory aided the establishment and maintenance of the structural and technological problems that were confronting organizational management at that time. Today, scientific management is viewed as a period piece: "A product of an age when engineering and physical science were the alpha and omega of industrial achievement, and when the profession of management was in its infancy."[10]

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[9]Max Weber, The Theory of Social and Economic Organization (New York: The Free Press of Glencoe, 1964), p. 337.

[10]John T. Diebold, "Scientific Management Applied to The Field of Human Relations," Advanced Management Journal 18 (December 1953):27.

Human Relations

While the traditionalists were concerned with structure and technology, the human relationists began to emerge with a new train of thought. The human relations movement became known as "a systematic, developing body of knowledge devoted to explaining the behavior of individuals in the working organization."[11] It sought "the integration of people into a work situation that motivates them to work together productively, cooperatively, and with economic, psychological, and social satisfaction."[12] This approach attempted to motivate "people in groups to develop teamwork which effectively fulfills their needs and achieves organizational objectives."[13] It has been noted that this theory is comprised of two parts: human relations and behavioral science.

In 1920, the human relations movement in industry began with the research of Elton Mayo and his associates Fritz Roethlisberger and Thomas Whitehead. Mayo's experiments at the Hawthorne Plant of the Western Electric Company began to counterbalance the excesses of scientific management.[14] The Hawthorne study revealed that the

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[11] S. G. Huneryager and Irvin L. Heckmann, Jr., Human Relations in Management (Cincinnati, Ohio: South-Western Publishing Company, 1967), p. 1.

[12] Fred Carvell, Human Relations in Business (London: The Macmillan Company, 1970), p. 1.

[13] Ibid., p. 2.

[14] Huneryager and Heckmann, p. 32.

organization was more than a formal arrangement of functions; it was a social system comprised of individuals. This study aided the development of group dynamics which brought to light the concepts of role, teamwork, status, leadership, and informal structure.[15] The Hawthorne study helped Mayo to look beyond the formal charts of organizational structure and to recognize the importance of the informal organization. He probed into the human and social factors of the work environment in order to determine how the informal group, through teamwork and mutually acceptable norms of performance, could be incorporated to raise production.[16] While the Hawthorne study was often criticized, it did place new light on the social factor, thus providing new avenues for the behavioral scientists.[17]

Abraham Maslow's contribution to the field of human relations dealt with motivation. He attempted to enlarge the concept of human personality by discovering higher levels of human nature. In 1942, Maslow emerged with his own philosophy of motivation. He believed that life would never be understood unless the motivating forces of that life were observed. Therefore, he developed a theory

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[15]Henry Albers, Principles of Management (New York: John Wiley and Sons, Inc., 1969), pp. 48-49.

[16]Carvell, p. 56.

[17]Bernard Rosenblatt, Robert Bonnington, and Belverd Needles, Modern Business: A Systems Approach (Boston, Massachusetts: Houghton Mifflin Company, 1973), p. 71.

of motivation which was based on a hierarchy of human values, and these values were the essence of human nature itself.[18]

Douglas McGregor, another behavioral scientist in the area of human relations, developed a theory of human behavior for organizations which he labeled Theory X and Theory Y. Theory X represented a type of organization that asserted direction and control through the use of authority. In opposition, Theory Y had less emphasis on authority and more on the integration of the individual to the organizational goals. Theory Y was representative of the desired method for management and was often called "management by objectives" as opposed to Theory X, "management by control."[19]

Fred Herzberg's contribution to the area of human relations was a motivation-hygiene theory of job attitudes. He discovered that factors involved in motivation are separate and distinct from the factors that lead to job satisfaction. The results of his study showed the motivation factors (achievement, recognition, advancement) to be the primary cause of satisfaction, while the hygiene factors (company policy, supervision, administration) were the cause of unhappiness on the job.[20]

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[18]Abraham Maslow, Motivation and Personality, 2nd ed. (New York: Harper and Row, 1970), pp. ix-xiii.

[19]Warren Bennis and Edgar Schein, eds., Leadership and Motivation: Essays of Douglas McGregor (Cambridge, Massachusetts: Massachusetts Institute of Technology, 1966), pp. 6-15.

[20]Fred Herzberg, "One More Time: How do you motivate employees?" Harvard Business Review 46 (January-February 1968):54-58.

It is obvious that the objective of the human relations theory was "to discover newer and better ways of understanding man and his relation to his work, to motivate him to higher standards of workmanship, and to help as many people as possible to realize their maximum potential."[21] The major revelation of this theory was the discovery of the informal group, which is now realized to exist in all organizations and is used as an outlet for the aspirations of the worker.[22] The communication within this organizational theory focused on these informal groups. The emergence of group dynamics and teamwork led to the development of interpersonal communication. Communication was no longer restricted to the structural and technological problems of the organization, but now brought to the forefront the importance of communication among people within the organization.

Systems

Systems theory was first recognized in the sciences by Ludwig von Bertalanffy.[23] He attempted to discover a unifying framework of general theory for various science disciplines such as psychology, sociology, and anthropology so that each discipline could obtain

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[21] Huneryager and Heckmann, p.6.

[22] Derek S. Pugh, David J. Hickson, and Christopher R. Hinings, Writers on Organizations, 2nd ed. (Baltimore, Maryland: Penguin Books, 1971), p. 130.

[23] Donald L. Caruth and Frank M. Rachel, Business Systems: Articles, Analyses, and Cases (San Francisco, California: Canfield Press, 1972), p. 3.

relevant communication from the other. Kenneth Boulding expanded Bertalanffy's theory into a hierarchical arrangement of nine different types of systems which are in turn components of larger systems. It was from this classification that the social system gained recognition, and today it is the basis for most systems research.[24] The systems concept has been applied to such disciplines as physical science,[25] biological science,[26] and social science.

Littlefield, Rachel, and Caruth defined system as "a group of interrelated and interdependent parts operating in a sequence, according to the predetermined plan, in order to achieve a goal or a series of goals."[27] From this definition, three important aspects of system were implied:

> 1. The arrangement of components must be orderly and hierarchical, no matter how complex it is.
> 2. Since the components of the system are interdependent, there must be communication among them.
> 3. Since a system is oriented toward an objective, any interaction among the components must be designed to achieve that objective.[28]

This explanation indicated that systems theory centralizes on the dynamic interrelationship and interaction of its components.

Johnson and his associates have condensed the systems approach

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[24]Ibid., p. 7.

[25]Arthur Stanley Eddington, The Nature of the Physical World (New York: The Macmillan Company, 1928), pp. 103-104.

[26]Ludwig von Bertalanffy, "The Theory of Open Systems in Physics and Biology," Science 111 (13 January 1950):23-29.

[27]C. L. Littlefield, Frank M. Rachel, and Donald L. Caruth, Office and Administrative Management: Systems Analysis, Data Processing, and Office Services, 3rd ed. (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 103.

[28]Caruth and Rachel, p. 7.

into three divisions: theory and concepts, design and analysis, and managerial applications. Within these divisions, the following system concepts were examined: organization, planning, control, open and closed systems, subsystems, network, etc. These men expressed the view that the focus of the systems approach is on "providing a better picture of the network of subsystems and interrelated parts which go together to form a complex whole."[29]

The title of Stanley Young's article "Organization as a Total System" is representative of his major principles. He felt that "organizations should be viewed as a total system if we are to increase organizational output."[30] He asserted that the analysis of an organization as a system involved such concepts as input, transformation, output, subsystem, feedback, and others. Young proclaimed that the concept of the organization is changing from one of structure to one of process and that input, output, and the organization itself comprise the process.[31]

Edgar Huse and James Bowditch's approach to systems analysis centered on the organization. They regarded the organization as a system and established these four generalizations:

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[29]Richard Johnson, Fremont Kast, and James Rosenzweig, The Theory and Management of Systems (New York: McGraw-Hill Book Company, 1963), p. 6.

[30]Fred Luthans, Contemporary Readings in Organizational Behavior (New York: McGraw-Hill Book Company, 1972), p. 112.

[31]Ibid., p. 113.

> 1. An organization (firm, company) is composed of a number of subsystems, all of which are interdependent and interrelated.
> 2. An organization (system) is open and dynamic, having inputs, outputs, operations, feedback, and boundaries.
> 3. An organization (system) strives for balance through both positive and negative feedback.
> 4. An organization (system) has a multiplicity of purposes, functions, and objectives, some of which are in conflict. The purpose of the administrator is to strive for an optimal balance among the subsystems.[32]

Justin Longenecker presented a view of the systems concept by examining it as an open system, as a means of integrating subsystems, and as a method used to find solutions to managerial problems.[33] He maintained that management and system went well together:

> The systems concept is useful because of its strong emphasis upon . . . interrelationships. These interrelationships are stressed as being of primary importance. The role of management is seen as the management of interrelationships.[34]

This brief survey of systems research has acknowledged that the organization is a system comprised of interacting subsystems. When the subsystems of an organization interact, just as when people interact, communication to some degree is involved. The communication within the systems theory of organization has drawn from the other two theories to form a more comprehensive method of organizational communication. The systems theory stressed the importance of

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[32]Edgar F. Huse and James L. Bowditch, Behavior in Organizations: A Systems Approach to Managing (Reading, Massachusetts: Addison-Wesley Publishing Company, 1973), p. 37.

[33]Luthans, p. 92.

[34]Ibid.

communication between the components of the organization. It accentuated the relationship between the different parts and how these relationships affect the performance of the overall system. Communication has become an important element of all the subsystems of the organization; therefore, communication maintains an essential place in the systems theory.

It has been observed that as organizational theory has experienced several major changes, the communication system of the organization also changed. While organizational theory has moved from the Traditional approach which focused on structure and technology of the organization, to the Human Relations approach which enhanced the human element in organizational settings, to the Systems approach which viewed all this as components of an organization, the emphasis and focus of the communication system has also varied. As the development of organizational theory has proceeded, communication has also been expanded to the degree that it is now viewed in several different manners. The systems theory is the most recent development of organizational theory and has a very comprehensive view of communication within an organization. For this reason, this thesis has adopted the systems method of analysis.[35]

Speech Communication

The second major concept to be considered in the review of the literature is speech communication. The first portion of this

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[35]Jenks, pp. 421-447.

chapter established that the systems theory exhibits a strong reliance on communication. It was noted that the means by which the components of an organization function cooperatively rely on communication: "Like all living systems, organizations establish and maintain themselves through communication with their environments and amongst their parts."[36]

In chapter one, it was related that a view of speech communication could begin with the traditional communication models. From these models, the network variable was discerned as a common and indispensable element occurring in the process of communication. Although speech communication is comprised of a number of interacting elements, this study limited its scope to only one--the network variable. This variable was the only element defined as "a system, with subsystems, where the various segments interconnect and interact at one or more points."[37] This variable can be used to study the interaction which occurs between the subsystems of an organization; for this reason, this particular element of the process of communication was selected.

Several authorities have indicated their doctrine of the network variable through a discussion of organizational communication.

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[36]Lee Thayer, Communication and Communication Systems: In Organization, Management, and Interpersonal Relations (Homewood, Illinois: Richard D. Irwin, Inc., 1968), p. 103.

[37]Johnson, Kast, and Rosenzweig, p. 242.

Lee Thayer's system of communication analysis was based on three levels: intrapersonal, interpersonal, and organizational communication. Included in the later level, Thayer stated that the actual structure of the organization was characterized by the patterns of information-decision flow occurring in the organization and that these patterns reveal what was happening in the organization. Thayer further commented that the function of the network channels of task related communication were to link the members of the organization together.[38]

Charles Redding and George Sanborn approached the study of organizational communication by including such areas as human relations, management-union relations, communicative skills (listening, speaking, writing), and internal communication patterns. They perceived organizational communication as the sending and receiving of information within a complex organization through the network channels of downward, upward, and horizontal.[39]

Ronald Smith, Gary Richetto, and Joseph Zima proposed that human communication within the complex organization is manifested through formal and informal communication channels. The discussion of these channels led to the dimensions of downward, upward, and

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[38]Thayer, pp. 141-142.

[39]Charles W. Redding and George A. Sanborn, Business and Industrial Communication: A Source Book (New York: Harper and Row, 1964), p. 3.

horizontal communication patterns.[40]

Another study focusing upon the formal and informal channels of communication as a part of organizational communication was conducted by Albert Wickesberg. He emphasized that information along these communication channels flowed either in vertical, horizontal, or diagonal patterns. These patterns represented the basic means by which information was relayed from one place to another in the complex organization.[41]

Harold Zelko and Frank Dance emphasized the basic skills which comprise business communication to be listening, selling, interviewing, speech-making, conferences, counseling, persuading, etc. They also defined organizational communication in terms of internal (downward, upward, horizontal) and external (sales, public relations) communication.[42]

Gerald Goldhaber established his views on the network variable in his recent book Organizational Communication. This text is the

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[40]Ronald Smith, Gary Richetto, and Joseph Zima, "Organizational Behavior: An Approach To Human Communication," in Approaches to Human Communication, eds. Richard Budd and Brent Ruben (New York: Spartan Books, 1972), p. 271.

[41]Albert K. Wickesberg, "Communications Networks in the Business Organization Structure," in Readings in Interpersonal and Organizational Communication, eds. Richard Huseman, Cal Logue, and Dwight Freshley (Boston, Massachusetts: Holbrook Press, Inc., 1969), p. 92.

[42]Harold Zelko and Frank Dance, Business and Professional Speech Communication (New York: Holt, Rinehart and Winston, Inc., 1965), pp. 23, 27.

the latest publication that concentrated on communication in the organization. He has been one of the first to view organizational communication as "the flow of messages within a network of interdependent relationships."[43]

From the preceding review, it can be observed that there is a strong emphasis on formal and informal channels which are comprised of vertical and horizontal communication patterns. In order to observe the interaction between the subsystems of an organization, these patterns will be the primary focus. Therefore, the speech communication portion of this study used in the analysis of the Texas Department of Public Safety will be represented by the vertical and horizontal network patterns.

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[43]Gerald Goldhaber, Organizational Communication (Dubuque, Iowa: William C. Brown Company, 1974), p. 11.

CHAPTER III

THEORY BUILDING

The focus of this thesis was on speech communication within an organization, better known as organizational communication. The study was limited to the network variable because the network is one means of observing the interaction that occurs between the components of an organization. In the previous chapter, the development of organizational theory was represented by three stages: Traditional, Human Relations, and Systems. The latter approach was selected for this study because of its emphasis on unifying all parts of the organization to form a whole.

Systems

> "In the last two decades we have witnessed the emergence of the 'system' as a key concept in scientific research. Systems, of course, have been studied for centuries, but something new has been added . . . . The tendency to study systems as an entity rather than as a conglomeration of parts is consistent with the tendency in contemporary science no longer to isolate phenomena in narrowly confined contexts, but rather to open interactions for examination and to examine larger and larger slices of nature . . . ."[1]

These words of Russell Ackoff reveal that the total systems concept is an approach that visualizes the organization as a single entity

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[1]Russell Ackoff cited by Ludwig von Bertalanffy, "General System Theory--A Critical Review," in Systems Behavior, eds. John Beishon and Geoff Peters (New York: Harper and Row, 1972), p. 29.

composed of various interrelated and interdependent subsystems. A simplified definition of the word "system" is stated in the dictionary as "a regularly interacting or interdependent group of items forming a unified whole."[2]

Time and experience have led such scholars as Hall and Fagen to modify this simple definition. Their concept of a system is that it is "a set of objects together with relationships between the objects and between their attributes."[3] According to Hall and Fagen, the definition of a system contains three basic properties: objects, relationships, and attributes.[4] The objects are the parts or components of a system. For example, within the framework of a university, the objects could be the president, the deans, and the faculty. Relationships are those things which tie the system together. For example, there could be a strong relationship between the president of a university and the administrative staff. The attributes within the scope of a university could be the budget for the school, the job placement center, its size, and the number of students.

The general systems theory introduced a convenient classification of diversified systems. Although open and closed systems

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[2]Webster's Seventh New Collegiate Dictionary, rev. ed. (1967), s.v. "system."

[3]A. D. Hall and R. E. Fagen, "Definition of System," in Modern Systems Research for the Behavioral Scientist: A Source Book, ed. Walter Buckley (Chicago, Illinois: Aldine Publishing Company, 1968), p. 81.

[4]Ibid., pp. 81-82.

were not included, they are extremely relevant in characterizing the attributes of the system itself.

Open and Closed Systems

The characteristics of the closed system are not hard to conjecture. This type of system is in direct opposition to the open system. A closed system is self contained and considers only what is in the systems' boundary. It does not interact with its environment; therefore, its eventual state is determinable from the initial conditions. This system is extremely stable and affords little opportunity for improvement or change.[5]

The open system is characteristic of all living organisms. It is called open because it exists only through a continual interaction with its environment. It continues to be self-maintained through feedback and the passage of material from input to output.[6] The concept of input and output are characteristic of the open system only. Input is the energy imported into the organization from the environment; output is the product of the input that the organization exports to the environment.[7] The fact that open systems interact with the environment makes them dynamic instead of static. Any

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[5]Brent Ruben, "General Systems Theory: An Approach to Human Communication," in Approaches to Human Communication, eds. Richard Budd and Brent Ruben (New York: Spartan Books, 1972), p. 129.

[6]Bernard Rosenblatt, Robert Bonnington, and Belverd Needles, Modern Business: A Systems Approach (Boston, Massachusetts: Houghton Mifflin Company, 1973), p. 37.

[7]Richard Johnson, Fremont Kast, and James Rosenzweig, The Theory and Management of Systems (New York: McGraw-Hill Book Company, 1963), p. 118.

organization that is considered to be an open system is in a state of perpetual change. The following definition is an adequate summation:

> An organism is an open system which maintains a constant state while matter and energy which enter it keep changing. . . . The organism is influenced by, and influences, its environment and reaches a state of dynamic equilibrium in this environment.[8]

Within the context of this definition lies a relevant and essential concept to the total comprehension of open systems. The phrase "a state of dynamic equilibrium," frequently referred to as a "steady state," established a new cognizance of the open system.

Steady States

One of the several systems' experts who has dealt with this concept and who has realized the importance of the steady state within the realm of systems analysis was Russell Ackoff. He used the phrase "state of a system" to refer to steady states. His explanation implied that a steady state occurs when the set of relevant properties of a system remain relatively stable over a period of time.[9] For example, the human being can be considered as a system. Over a number of years this system experiences several different periods as childhood, adolescence, and adulthood. Within these periods, the properties of the system remain relatively stable

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[8]Ibid., p. 10.

[9]Russell Ackoff, "Towards a System of Systems Concepts," in Systems Behavior, eds. John Beishon and Geoff Peters (New York: Harper and Row, 1972), p. 84.

until the system makes a change into another period. These periods are called steady states because for a span of time the relevant properties remain relatively stable. Ackoff further explained that a steady state can be classified as variety-increasing or variety-decreasing. Variety-increasing occurs when there is an increase of goals and an increase in the methods for achieving these goals and their outcomes. Variety-decreasing is the opposite.[10] A system that displays a greater variety of change and a higher level of behavior is referred to as variety-increasing. A system that displays less variety of change in behavior and operates at a lower level is referred to as variety-decreasing. Ackoff insisted that a system must be either variety-increasing or variety-decreasing.

Furthering the explanation of steady states, Ackoff supplied a behavioral classification for a system. His theory depicts a system as having four different system states: (1) state-maintaining, (2) goal-seeking, (3) multi-goal-seeking and purposive, and (4) purposeful.[11]

A state-maintaining system is one in which the outcomes are fixed. No matter what the goals are, the result will be the same. The system can react to internal or external changes but it cannot respond; the outcomes are already determined. An example is a

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[10]Ibid., p. 87.

[11]Ibid., p. 86.

heating system. The internal controls turn it on when the temperature is too low and turns it off when the temperature is too high, thus maintaining a balanced state.[12]

A goal-seeking system is one that obtains only one goal no matter what changes it must go through. This system can respond to internal and external changes until it produces a particular outcome. The production of this system is its goal. Any system that contains an automatic "pilot" is goal-seeking because it represents another means of attaining the goal.[13]

A multi-goal-seeking and purposive system seeks to obtain the common property of a number of different goals. Multi-goal implies that there are several goals involved, and purposive implies that these goals have a common element which binds them together. The purpose of this system is the production of that common element. A computer which is programmed to play more than one game and has the objective of winning is a purposive multi-goal-seeking system.[14]

A purposeful system is one in which the outcomes are not determined. Under constant conditions, this system can change its goals. It does not have to be limited to a certain number of goals and it can choose between different outcomes. The best example of this system is the human being. Humans display self-will and can choose

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[12]Ibid., 85.

[13]Ibid., 86.

[14]Ibid.

different outcomes and place different values on these outcomes.[15]

From this explanation of the four basic behavioral systems, one must return to Ackoff's declaration that any open system must maintain a variety-increasing or variety-decreasing steady state. For example, a state-maintaining system would basically maintain a variety-decreasing steady state since the outcomes are naturally determined and the goals are limited. The goal-seeking system is responsive to internal changes but the variety of goals is limited. Therefore, it would maintain a fluctuating steady state between variety-decrease and variety-increase. A multi-goal-seeking and purposive system contains a greater variety of goals and more ways of obtaining these goals are exercised. Therefore, this system would maintain a fluctuating steady state between variety-increase and variety=decrease. The purposeful system would hold a steady state of variety-increase because a number of goals are involved, and there is an increase of variety in the manner in which these goals are obtained.

In summary, Ackoff, has classified a system as consisting of four steady states or system states. For a better understanding, this classification has been arranged in a chart in table 1.

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[15]Ibid., p. 87.

TABLE 1

SYSTEM STATES

SSI State-Maintaining	SSII Goal-Seeking	SSIII Multi-Goal-Seeking & Purposive	SSIV Purposeful
Variety-decrease	Variety-decrease to Variety-increase	Variety-increase to Variety-decrease	Variety-increase

For the purposes of arriving at a set of strategical propositions as well as developing a hypothesis concerning the relationship of these steady states to the organization as a system and to the network variable, a theory-building strategy advocated by Robert Dubin was adopted.[16]

The formulation of a theoretical model is founded on several concepts. Dubin defined theory as "a model of some segment of the observable world."[17] Dubin suggested that the following steps are necessary for theory building.

1. Definition of the units. A theory is in essence a model of reality which is comprised of several units. The units are "the things out of which theories are built."[18]

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[16]Robert Dubin, Theory Building (New York: The Free Press, 1969).

[17]Ibid., p. 223.

[18]Ibid., p. 28.

2. Development of the laws of interaction. "The linkages among units of a model" are labeled the laws of interaction.[19] These laws are statements of how the units relate to each other.

3. Establishment of the propositions. Propositions are predictive statements about the values of one or more units in the system.[20]

4. Creation of the empirical indicators. An empirical indicator is a procedure employed by the researcher to secure measurements of values on a unit.[21] In order for a unit to be measured it must have a designated value; therefore the devices used for this task are the indicators.

5. Development of the hypothesis. The hypothesis is a statement that makes predictions "about values of units of a theory in which empirical indicators are employed for the named units in each proposition."[22] The link between the empirical world and the theories about it are to be found in the hypotheses that reflect the propositions of the model.

Dubin's procedures through step three were accomplished in the immediate chapter; steps four and five will be developed in the subsequent chapter.

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[19]Ibid., p. 87.

[20]Ibid., p. 165.

[21]Ibid., p. 184.

[22]Ibid., p. 212.

Organization as a System

Kast and Rosenzweig have employed the systems approach for analyzing the organization. This approach considers the parts of an organization and observes how these parts relate. These men have concluded that organizations are: (1) goal-oriented groups, people striving toward an objective; (2) psycho-social systems, people working in groups; (3) technological systems, people using knowledge and techniques; (4) an integration of structured activities, people working together; and (5) management systems, people working toward an objective.[23] Kast and Rosenzweig's concept of the organization is that it is a sociotechnical system comprised of these five subsystems. In this study, not all of these subsystems are directly applicable; therefore in order to proceed, it must be revealed why these subsystems have been limited.

Hall and Fagen's definition of a system, which has previously been stated, specifically established that there were three basic properties: objects, relationships, and attributes. The component "structure" veered heavily toward the property of relationships because structure refers to a pattern of relationships among the parts of an organization. The structure of an organization is easily discovered by the organization's structural chart; therefore, this

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[23]Fremont Kast and James Rosenzweig, Organization and Management: A Systems Approach (New York: McGraw-Hill Book Company, 1970), p. 6.

component has been omitted from the analysis. Technology has also been eliminated because of its focus on the transformation of inputs into outputs. For purposes in another study, technology might be of significant importance, but in this study it has little relevance. The attributes are the main focus for the analysis. The attributes are the preceptible qualities of the remaining components--goals, motivation, role, management, network, and system.

Goals

Goals may be viewed as being written or unwritten, stated or unstated, implicit, or explicit. In order to determine to what system state goals belong, the number of goals present is a determining factor along with a ratio of possible agreements. For example, when there is a maximum agreement on a number of goals then there is a greater increase in variety and the subsystem "goals" would be included in system state four.[24] Table 2 is representative of the component goals.

TABLE 2

GOALS

	SSI	SSII	SSIII	SSIV
Goals: Implicit / Explicit	Little agreement on few goals	General agreement on one goal	Limited agreement on many goals	Maximum agreement on many goals

[24] Ibid., p. 439.

Psycho-Social System

The psycho-social system in any organization is comprised of human beings and interpersonal relationships. This system centers on the individual in social relationships and can best be understood in terms of motivation and role behavior.[25]

Motivation

One framework for studying motivation was developed by Abraham Maslow. He stated that fulfillment of basic needs was necessary to the motivation of man; therefore, Maslow arranged the human needs in a hierarchy according to their importance.

Physiological needs were those needs which sustain human life such as food, clothing, shelter, money, etc. Security needs represent man's desire to be free from danger now and in the future. Affiliation (belonginess) represents man's need to belong, to be liked, and to be accepted in a group. Esteem is the need in which the person feels that now he is accepted into the group, he must excel to get the esteem of his fellows. Self-actualization is the most difficult need to satisfy. This need represents a desire to reach one's maximum potential. In order to determine to what system state motivation would belong, the number of possible needs as well as the ratio of possible agreement on these needs would be the determining factor.[26]

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[25]Ibid., p. 211.

[26]Abraham Maslow, Motivation and Personality, 2nd ed. (New York: Harper and Row, 1970), pp. 35-47.

Table 3 is representative of the psycho-social component, motivation.

TABLE 3

MOTIVATION

	SSI	SSII	SSIII	SSIV
Motivational Needs				
Physiological Security Affiliation Esteem Self-Actual-ization	Little agreement on few goals	General agreement on one goal	Limited agreement on many goals	Maximum agreement on many goals

Role

The analysis of interpersonal behavior has been based on the four life positions given below:

1. I'm Not O.K.--You're O.K.: In this position, one person perceives himself inadequate while he sees others as adequate. 2. I'm Not O.K.--You're Not O.K.: The people in this position give up and lose interest in life. 3. I'm O.K.--You're Not O.K.: A person who feels victimized or persecuted may occupy this position. 4. I'm O.K.--You're O.K.: This is the most desirable and healthy state that people could attain. The system state in which role belongs is determined by power. If the person in power perceives himself as being O.K., he will push his goals until they are accepted. Thus, creating a greater degree of variety and a higher level of behavior. Each of these life positions

itself will be the determining factor of the role's position in a system state.[27] The second psycho-social component is represented in table 4.

TABLE 4

ROLE

	SSI	SSII	SSIII	SSIV
Roles: I'm Not O.K.-- You're O.K. I'm Not O.K.-- You're Not O.K. I'm O.K.-- You're Not O.K. I'm O.K.-- You're O.K.	I'm Not O.K.-- You're Not O.K.	I'm Not O.K.-- You're O.K. or_____(Power) I'm O.K.-- You're Not O.K.		I'm O.K.-- You're O.K.

Management

An approach to the study of management within the organization has been established by Rensis Likert. Likert asserted that most management styles could be classified as belonging to one of four possible "systems."

System 1: This system is usually ruled by a single ruler. It closely represents autocracy. There is little confidence or trust placed in the employee; the management at top levels make all the decisions.

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[27]Thomas Harris, I'm O.K.--You're O.K. (New York: Harper and Row, 1967), p. 66.

System 2: In this system, decisions are made primarily at the top of the organization and information basically flows downward. Managers usually reveal a condescending confidence in their employees.

System 3: This system is based on more interaction, trust, and communication between the subordinate and his superior. Major decisions are made at the top level in the organization, but subordinates are frequently consulted.

System 4: This system represents a closer view of the democractic system. Decision-making is widely spread throughout the organization and there is a high degree of trust and confidence placed in the employees. Each of these systems itself is the determining factor of the system state for differing management styles. The greater the freedom of decision-making, the greater the chances for accomplishing organizational objectives.[28] Table 5 is representative of the component, management.

TABLE 5

MANAGEMENT

	SSI	SSII	SSIII	SSIV
Management Systems				
System 1 System 2 System 3 System 4	System 1	System 2	System 3	System 4

[28]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, 1961), pp. 222-236.

In summary, the organization has been the first unit for consideration in the theoretical model. This unit has been viewed as a system that varies across four different system states.

Communication System

Communication Network

Gerald Goldhaber incorporated the communication element into the organization. He knew organizations consisted of people who occupied certain positions and roles. Therefore, his concern focused on the flow of messages between and among these people which takes place over pathways called communication networks. The networks were established as communication patterns that flowed in a downward, upward, or horizontal direction.

Downward network patters refer to messages that flow from the supervisors to the subordinates. These patterns represent a variety-decreasing steady state because the communication flows from the upper levels of management down to the lower levels. Since the basic flow of communication comes from a few top level managers and goes to many people in the lower levels, the number of goals and the method of attaining these goals are limited.

Upward network patterns refer to messages that flow from the subordinates to the supervisors. Since the communication flow of the vast number of people in the lower levels of management is increased, the number of goals and the means of attaining these goals would also be greater. Therefore, these communication patterns would

fluctuate between a variety-increasing and a variety-decreasing steady state.

Horizontal network patterns represent the lateral exchange of messages among people on the same organizational level of authority. These patterns represent a variety-increasing steady state because the flow of communication is dispersed throughout all levels of the organization. Therefore, the goals as well as the means of accomplishing these goals are increased. Table 6 represents the network component.

TABLE 6

NETWORK

	SSI	SSII	SSIII	SSIV
Communication Patterns				
Downward Upward Horizontal	Downward	Down with little up and horizontal	Up with little down and horizontal	Horizontal

The network variable was the second unit of theory-building. This unit has been viewed as having specific directional patterns: down, up, and horizontal.

The two units included in this section of theory-building are organization and network. The organization was defined as the integration and coordination of individuals in interdependent relationships. The communication networks referred to the pathways used for

the flow of messages between and among people.

Laws of Interaction

Dubin defined laws of interaction as statements made about the linkage between theoretical units.[30] The validity of a theory is based on these statements because the laws of interaction reveal that one unit is related to another unit. The efficiency of a law refers to "the range of variability in the values of one unit when they are related by a law to the values of another unit."[31] A law of the lowest efficiency is referred to as a categoric law. "A categoric law of interaction is one that states that values of a unit are associated with values of another unit."[32] For example, organization is related to network and network is related to the organization. Categoric laws are symmetrical. It does not matter whether one or the other of the units comes first in the statement of the law. The rationale for employing this type of law is that approximately "three-quarters of all laws of interaction in the literature of the social and behavioral sciences are expressed as categoric laws of interaction."[33]

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[30]Dubin, p. 87.

[31]Ibid., p. 110.

[32]Ibid., p. 96.

[33]Ibid., p. 97.

Propositions

Dubin defined the proposition as "truth statements that may be made about a theoretical model."[34] Propositions can be either predictive or strategic. Predictive propositions predict the exact values of units.[35] Strategic propositions are ones that "state critical or limiting values for one of the units involved."[36] The strategic propositions for this study are the following:

1. When the organization is valued at system state one, then the communication network is also valued at the same state.

2. When the network is valued at system state one, then the organization is also valued at system state one.

3. When the organization is valued at system state two, then the communication network is also valued at the same state.

4. When the network is valued at system state two, then the organization is also valued at system state two.

5. When the organization is valued at system state three, then the communication network is also valued at the same state.

6. When the network is valued at system state three, then the organization is also valued at system state three.

7. When the organization is valued at system state four, then the communication network is also valued at the same state.

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[34]Ibid., p. 166.

[35]Ibid., p. 170.

[36]Ibid., p. 175.

8. When the network is valued at system state four, then the organization is also valued at system state four. In general, communication and organization should be valued at the same system state.

Summary of Theory Building

The review of related literature led to the conclusion that the Systems theory was the most relevant and contemporary method of study now being utilized in organizational analyses. The system has been discussed as being comprised of different steady states. The organization has been viewed as a system comprised of five major subsystems. The network was defined as the pathway by which the messages travel (see table 7). By adopting Dubin's theory-building strategy, the units have been determined and explained, the laws of interaction were specified, and the strategic propositions were established. In chapter IV, these propositions will be reduced to a hypothesis and the indicators will be determined and explained.

TABLE 7

SUMMATION TABLE

Organizational Components	SSI State-Maintaining	SSII Goal-Seeking	SSIII Multi-Goal Seeking	SSIV Purposeful
Goals: Implicit Explicit	Little agreement on few goals	General agreement on one goal	Limited agreement on many goals	Maximum agreement on many goals
Psycho-Social Motivational Needs: Physiological Security Affiliation Esteem Self-actualization	Little agreement on few goals	General agreement on one need	Limited agreement on many needs	Maximum agreement on many needs
Role: I'm Not-You're Not I'm O.K.-You're Not I'm Not-You're O.K. I'm O.K.-You're O.K.	I'm Not O.K.- You're Not O.K.	I'm Not O.K.- You're O.K. I'm O.K.- You're Not O.K.	Same as SSII Determining factor is power	I'm O.K.- You're O.K.
Management: System 1-Autocracy System 2 System 3 System 4-Democracy	System 1	System 2	System 3	System 4
Communication Patterns: Downward Upward Horizontal	Downward	Downward with a little up and horizontal interaction	Upward with a little down and horizontal interaction	Horizontal

CHAPTER IV

PROCEDURES AND METHODS

In chapter III, the organization was established as a socio-technical system consisting of five primary subsystems: goals, technology, structure, psycho-social system, and management. It was also established that communication in the organization was considered as the flow of messages that travelled downward, upward, and horizontally. The purpose of this present chapter is to observe how these organizational and communication components were measured so as to determine their appropriate system state. Yet before this task is initiated, it must be determined what type of research study this thesis characterizes.

Organizational communication is a behavioral science which allows the communication behavior of people in organizations to be observed. One type of research designed to accomplish the task of observing behavior is the descriptive, field research. This type of research has been variously defined in the social sciences in terms of locus, in terms of procedures used, and in terms of research approaches. Field research, as it implies, occurs when the investigator is taken out of the library and laboratory and put "in the field" to observe human behavior. Field studies were designed basically to discover "what is going on" in the organization. These types of studies attempt to derive functional relationships from systematic observations of events as they occur uncontrolled in

nature.[1] As Redding has explained,

> a field study. . .is simply any kind of research carried out in a specified locale which is perceived by specified perceivers (particularly the subjects) as being free of significant researcher related deviations from everyday life.[2]

Katz has stated that

> the great strength of the field type of study is its inductive procedure, its potentiality for discovering significant variables and basic relations that would never be found if we were confined to research dictated by a hypothetical-deductive model. Thus, the field study and the survey are the great protection in social science against the sterility and triviality of premature model building.[3]

The field study has been a popular type of research method employed in organizational communication studies. Several characteristics based on the previous definitions easily confirm that this thesis too is a field study. First, the research of this study was not done in a laboratory but in the real physical setting of the organization. By going "into the field," a better view and cognizance of the existing problems was obtained. Not only was a knowledge of the present condition in the organization concerning the goals, the

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[1]Ralph Nafziger and David White, eds., Introduction to Mass Communications Research (Baton Rouge, Louisiana: Louisiana State University Press, 1963), p. 78.

[2]Charles W. Redding, "Research Setting: Field Studies," in Methods of Research in Communication, eds. Philip Emmert and William Brooks (New York: Houghton Mifflin Company, 1970), p. 150.

[3]Daniel Katz, "Field Studies," in Research Methods in the Behavioral Sciences, eds. Leon Festinger and Daniel Katz (New York: Holt, Rinehart and Winston, Inc., 1953), p. 75.

psycho-social element, and the management discovered, but the existing communication relationships within these components were also disclosed. Furthermore, in this field study no experimental devices were apparent to those being observed; there were no researcher-induced deviations from the subject's everyday life; and there were no strict controls exerted on the subjects by the researcher. This study was indirectly controlled which allowed more freedom for the results of the research to be relevant to the problems confronting the contemporary organization. The field study method of research seems to be very successful in organizational studies since it has been observed that "most of what we know today about organizations and the behavior of their members is known on the basis of field studies."[4]

Procedures

"Organizational communication research is a set of empirical research procedures and techniques used in either laboratory or field settings for building and/or testing theories about communication behavior in organizations."[5] A great majority of organizational communication has been conducted in field settings using descriptive procedures. Procedures refer to "a set of instructions or directions for implementing a particular research method in a particular

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[4]W. Richard Scott, "Field Methods in the Study of Organizations," in Handbook of Organizations, ed. James G. March (Chicago: Rand McNally and Company, 1965), p. 261.

[5]Gerald Goldhaber, Organizational Communication (Dubuque, Iowa: William C. Brown Company, 1974), p. 269.

setting."[6] Four types of field research procedures identified by Charles Redding are experimental, nonexperimental, instrument devising, and descriptive.[7] The latter attempted to describe observed behavior in a system; therefore, this type of research procedure was selected for use in this thesis.

One of the more common types of descriptive procedures found in the literature of organizational communication was the survey. The survey is used primarily to measure specific variables by gathering information from samples within the population.[8] The survey employed in this study was accomplished by means of a questionnaire. The questionnaire was the instrument used to measure goals, technology, structure, psycho-social system, management, and network patterns of the organization. Although there are five components included in the systems analysis of an organization, only four were examined. The component "technology" has been eliminated because according to Kast and Rosenzweig, technology refers to "the techniques used in the transformation of inputs into outputs"[9] and this particular focus was not relevant to this thesis.

The four remaining organizational components (goals, structure,

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[6]Ibid., p. 268.

[7]Emmert and Brooks, pp. 105-114.

[8]Ibid., p. 122.

[9]Fremont Kast and James Rosenzweig, Organization and Management: A Systems Approach (New York: McGraw-Hill Book Company, 1970), p. 141.

psycho-social system, management) along with the speech component (network) will be analyzed in order to determine their appropriate system state. It has been confirmed that a system state develops when a set of relevant properties such as objects, relationships, and attributes of that system remain relatively stable over a period of time. The established system states used for this study are system state one--State-Maintaining; system state two--Goal-Seeking; system state three--Multi-Goal-Seeking and Purposive; and system state four--Purposeful. In order for the components to be placed in the appropriate system state, the indicators of these units must be established.

Empirical Indicators

Dubin has stated that the empirical indicators "produce the values on the units employed in a model."[10] The specific values or requirements that are placed on the units are used to determine to which system state the unit belongs. In the discussion of the following components, the empirical indicators were established. This establishment allowed for each component to be assigned to its appropriate system state.

Goals

Goals are written or unwritten, explicit or implicit statements

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[10]Robert Dubin, Theory Building (New York: The Free Press, 1969), p. 183.

of the pursued outcomes to be achieved by the organization.[11] On page one of the questionnaire in appendix A, fifteen goals were listed. These goals were directly stated from the General Manual of the Department of Public Safety and from informal conversations with several patrolmen.[12] From these fifteen goals, the captain, the three sergeants, and the patrolmen from District "B" areas 1, 3, and 7 of Region III were asked to rank, in their opinion, the five most important goals. Although the ranking was insignificant, the extent to which each goal was chosen by the subjects was of vital importance. In order to determine if any of these goals are being pursued in the organization, there needed to be an agreement by 50% + 1 from the subjects on any goal before it could be labeled an organizational goal.[13] Therefore, of the thirty returned questionnaires that were sent to the three different managerial levels in the DPS, any of the goals listed on the questionnaire had to be selected by sixteen subjects before it could be considered as a pursued organizational goal. The total number of goals agreed upon denote the appropriate system state. For example, from this questionnaire there were five possible

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[11] Kast and Rosenzweig, p. 439.

[12] Interview with Captain J. R. Allen, Department of Public Safety District Office, San Antonio, Texas, 18 October 1974; Interview with available patrolmen, Department of Public Safety Offices, New Braunfels, San Antonio, and Seguin, Texas, 15 January 1975.

[13] The probability of receiving a 50% + 1 agreement from the subjects, randomly sampled, is 0.17.

goals: agreement on 0 number of goals would place this component in system state one; agreement on 1 goal would place it in system state two; agreement on 2 or 3 goals would place it in system state three; agreement on 4 or 5 goals would place it in system state four.

Structure

Structure refers to "the established pattern of relationships among the components or parts of the organization."[14] These relationships in any organization are easily discerned by means of the organization's structural chart. For this reason, the measurement for structure was not provided for in the questionnaire. The system state of this component is derived by the design of the organization's structure as seen on its organizational chart in appendix B.

Psycho-Social System

The psycho-social system of any organization is composed of individuals in social relationships. Acknowledging that the individual is the basic unit for analysis in an organization, two important elements of human behavior, motivation and role, were analyzed.[15]

Motivation

"A motive is what prompts a person to act in a certain way or

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[14]Kast and Rosenzweig, p. 170.

[15]Ibid., p. 209.

at least develop a propensity for specific behavior."[16] Motivation of any organism is only partially understood but it is believed to stem from needs, wants, tensions, and discomfort. One alternative to viewing motivation in terms of a series of relatively distinct drives or needs has been consummated by Abraham Maslow. According to Maslow, motivation of human beings relies on the fulfillment of their basic needs. He felt that man's needs were geared toward obtaining food, clothing, shelter, security, affiliation, esteem, and self-actualization, and that the particular situation was the determining factor of the particular need.

On page four of the questionnaire, the motivational component has been measured. In order for Maslow's need-hierarchy theory to be understood, the needs were identified in specific terms: (1) physiological needs were represented by the term "salary"; (2) the need of security was represented by the term "job security"; (3) the need for affiliation was represented by the phrase "acceptance by peers in the organization"; (4) the need for esteem was represented by the three terms "awards, commendations, promotions"; (5) the need for self-actualization was represented by the phrase "feeling of accomplishment." The subjects were asked to rank these personal needs or goals from one to five. From this ranking of the motivation element of the psycho-social component, the results would not only reveal the frequency of each personal goal chosen, but also the rank of importance

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[16]Ibid., p. 219.

that these personal goals maintain to the subjects involved. For the motivation component to be adequately placed in one of the four system states, a 50% +1 agreement by the subjects on the rank of each of these personal goals had to occur and the total number of personal goals agreed upon will indicate the appropriate system state for this component.

Role

"Role relates to the behavioral patterns identified or expected for a given position."[17] In this study, role has been defined as consisting of four life positions. Human beings perceive themselves and perceive others in basically four different ways. They either see themselves as being valuable (O.K.) or not valuable (Not O.K.), and they either see other people as being valuable (O.K.) or not valuable (Not O.K.). Therefore, role refers to the way in which human beings perceive themselves and perceive others. This element of the psychosocial component was measured by three sets of questions located on page three of the questionnaire.

Set 1 focused on the relationship between peers: whether or not the subjects felt that their ideas were of any importance around their peers and whether their peers regarded their ideas as being important or not. Question one represented the life position of (A) I'm O.K. or (B) I'm Not O.K., depending on how the subject perceived

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[17]Ibid., p. 211.

himself. Question two represented the life position of (A) You're O.K. or (B) You're Not O.K., depending on whether the subjects' peers regarded his opinion as valuable or not valuable. Set 2 focused on the relationship to the supervisor. The questions were basically stated in the same manner as those in set 1. The results from question three would reveal the subject to feel (A) I'm O.K. or (B) I'm Not O.K., when his ideas were expressed to the supervisor. Question four would reveal the subject to feel that the supervisor was either (A) You're O.K. or (B) You're Not O.K., depending on how the supervisor regarded the persons's ideas. Set 3 focused on the relationship to subordinates. This set of questions related to the supervisors and to only those Patrolmen who have been assigned a rookie for a partner. The results of questions five and six would be concluded in the same manner as above. For each set there were the following possible combinations:

A-A----------I'm O.K.-You're O.K.----------SSIV
A-B----------I'm O.K.-You're Not O.K.------SSIII
B-A----------I'm Not O.K.-You're O.K.------SSII
B-B----------I'm Not O.K.-You're Not O.K.--SSI

System states two and three are determined by the person who has the most power and authority in making decisions and getting things accomplished in the organization. If the person who occupies the "I'm O.K." position has the most power, then the system state would be number three--Multi-Goal-Seeking and Purposive. If the person with the power occupies the "I'm Not O.K." position, then the system state would be number two--Goal Seeking. To determine what system

state the element of role should be credited to, each set of questions was counted to determine which life position was most frequently noted by 50% + 1 of the subjects that returned the questionnaire.

Management

Management is the "process of integrating human and material resources into a total system for objective accomplishment."[18] One method of achieving this process is through the decision-making strategies. Rensis Likert proposed a classification of management styles which consist of four possible "systems" (system 1, 2, 3, 4). These "systems" are representative of the different decision-making strategies that could possibly occur in a complex organization. "System 1" signified that decisions were made in the organization with the top level managers only. "System 2" signified that decision-making was primarily at the top level of the organization but some decisions and goal setting were considered from the lower levels. "System 3" signified that board policies were decided upon at the top levels of the organization and specific decisions were made at the lower levels. "System 4" signified a widely spread decision-making process throughout the organization.

This component (management) was measured on page five and six of the questionnaire. Each question had four possible answers and these answers were precisely stated to represent Likert's "system

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[18]Ibid., pp. 340-341.

1,2,3,4." Therefore, the number of times the answers were marked in column one of each question represented the frequency count for "system 1." The number of times the answers were marked in column two of each question represented the frequency count for "system 2," and so on down each column. For conclusions to be drawn, there must be a 50% + 1 agreement on any of these Likert "systems." The system state in which management belonged was determined according to the following Likert "system" classification:

"system 1" represents system state I
"system 2" represents system state II
"system 3" represents system state III
"system 4" represents system state IV

This system classification is only an abstraction of Likert's total arrangement of the various occurring management styles. The items in Likert's scale that deal specifically with decision-making are the sole items that were chosen for the management portion of this study.

Communication Network

Communication occurring within the framework of the organization has been defined as "the flow of messages within a network of interdependent relationships."[19] Networks are of vital importance to the communication process because these are the means by which messages flow among the interdependent relationships. In an organizational setting the network flows in three directions: downward, upward,

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[19]Goldhaber, p. 11.

and horizontally. The assessment of this communication variable is seen on page two of the questionnaire. The assessment involved rankings and written explanations. The direction of communication flow was indicated by ranking to whom the person communicated with the most. For example, if the results indicated that the patrolmen communicated most often with other patrolmen, then the direction would be basically horizontal. If the results indicated that the supervisors communicated most often with patrolmen, then the flow would be predominantly downward. If the results indicated that the patrolmen communicated most with supervisors, then the flow would be predominantly upward.

The results depended on who initiated the message and who received it. This information was indicative of the network directional flow. The written explanations provided additional information as to the amount of interaction that occurs between these different levels which help to determine a more accurate network flow in the organization as a whole. The decision as to which system state the communication component of network belonged was based on the rankings and written explanations from the questionnaire and special interviews with patrolmen.

Organization As A Whole

The questionnaire was the method employed to measure the organizational units of the total system. Page one measured the goals; page two measured the communication network flow; page three measured

the roles; page four measured motivation; page five and six measured management styles. The assessment of the system as a whole to determine the overall system state depends upon the results of the organizational units. Each of these units (goals, structure, motivation, role, and management) will be assessed to the appropriate system state. The combination of these results will determine the system state of the total organization. For example, there are four basic system states that an organization could maintain (State-Maintaining, Goal-Seeking, Multi-Goal-Seeking and Purposive, and Purposeful) and four additional possibilities if the organizational state falls in between any of these established states. From these eight possible system states, the overall position of the organization will be discerned by determining the mean of its organizational units. The mean is a numerical average. It is the sum of the individual scores divided by the total number of individual scores. Therefore, the resolved system states of the goals, structure, psycho-social system, and management will be totaled and divided by four and the results will indicate what system state the organization is presently occupying. Also when the appropriate system state of the network element is specified, the position of the communication system in the organization will be known.

In conclusion, this chapter revealed how each component was measured and has established the specific indicators or requirements that each component must attain before it is credited to a particular

system state. Now that the measurements for the units have been determined, the concluding hypothesis is as follows: when the organization is valued at a particular system state, the communication network should be valued at the same state. In the subsequent chapter, the results of the questionnaire will be presented and each of these components will be placed in the proper system state.

CHAPTER V

ANALYSIS AND RESULTS

The components goal, structure, motivation, role, management, communication, and system have now been discussed and specific requirements have been established in order for each component to be ascribed to a particular system state. In this chapter, the data obtained from the responses to the questionnaire employed in the study are presented. However, without a discussion and interpretation of these results based on the information provided in chapter four, major implications of these findings might go undetected. Therefore, conclusions based upon the results of the survey pertaining to each component will be drawn.

The survey consisted of forty-two questionnaires distributed to a select population. Out of the total population of the Department of Public Safety, Region III was chosen because of its convenient location to Southwest Texas State University. Since Region III comprises a vast area, only half if its population (District "B") was utilized in this study. From District "B", a random sampling of areas 1, 3, and 7 was conducted. The subjects used in the sampling were the patrolmen, sergeants, and captain. The questionnaire was designed to be completed by all levels of authority, but in such cases where the question did not apply, the subject responded by stating "not applicable." Each division of the questionnaire was tabulated on an individual basis and the following conclusions pertaining to each component were substantially based on 50% + 1 of the returned questionnaires.

Goals

Goals have been defined as implicit or explicit statements of pursued outcomes to be achieved by the organization. The following list of goals have been taken from page one of the questionnaire, and the number of times each goal was ranked 1, 2, 3, 4, or 5 by the subjects is now disclosed.

1. To educate the public concerning laws in the State of Texas was ranked eight times.

2. To secure and maintain social order in the State of Texas was ranked twenty four times.

3. To serve the community as individuals as well as law officers was ranked nine times.

4. To investigate accidents and crimes was ranked five times.

5. To provide an efficient law enforcement agency for the State of Texas was ranked thirteen times.

6. To protect life and property of individuals was ranked eighteen times.

7. To prevent accidents by issuing citations for traffic violations was ranked six times.

8. To supervise traffic on rural highways was ranked twenty-one times.

9. To maintain and improve the standards of the DPS as an organization was ranked nine times.

10. To preserve the peace and arrest criminals was ranked three times.

11. To provide security in presence of disasters was ranked four times.

12. To demonstrate courtesy, service, and protection was ranked fourteen times.

13. To provide for the prevention and detection of crimes was ranked seven times.

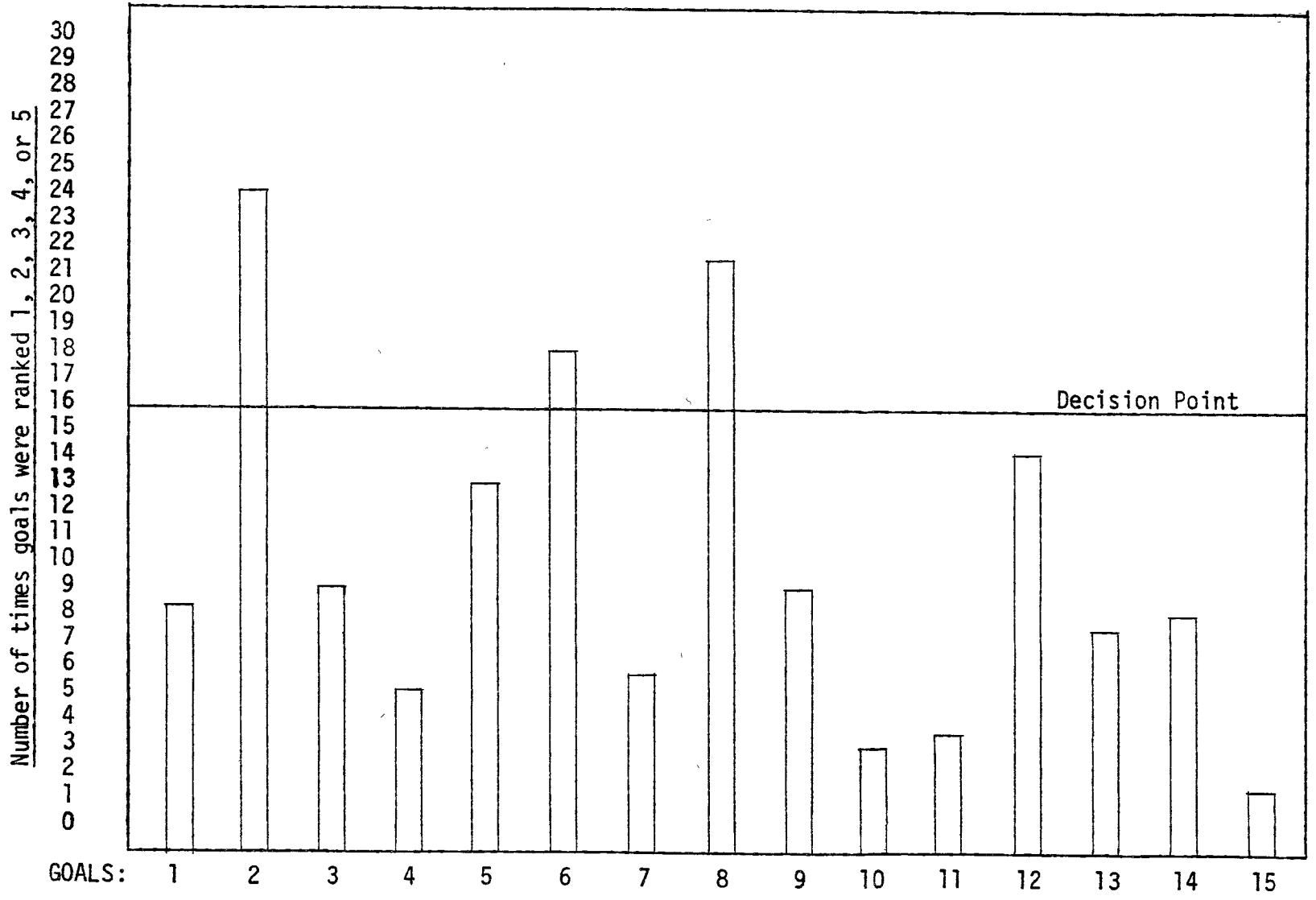
14. To enforce all laws of the State of Texas was ranked eight times.

15. To administer regulatory programs in safety responsibility was ranked once.

These results from the survey are indicated in table 8 on the following page.

TABLE 8

GOAL RESULTS



The results based on this table revealed that there were three goals that have been agreed upon by 50% + 1 or sixteen or more of the people that responded to the questionnaire. The goals were number 2--to secure and maintain social order in the State of Texas; number 6--to protect life and property of individuals; number 8--to supervise traffic on rural highways. Since there are three goals which were generally being pursued, this component (goals) is in system state three--Multi-Goal-Seeking and Purposive.

Structure

Structure has been defined as the established pattern of relationships among the components or parts of the organization. In this organization, the authority and responsibility flows in a direct line vertically from the highest level of the organization to the lowest level (see appendix B). This type of structure places the organization in system state one--State-Maintaining because the emphasis is upon superior-subordinate relationships which denote a vertical organization.

Psycho-Social System

The psycho-social component in this study consisted of motivation and role. The system state of this component was dependent upon the results of these two components combined.

Motivation

Abraham Maslow devised a need-hierarchy theory which implies that

man is motivated according to the fulfillment of his needs. The five needs in which Maslow specified to be of importance to every individual were: (1) the esteem need--awards, commendations, promotions, (2) the physiological need--salary, (3) the self-actualization need--feeling of accomplishment and satisfaction, (4) the security need-job security and benefits, and (5) the affiliation need--acceptance by peers in the organization. Based on the results obtained from the questionnaire, the number of times each of these needs were ranked 1 (least important) to 5 (most important) is revealed in table 9.

TABLE 9

MOTIVATION RESULTS

Ranking	Awards	Salary	Feeling of Accomplishment	Job Security	Acceptance by Peers
1st	20	3	2	3	2
2nd	7	6	3	2	12
3rd	2	10	3	9	6
4th	1	7	5	10	7
5th	0	4	17	6	3

The results based on this table showed that there were two personal needs or goals that have been agreed upon by 50% +1 (16) of the people that responded to the questionnaire. These results indicated that the most important need was self-actualization and the least important need was esteem. Since there were two needs which are generally being pursued, this component (motivation) is in system state three--Multi-Goal-Seeking and Purposive.

Role

Role relates to the behavioral patterns identified or expected for a given position. On page three of the questionnaire were three sets of questions devised for three different positions that people generally assume in an organization. Questions one and two focused on the peer's relationship with other peers; question three and four focused on the supervisor's relationship with other supervisors; and question five and six focused on the subordinate's relationship with other subordinates. Within the realm of each of these sets of questions was the possibility of four different behavioral patterns. Pattern A-A represented I'm O.K.-You're O.K.; pattern A-B represented I'm O.K.-You're Not O.K.; pattern B-A represented I'm Not O.K.-You're O.K.; and pattern B-B represented I'm Not O.K.-You're Not O.K. Based on the results from the questionnaire, table 10 reveals the number of times each role behavioral pattern was designated in the three sets of questions.

TABLE 10

ROLE RESULTS

Roles	Questions 1&2	3&4	5&6
A-A	24	17	19
A-B	2	9	1
B-A	1	0	0
B-B	1	4	2

The results based on this table showed that within the three designated relationships, the dominant role position was I'm O.K.-You're O.K. Therefore, this component (role) is in system state four--Purposeful.

The overall state of the psycho-social element was derived by combining the resulting system states of motivation and role. Evidence revealed that this component seemed to be maintaining a system state between three--Multi-Goal-Seeking and Purposive and four--Purposeful.

Management

Management has been defined as a process of integrating human and material resources into a total system for objective accomplishment. Likert has established a classification for different management styles which he called "system 1,2,3,4." The results from the questionnaire revealed the number of times Likert's system 1,2,3, and 4 was chosen in each of the ten questions. These results are stated in table 11.

TABLE 11

MANAGEMENT SYSTEMS

Questions	System 1	System 2	System 3	System 4
1	16	0	13	1
2	6	12	10	3
3	7	9	2	11
4	6	12	11	1
5	3	12	14	1
6	6	6	14	4
7	1	10	13	6
8	0	13	13	4
9	1	7	18	4
10	0	8	18	4
Total	46	89	126	39

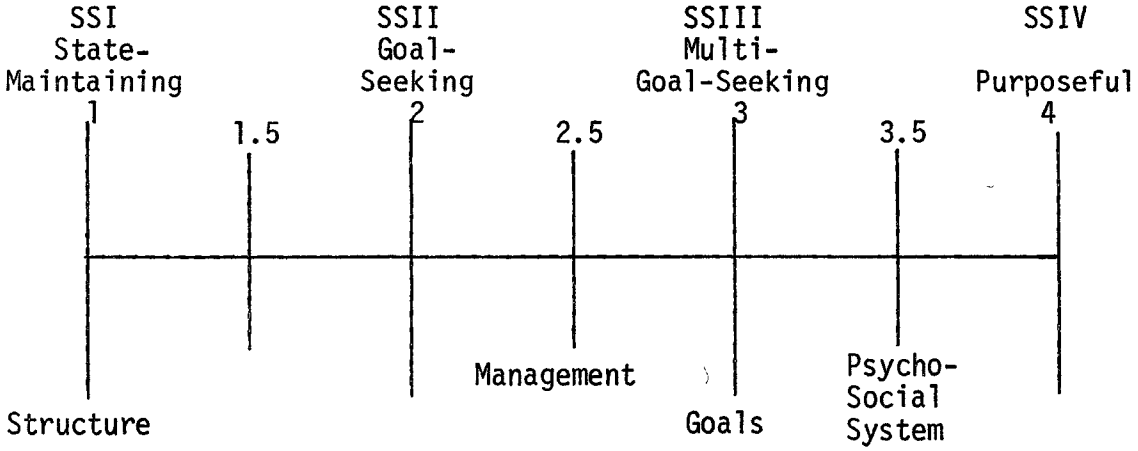
The results based on this table revealed that out of three hundred possible responses none of the system states contained 50% + 1 agreement. Therefore, this component (management) seems to be maintaining a system state between Goal-Seeking and Multi-Goal-Seeking and Purposive.

System

A system has been defined as a set of objects together with relationships between the objects and between their attributes. In order to determine the appropriate system state of the total organization, the results of each component must be combined. These results are seen in table 12.

TABLE 12

SYSTEM RESULTS



To obtain the overall system state of the organization, the mean of these organizational units must be discovered:

Structure was valued at 1		
Management was valued at. 2.5		
Goals were valued at. 3		
Psycho-Social System was valued at. 3.5		2.5
Total	10.0	4 | 10.0

The results indicate that the system state of the organization is maintaining a state between Goal-Seeking and Multi-Goal-Seeking and Purposive.

Communication Network

The communication component network was measured according to its directional flow: downward, upward, or horizontal. The directional flow was assessed by asking the subjects to rank to whom they communicated with first (the most), second, and third (the least). The results of the responses by the patrolmen as to the frequency that they communicated with their supervisors, peers, and subordinates is seen in table 13-A. The results of the responses by the supervisors as to the frequency that they communicated with their supervisors, peers, and subordinates is seen in table 13-B.

TABLE 13-A

PATROLMEN RESPONSES

Communication Rank	Supervisor	Peers	Subordinate
1st (most)	2	22	2
2nd	18	3	5
3rd (least)	6	1	19

TABLE 13-B

SUPERVISOR RESPONSES

Communication Rank	Supervisor	Peers	Subordinate
1st (most)	0	0	4
2nd	3	1	0
3rd (least)	1	3	0

The results based on table 13-A revealed that the patrolmen communicated with their peers the most, with supervisors second, and

with subordinates least. The written explanations that were also a part of the measurement revealed the reasons for their rankings. Most of the communication flow for the patrolmen was horizontal because they converse with their peers daily. The communication flow changed to upward when the patrolman confronted his sergeant or captain. In some cases there was a high degree of upward flow because some men talked with the sergeant daily about matters concerning the job. But the majority of time, they confronted their supervisor once or twice a week so the upward flow was consistently moderate. The patrolman's communication upward to the captain occurred only on rare occasions. Lastly, the patrolmen communicated with the rookies. Here the answers from the questionnaire varied because some patrolmen did not have a rookie partner while others did. Those that had a rookie for a partner maintained a high degree of downward communication because the patrolman was in a position in which he issued the orders, gave the commands, and instructed the rookie on matters concerning the job. The patrolmen that did not have a rookie for a partner had no means of communicating downward because the rookie is the only subordinate the patrolmen could have.

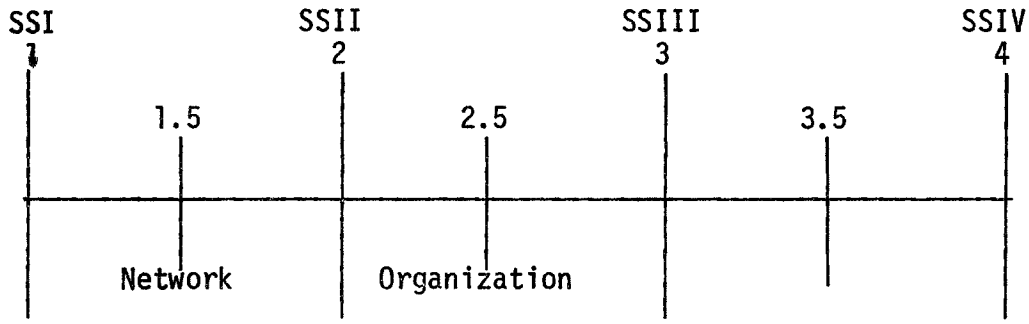
The results based on table 13-B revealed the main communication flow of the four supervisors. The results showed that all four of the supervisors communicated with their subordinates first; therefore, there was a high degree of downward communication. The next flow of communication varied between downward, upward, or horizontal depending upon the situation.

It was noted that there was a high degree of horizontal communication that occurred between the patrolmen. Most of their conversations dealt with opinions, gripes, suggestions, and general discourse about their job. No policy decisions or rules were ever made mainly because they do not have the authority to do so. On the other hand, the supervisors, although small in number, do have the power to make decisions for the organization and it has been noted that most of their communication flows downward. Therefore, the system state of the network variable is really dependent upon who has the most authority in the organization and who exercises that authority. Since the communication flow of the people who are in power and have the authority to make the decisions in the organization was predominantly downward with very little upward or horizontal interaction, the network variable within the organization seems to be fluctuating between system state one--State-Maintaining and system state two--Goal-Seeking. Table 14 displays the system state of the communication system network and the system state of the organization as a whole.

TABLE 14

TOTAL SYSTEM STATES

OF THE ORGANIZATION



In conclusion, this table shows that there is a contradiction in the proposed hypothesis of this study. The hypothesis stated: when the organization is valued at a particular system state, the communication network should be valued at the same state. Based on the concluding results, it is evident that the communication system of the organization was not valued at the same system state as the organization; therefore, the proposed hypothesis must be rejected.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The primary concentration of this thesis was on speech communication within an organization. The two major divisions were organization and communication. In chapter II, a review of the literature revealed that organizational theory has experienced several different stages of development. From these stages, the Systems theory was adopted because of its emphasis on viewing all the components of the organization as a complete entity. It was also concluded from the review of the literature that the network element had an essential role in the process of communication. This variable was chosen for analysis because it allowed vertical and horizontal patterns of communication that were apparent in the organization to be observed.

In chapter III, Robert Dubin's method of theory-building helped to establish the following theory: the value of the organization is the same value as the communication network. As the systems concept was discussed, it was concluded that the organization could have four different system states. From the development of these system states, the strategic propositions were established.

In chapter IV, the strategic propositions were reduced to a hypothesis and the indicators of the organizational and speech components were developed. The results from the questionnaire were revealed and explained in chapter V. Since the outcome of the theory-building portion of this study revealed several surprising results, a discussion of the possible causes is imperative.

Interpretation of the Results

The stated hypothesis for this study was that when the organization is valued at a particular system state, the communication network should be valued at the same state. From the results of the survey, it was discovered that the organization was valued at a system state between two and three and the communication network was valued at a system state between one and two. Therefore, it was concluded that the system state of the organization could not be assessed by its communication flow. The immediate question that comes to light seems to be, What is the reason for the organization and network not to be maintaining the same system state?

There are several speculations as to why the hypothesis was not fulfilled.

1. The organizational analysis might have been expanded.

2. There could have been a mistake in the selection of the communication variable.

3. The theory might have been developed incorrectly.

4. The theory might have been developed correctly but one or more of the indicators could have been inadequate.

First, it has been stated that the organizational components could have been expanded. The organizational components adopted for this study were based on Kast and Rosenzweig's systems analysis. This type of analysis has been successful in organizational studies; therefore, the fault seems not to lie in the chosen components but

perhaps in the components that were omitted. It might have been of greater value to include "technology" in the analysis or to include the leadership and small group element in the psycho-social component. These components were eliminated because the information that would have been gained seemingly at the time was not of great importance. The suggestions of including technology as well as leadership and group dynamics do not altogether reveal the problem of why the hypothesis was disproven but they do add insight as to where the problem might lie.

Second, the reason why the organization and network were not valued at the same system state might be because the network was possibly the wrong speech element to use as the speech component in this study. Messages can be classified according to relationship (dyadic, small group), network (formal and informal), purpose (task, maintenance, human), receiver (internal or external), language mode (verbal or nonverbal), and diffusion method (hard or software).[1] Any of these methods of analyzing the communication system of an organization other than the network variable might be the element that would acquire more successful results. However, the focus of this study was to observe the communication flow that occurred between each of the components in the organization, and the network variable seemed to be the most appropriate means of accomplishing this task.

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[1]Gerald Goldhaber, Organizational Communication (Dubuque, Iowa: William C. Brown Company, 1974), p. 125.

Third, the development of the theory was based on Dubin's theory-building strategy. The theoretical aspects of this thesis were derived from his design. He revealed that categorical propositions were sound statements that could be made about the relationship of two variables; therefore the theory down to the hypothesis was developed as Dubin had suggested. Hence, if the theory seems to be developed correctly, the error may lie in the indicators of each organizational and speech component.

Goals

The goals listed for the Department of Public Safety were an adequate representation, although, some were very broad and some very specific. All the goals were ranked at least once and this could be attributed to the wide span of variety. In future research, it might be more beneficial if the goals were limited to eight or ten and the variety of each goal condensed. Condensation of the goals was of no question in the early stages of this study; however, the results obtained from the questionnaire revealed that a change in the number and scope of the goals might have been more significant.

Structure

The indicator for the structure of the organization was the Department of Public Safety's structural chart. From this chart, it was relatively easy to discern the appropriate system state of the structure of the organization.

Psycho-Social System

The psycho-social system consisted of motivation and role. The measurement used for the motivational component was based on Maslow's need-hierarchy. This category seemed to be an adequate means for measuring the motivational needs because the results from each questionnaire seemed to be substantially similar. The measurement for the behavioral role patterns, however, might have been improved. The questions could have been stated in a different manner by omitting the word "valuable." Very few people admitted that they felt their ideas were of no value, much less that their ideas in the eyes of other people were valueless. However, it has been established by the role I'm Not O.K. but You're O.K. that in certain situations and around certain people, a person is very susceptible to feeling himself inadequate and his ideas of no value (I'm Not O.K.). Also, many people take the position of I'm O.K. but You're Not O.K. and this was seldom revealed by the results of the questionnaire. A different choice of words that represented the role positions could have possibly led to different results. Another factor to consider in the realm of the psycho-social component is that other elements such as leadership and group dynamics could have been used in the analysis; however, due to the time factor and scope of this study, these two components were eliminated.

Management

The indicators used for measuring the management component of

the organization was based on Likert's system classification. Each system represented a type of decision-making process from autocracy to democracy. Since decision-making was the primary focus for measuring the management component, Likert's system analysis seemed to be appropriate for the task. One problem that emerged focused on the instructions. It needed to be stated in the beginning that the questions to be answered were related to decision-making in the total organization, not just to one subject's area. Several subjects marked two answers instead of one and indicated these answers as being directed toward the organization as a whole or the particular area.

Communication Network

The focus of the communication role in this study was to discover the flow of interaction. The ranking provided a means by which the subjects indicated where the majority of messages came from and where they were going. The written explanations further developed the rankings by explaining the types of messages and communication that normally occurred in the organization. From these indicators, it was revealed that the top level managers had the power to make decisions that affected the people in the lower levels of the organization and that they exercised that power. Since their policy decision-making communication was consistently downward with very little interaction from the lower levels, the network system state was determined at 1.5.

This conclusion was substantially based on the explanations in the questionnaire from all the levels of management.

This reexamination of each component's indicators does not establish or pinpoint what made the hypothesis not conclude as expected, but it does reveal an insight as to what could have caused the results to conclude as they did and what might be improved in a subsequent study. It must be noted that the alternative statements that were made concerning each component were only suggestions of what might have been changed had the problem been foreseen. Otherwise, the manner in which all decisions were made in this study were always supported by previous research and made after considering other possibilities.

This thesis was a descriptive study of the network communication patterns that are presently operating in one area of the Traffic Law Enforcement Division of the Department of Public Safety in the State of Texas. Although the hypothesis concluded negatively, this study was successful in that it accomplished the general purposes that were established in chapter I.

This study was designed to accomplish three purposes. First, it was to discover how the Texas Department of Public Safety functioned as a system and operated as an organization. According to Kast and Rosenzweig, the operation of any organization is accomplished by the people, goals, management, structure, and technology. When these components are interacting and join together to form a unified whole,

the organization will be functioning as a system. These components were observed in the Department of Public Safety and results showed that each maintained an active part in the operation of that organization. Through the interaction and interdependence of these components, this organization is able to function as a system.

Second, the study was to define communication network in relation to vertical and horizontal communication patterns within the Department of Public Safety. The questionnaire employed in this study was used to obtain pertinent information about different areas of the DPS. One part of the questionnaire dealt with the flow of interaction that occurred between the three different management levels of the organization. The final results revealed the frequency and manner of the downward, upward, and horizontal communication patterns that occurred between the top, middle, and lower levels of management in the Department of Public Safety.

Third, this study was to observe the different types of communication patterns that might occur within the various types of system states of the Department of Public Safety. Russell Ackoff's system states classification of an organization was adopted for this study. After an examination of this classification, the appropriate type of communication flow pattern for each state was established. The concluding results were four different system states each maintaining its own basic type of communication flow pattern. The DPS was then analyzed to discover what system state it maintained. Although this

study was limited to a particular focus and a particular design, there are numerous options for further organizational studies in the Department of Public Safety.

Suggested Research

This thesis was the first field study that has ever been conducted in the Texas Department of Public Safety. It commenced with the theory that there is a definite relationship between organization and communication. The hypothesis stated that when the organization was valued at a particular system state, the communication network should be valued at the same state. The conclusions based on the results obtained from the questionnaire revealed this hypothesis to be false. This conclusion does not dispute the concept that a relationship exists between organization and communication, but it does reveal that the two components cannot be valued at the same system state. Consequently, as a result of this study, the following questions for further research have been concluded:

1. Why was the value of the organization and the value of communication different?

2. Would a change in communication cause a change in the organization and vice versa?

3. How much of a change in communication is needed to bring about a change in the organization and vice versa?

4. What particular change in communication is needed to cause a particular change in the organization?

5. What particular change in the network component is needed to bring about a particular change in the organization?

The systems method of analysis was employed in this thesis as a guideline for studying the organization as a complete entity. After having employed the systems approach to a specific organization, this thesis could act as a guide for other organizational studies. The specific area of concentration in this thesis focused on organizational communication. The research obtained from this study could be a starting point for more extensive communication studies within different organizations. A study of the network variable could be extended into different regions and areas of the Traffic Law Enforcement Division of the Department of Public Safety.

Although this study was limited to the network variable, any area of speech communication could be developed into a new research approach. Studies focusing on leadership, small groups, interpersonal relations, non-verbal communication, etc. could be areas of concentration in any branch or level of management within the DPS. Dyadic communication studies focusing on the working relations between two patrolmen of the same or different nationalities could be a challenging focus for intensive research. Another area of concentration could be aimed toward the informal channel of communication commonly known as the grapevine. The discovery of how efficient or inefficient the relay of information through the lower levels of this organization might reveal surprising results. Due to the different levels of management

within this organization, a comparison of the communication patterns that occur between complementary levels or different levels could be initiated. The technological communication or the communication system used on the radio is an area within itself that is open to new discoveries. These suggestions are only possible areas that could be developed into a thesis project. Organizational communication is a rapidly expanding area of study, and the Texas Department of Public Safety is a highly organized and structured system; a combination of the two provides innumerable opportunities for research.

APPENDIX A

QUESTIONNAIRE

Dear Sir:

Enclosed is a questionnaire which I am compiling in partial fulfillment of thesis requirements for a Master of Arts Degree from Southwest Texas State University. The questionnaire is aimed toward gathering information about the speech communication that occurs within District 3-B of the Department of Public Safety.

This questionnaire is comprised of five different parts. Each part is relatively short and usually asks for an explanation. These explanations are extremely vital to the results of this study; therefore, please take time to explain your answers. Although the questionnaire asks information concerning you and your specific division, the information will remain confidential and will only be published as averages. The information obtained is for purposes of this thesis only and will not be used to slander or discredit the organization in any manner. Your complete sincerity in answering these questions will be to your benefit and to the benefit of the organization.

Your cooperation is appreciated and I thank you for taking time from your busy schedule to complete this questionnaire. Please mail the questionnaire in the enclosed envelope when you are finished.

Thank you.

Sincerely,

Linda McCraw

I. Instructions: From the following list of goals, what do you consider to be the five major goals of the Highway Patrol Division within the Department of Public Safety? Reveal your selection by ranking the goals from 1 to 5; 1 represents the most important goal and so on down the line to 5. There must be only one number 1, one number 2, one number 3, one number 4, and one number 5.

_____ 1. To educate the public concerning laws in the State of Texas

_____ 2. To secure and maintain social order in the State of Texas

_____ 3. To serve the community as individuals as well as law officers

_____ 4. To investigate accidents and crimes

_____ 5. To provide an efficient law enforcement agency for the State of Texas

_____ 6. To protect life and property of individuals

_____ 7. To prevent accidents by issuing citations for traffic violations

_____ 8. To supervise traffic on rural highways

_____ 9. To maintain and improve the standards of the DPS as an organization

_____ 10. To preserve the peace and arrest criminals

_____ 11. To provide security in presence of disasters

_____ 12. To demonstrate courtesy, service, and protection

_____ 13. To provide for the prevention and detection of crimes

_____ 14. To enforce all laws of the State of Texas

_____ 15. To administer regulatory programs in safety responsibility

Other Choices: Specify

_____ _____

_____ _____

_____ _____

II. Instructions: The following is to assess with whom you engage in conversation the most--your supervisors, your peers, or your subordinates. The focus of these conversations should be on items as comments, discussions, complaints, directions, giving or receiving orders, etc. Rank the following from 1 to 3; 1 represents those you communicate with the most, and 3 represents those you communicate with the least.

_____ A. I communicate with supervisors

_____ B. I communicate with peers (other patrolmen)

_____ C. I communicate with subordinates (if any)

Explain: Approximately how often and on what occasions do you communicate with these people? Give an explanation for A, B, and C above. (Be specific as Sergeants, Captains, Patrolmen, etc. at District Meetings, Departmental Meetings, Discussions, Daily Conversations, etc.) Example: I communicate with the Captain once a month every month at a District meeting.

III. Instructions: Please answer the following questions by marking an X in the appropriate box. Below each set of questions is a space provided for an explanation of your answer. This explanation is very important so please take time to explain your answers.

1. Do you think the ideas or opinions you generally express to your peers are (A) valuable or (B) not valuable?

   ( ) A or ( ) B

2. Do you feel that your peers regard your ideas or opinions as (A) valuable or (B) not valuable?

   ( ) A or ( ) B

Explain:

3. Do you think the ideas or opinions you generally express to your supervisors are (A) valuable or (B) not valuable?

   ( ) A or ( ) B

4. Do you feel that your supervisors regard your ideas or opinions as (A) valuable or (B) not valuable?

   ( ) A or ( ) B

Explain:

5. Do you think the ideas or opinions you generally express to your subordinates (if any) are (A) valuable or (B) not valuable?

   ( ) A or ( ) B

6. Do you feel that your subordinates regard your ideas or opinions as (A) valuable or (B) not valuable?

   ( ) A or ( ) B

Explain:

IV. Instructions: Please arrange the following items in the order from 1 most important to 5 least important. After you have arranged these items explain why you placed one item before the next and so on down the line. This explanation is very vital so please take time to explain why you ordered these items the way you did.

_____ Awards, Commendations, Promotions

_____ Salary

_____ Feeling of accomplishment & satisfaction

_____ Job security & benefits

_____ Aceeptance by peers in the organization

Explanation:

V. Instructions: Listed below are several questions. Under each question are four possible answers. If your answer to the question is not available, please choose one that is a close representative. Make your selection by marking an X in the box just above the answer.

1. At what level in the DPS are decisions concerning policy and procedures formally made:

( )	( )	( )	( )
Top	Top and Lower	Top and Middle	Top, Middle, Lower Levels

2. To what extent are decision makers aware of the problems within the organization?

( )	( )	( )	( )
Unaware	Partially Aware	Moderately Aware	Fully aware & knowledgeable

3. To what extent is technical and professional knowledge used in decision-making?

( )	( )	( )	( )
Used only if possessed at higher levels	Higher & Middle levels are used	Higher,Middle, & lower levels are used	Much of what is available anywhere in the organization is used

4. To what extent are subordinates involved in making policy and procedures related to their work?

( )	( )	( )	( )
Not at all	Occasionally Consulted	Usually consulted but not included in decision making	Are involved fully in decisions related to work

5. To what extent does the decision-making process help to create the necessary motivations in those persons who have to carry out the decisions?

( )	( )	( )	( )
Contributes nothing to motivation	Contributes little to motivation	Some contribution is made to motivation	Substantial contribution is made

6. Describe the amount of conversation or interaction that occurs between the supervisors and patrolmen.

( )	( )	( )	( )
Little interaction	Some interaction	Moderate interaction	Extensive, friendly interaction

7. Describe the atmosphere of the conversations or interactions that occur between the supervisors and patrolmen.

( )	( )	( )	( )
Fear & distrust exists	Caution exists	Caution with some trust exists	High degree of trust exists

8. In the DPS as an organization, by what means are policy and administrative decisions derived?

( )	( )	( )	( )
One individual	Selected individuals	Selected small groups	Several decision making groups from all levels

9. What amount of cooperative teamwork is present in the DPS?

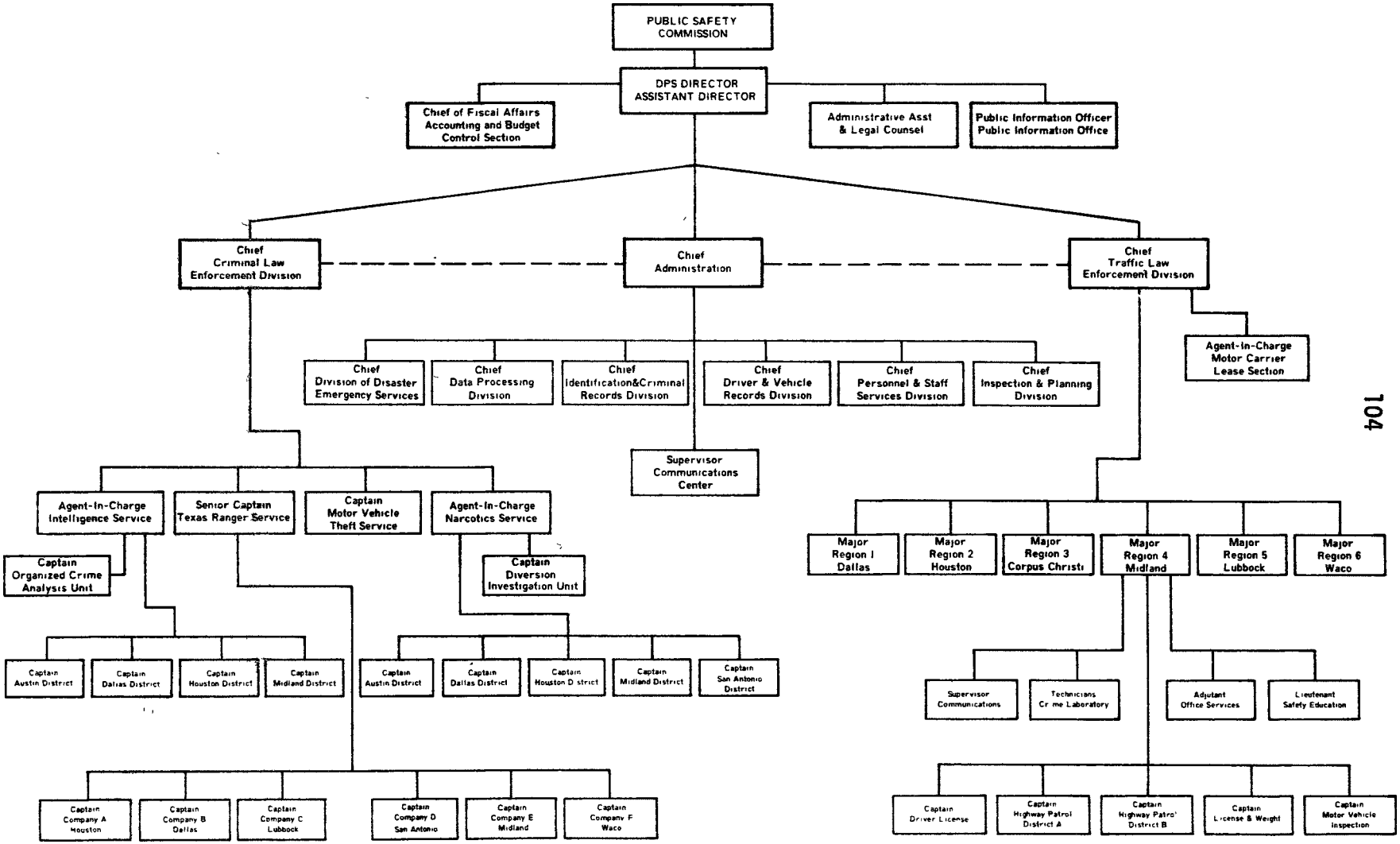
( )	( )	( )	( )
None	Little	A moderate amount	Very substantial

10. To what extent is an informal organization (Inf. org.) present and supporting or opposing goals of the formal organization (F. org.)?

( )	( )	( )	( )
Inf. org. present and opposing goals of F. org.	Inf. org. present & partially resisting goals of F. org.	Inf. org. present & partially supporting goals of F. org.	Inf. & F. org. are one and the same and working together to achieve the total organization's goals

APPENDIX B

STRUCTURAL CHART



Other Regions are substantially the same as Region 4

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VITA

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