A CONCEPTUAL MODEL FOR THE ESTABLISHMENT OF ORGANIZATION-CONSTITUENCY COMMUNICATION

A Thesis

by

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ABSTRACT

A CONCEPTUAL MODEL FOR THE ESTABLISHMENT
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The principal objectives of this study involved: (1) a review of the literature from the fields of communication theory and the developmental approach to the study of human cognitive functioning, and (2) a presentation of a conceptual model for the establishment/maintenance of a communication network between an organization and its constituency that is based upon the research from the fields of adult education/ community development as well as the findings of noted public opinion pollsters.

Through a review of the literature from the cybernetic (or mathematical), general semantic (or non-Aristotelian), and consistency models of communication conclusions were drawn which suggested that individuals respond to a variety of communication stimuli in highly individual fashions due to the complexity of the human condition. This review then

proceeded to support such a notion through an incorporation of the findings of certain developmental psychologists. Thus, conclusions were reached which suggest that individuals do, in fact, maintain highly individual cognitive processes which manifest in the form of uniquely individual reactions to communication stimuli.

In light of that determination, a conceptual model for the establishment of communication networks between an organization and its constituency was explored. This model strongly asserts the dismissal of haphazard guesswork in favor of a systematic data gathering procedure. The procedure in question employs the citizen involvement techniques present in the fields of adult education and community development in conjunction with the rigorous methods of data gathering advocated by prominent researchers from the public opinion polling frame of reference. Through such a procedure the organization attempting to communicate with its service population can actually ascertain where constituents gather their information, the credibility they extend to that source, as well as effectively encounter the many problems that debilitate the communication processes such as regional semantics, lack of responsiveness, and the like.

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CHAPTER I

I. STATEMENT OF THE PROBLEM

Often, in an academic investigation, specific research trends will manifest themselves in the form of "catch all" phrases to describe the general concept under examination. E. G. Bormann (1980) elucidates this assertion by pointing out what he considers to be "god terms" which have been somewhat overused by writers since the turn of the century. Bormann relates that the word "education" was used extensively during the first half of the century as the key which would unlock the great potential present within society; however, the use of that "god term" quickly subsided during the 1940's in favor of a more all-encompassing concept: "communication". While these two terms are quite similar in that each can clearly be used to describe almost any exchange between two or more people (Nilsen, 1970), the focus of inquiry appears to have shifted from an emphasis on the provision of "educational" experiences to the facilitation of "communication" between individuals.

Therefore, this project intends to examine one aspect of the communication process through a review of the literature from the fields of communication theory and

developmental psychology. This particular facet of the communication process relates to an organization's attempt to establish a communication network with its constituency. An organization may enter into such an endeavor without actually taking the time to evaluate the existing situation which could result in communication patterns that fail to achieve the desired goal(s).

The impact of a given communication stimulus on the human nervous system has been studied by both communication theorists and developmental psychologists. This research indicates that each individual maintains a unique system of processing any given communicative situation which can often result in a multitude of responses to a single event. Thus, a recognition of these "individual differences" can prove to be beneficial to those persons responsible for the preparation of communication stimuli.

This paper will attempt to present the reader with a methodology which might be effectively employed by an organization interested in gathering data from a given population. Knowles (1972) explains that there are basically two approaches to the process of establishing a positive relationship with the members of a specific service population: one is to employ a Madison Avenue type of salesmanship while the other requires the interested party to undertake a more specific analysis of

that service population. This paper supports the latter position to the extent of presenting the reader with a model for such a procedure that is representative of the findings of public opinion research as well as those of the field of adult education/community development.

In sum, the purpose of this paper is to present a conceptual model for the establishment of an effective system of communication between an organization and its service population. The writer contends that such an endeavor can be accomplished through an understanding of how the members of that service population gather their information and the subsequent treatment of that information.

The mathematical approach to the study of information processing is primarily based on the notion that people and machines are, in fact, the same with regard to the communication act (Wiener, 1950; George, 1959; Broadbent, 1958). This perspective suggests that in order to accurately communicate with either people or machines the communicator must transform the message into a precise mathematically logical code. Without such precision the potential for accurate communication will be significantly reduced.

The general semantics system of communication rejects the mathematical model through a repudiation of the syllogistic reasoning employed by the information theorists

(Korzybski, 1933; Hayakawa, 1941; Borden, 1970; Gorman, 1958). The non-Aristotelian or general semantic viewpoint refuses to accept the notion that a given concept "is" anything since to do so would be at the expense of all other possibilities. However, through an examination of these two frames of reference the interested observer may note a substantial "gray area" between the two positions which could serve as a possible resolution of this conflict.

The third viewpoint actually expounds on the previous perspectives through a close examination of the impact of any communication stimulus on the receiver of that communication attempt. The consistency theory approach stresses the individual's perception of a given situation through an incorporation of the research in perceptual psychology (Toch and MacLean, 1970; Barnlund, 1970; Zajonc, 1970; Massey, 1979). The work of Morris Massey (1979) will also be reviewed in this section even though Massey does not specialize in the study of communication. However, this research into the formulation and maintenance of an individual's "gut level value structure" will provide excellent insight into the nature of consistency theory.

These three theoretical perspectives appear to be rather diverse on the surface in that each generates its own jargon. Nevertheless, this vernacular gains new value

when viewed from the developmental perspective. The works of Piaget and his associates demonstrate that each individual passes through a sequence of stages that is both unique to that individual as well as being descriptive to the point of encompassing the overall population. As a result of the person's stage of cognitive development, he or she develops a strategy through which that individual processes information (Goldstein and Blackman, 1978; Brody, 1972; Messick, 1976). The individual's "cognitive style" can be viewed through an examination of how the person processes data in reaching moral decisions (Kohlberg, 1969; Kohlberg and Turiel, 1971; Mattox, 1975; Duska and Whelan, 1975). The work of Kohlberg and his researchers provides insight as to an individual's cognitive processes in that the Kohlbergian stages of moral development denote a separate set of cognitive functions within each stage. Therefore, the Piagetian notion of stages or levels of cognitive development can actually be observed through an understanding of Kohlberg's stages of moral development.

The implications of this developmental frame of reference for the communication theorist will be of central importance in the evolution of this paper in that the way an individual will react to any given communication can be seen as a function of that person's level of cognitive development along with his or her subsequent cognitive

style. Whether one assumes the position of the cybernetician (or information theorist), general semanticist, or operates from the consistency theory point of view, the central theme is one that hinges on the notion of how the individual reacts to the communication stimulus. Such a reaction, in the writer's view, is a function of that individual's method of processing information.

As an organization attempts to establish communication with its service population, the personnel responsible for that task must make one critical decision above all else: either to undertake a systematic process for the establishment and maintenance of an active communication system or to accept the consequences of a haphazard, inconsistent methodology. This paper will present the former position in an effort to demonstrate that the findings from the field of public opinion research (Gallup, 1940; Blankenship, 1943; Weiss, 1979) as well as the field of adult education/community development (Knowles, 1972; Biddle and Biddle, 1968; Snow, 1955) can be employed in this process to the extent of ascertaining the source from which individual members of the service population gather their information and their reaction to that information. Thus, an organization can forego guesswork in favor of a systematic process of targeting communications.

II. PURPOSE OF THE STUDY

1. To review the literature from the fields of communication theory and developmental psychology in an effort to present a developmental approach to the study of communication.
2. To develop a conceptual model which depicts a comprehensive process through which an organization can gather data.

III. SIGNIFICANCE OF THE STUDY

The problems which result from unsuccessful communication attempts can prove to be a source of anxiety for the organization wishing to establish rapport with its constituency. This conceptual model presents a position that relates the need to undertake scientific procedures in order to determine the composition of the population with which the organization wishes to communicate as well as a procedure which can be employed in the maintenance and evaluation of an on-going program.

IV. DEFINITION OF TERMS

Communication: Stated behaviorally, a stimulus-response situation in which one deliberately transmits stimuli to evoke a response.

Conceptual Model: A representation of the various aspects of a complex event or situation and their interrelationships.

Consistency Theory: A model of communication based on perceptual psychology as well as the literature from the area of persuasion research which is concerned with the need for individuals to achieve a state of psychological congruency.

Cybernetics: The mathematical model of communication based on the notion that people and machines are (insofar as communication is concerned) the same.

Developmental Theory: A theoretical perspective founded on the notion that the individual passes through a series or sequence of stages in the processes of development.

General Semantics: A model of communication that claims to be not a philosophy, a psychology of logic, but a discipline which explains how

to use the nervous system in sending and receiving messages; how to react to words; and how to guard against the inadequacies and confusion of words.

Survey: A concept that rests on the principle that by sounding the opinions of a relatively small number of people, proportionate to each population group in the overall population, the opinions of the whole population can be determined with a high degree of accuracy.

V. RESEARCH METHODOLOGY

This project employs a descriptive research methodology. This strategy is viewed as being appropriate to the process of developing a conceptual model that is representative of the literature of the fields in question.

VI. LITERATURE SEARCH

1. The literature presented in this project has been gathered from the various journals of the fields of study relevant to this topic, a series of texts representative of the areas of inquiry, as well as

successions of primary literature upon which this project has been constructed.

2. The topics of research involved in this model include:

   A. the mathematical model of communication

   B. the general semantics model of communication

   C. the consistency model of communication

   D. the developmental theory of human growth

   E. the survey/polling methodologies of the fields of adult education/community development and public opinion research

VII. ASSUMPTIONS

1. Every population, regardless of socioeconomic background, consists of an extremely diverse mix of individuals each of whom processes information in an exclusively individual fashion.

2. The systematic process of data collection is the most desirable approach to organization-constituency relations.

3. Organizations strive to maintain the goal of establishing an accurate communication pattern with a designated service population.

VIII. LIMITATIONS

1. The materials presented within this framework are limited to the specific time period during which

this project was constructed.

2. This project did not involve the use of personal interviews.
3. This project is limited in that it does not purport to deal in how an organization reacts to the information gathered via this model.

IX. ORGANIZATION OF THE STUDY

This project will first consider the theoretical positions relevant to the mathematical, general semantics, and consistency models of communication. These frames of reference will be followed by an examination of the developmental approach to the study of human cognitive functioning through the works of Jean Piaget and Lawrence Kohlberg. The review of the literature will conclude with an overview of the proposed developmental approach to the study of communication.

The conceptual model to be presented in chapter three will consist of a step-by-step review of the process of the construction, dissemination, and evaluation of instruments to be utilized by an organization interested in the establishment and maintenance of communication with its service population.

The concluding chapter will present a conceptual representation of the methodology supported by this paper.

CHAPTER II

As one presents a theoretical perspective with the intention of demonstrating how that perspective is relevant to a particular situation, the presenter should first understand what role that theory is intended to perform. The first step in this process involves a discussion of the purpose of a theory. Dance and Larson speak to this question by pointing to the two goals of a theory:

1. The ability to explain what is happening with regard to particular phenomenon, and
2. The ability to predict what will take place with regard to a particular phenomenon (1976, p. 5).

Dublin elucidates, "to the extent that a theory is highly explanative, it is said to have 'power'; and to the extent that a theory is highly predictive, it is said to have 'precision'." (1965, p. 5). Therefore, as one undertakes the task of theory construction, he or she has a scientific obligation to extend that work far beyond the realm of mere explanation. Even though Dance and Larson agree with Dublin that any given theoretical position may

maintain "power" in the absence of "precision" or the inverse ("precision" without "power"), these writers do suggest that a position which adequately addresses both aspects of a theory is of greater value than a one-sided presentation. This project will attempt to meet these criteria of precision and power through an in-depth discussion of what takes place in the communicative act (power) as well as a presentation of one method which can be employed in order to determine how an individual might react to a particular communication attempt (precision).

However, before entering into a review of the communication theory research, it is necessary to examine the concept in question. The process of presenting a particular concept usually involves an inspection of the definition that is said to represent that concept. This is of primary importance in that the definition should be the signpost for the concept it represents; however, any definition only consists of words and these words often debilitate understanding as much as they facilitate comprehension. Dance maintains that there are three critical points in the establishment of "conceptual clarity" with regard to the notion of communication:

1. the level of observation,
2. presence or absence of intent on the part of the sender, and

3. the normative judgment component (1970, pp. 201-210).

Simply, one might observe an army of ants perform their uties and therefore successfully meet all three of Dance's riteria in that the ants' activities are observable, their ctions establish some degree of intent (through a clear livision of labor), as well as the fact that the end prod- ict provides the observer the opportunity to judge the legree of success the ants have experienced. Thus, it seems reasonable to suggest that any communication between humans could be subjected to a similar examination. All of the definitions of communication present in this work do meet the criteria set forth above; however, many of the definitions differ drastically with regard to the second item on Dance's list: the intent.

In reviewing the following definitions of the concept of communication the reader is cautioned to pay attention to the "intent" component of each individual position.

1. Communication: a process involving the selection, production, and transmission of signs in such a way as to help a receiver perceive a meaning similar to that in the mind of the communicator (Fotheringham, 1966, p. 254).

2. Communication is the social interaction through symbols and message system (Gerbner, 1966, p. 102).
3. Communication cannot be understood except as a dynamic process in which the listener and speaker, reader and writer act reciprocally, the speaker acting to provide direct and indirect sensory stimulation of the listener; the listener acting on the stimulation by taking it in, investing it with meaning by calling up images against present information and feelings, and sooner or later acting upon those images (Martin and Anderson, 1968, p. 53).
4. Communication: the transmission of information with the purpose of influencing audiences (Cassata and Asante, 1979, p. 6).
5. Communication means that information is passed from one place to another (Miller, 1951, p. 6).
6. Communication must be two-way, for the response is part of the process (Avery, 1959, p. 5).
7. Communication consists in the communicator's selecting and arranging symbols that have a certain meaning to him and his audience's sensing those symbols and inferring their intended meaning (Minnick, 1957, p. 70).

In each of these definitions of the concept of communication the transmission or interaction phase of the act is stressed. The intent component appears to have different values ranging from an attempt to influence the receiver to a simple social exchange of ideas. Thus, one can note the need for a more in-depth view of such a complex phenomenon as the process of communication. Many theorists have responded to that need through the construction of conceptual models that may at first glance appear rather sterile; however, this aseptic viewpoint provides the observer the opportunity to apply the individual model to almost any communicative event.

These models range in complexity from Schramm's "A communicates B through channel C to D with effect E" (1954, p. 4), to Berlo's six phase model which consists of:

1. the communication source
2. the encoder,
3. the message,
4. the channel,
5. the decoder, and
6. the communication receiver (1960, p. 6).

Shannon and Weaver (1949) present a model which centers primarily on the reduction of interference ("noise") within the communicative act. The authors feel that this can be best achieved through the use of codes and channels that

specifically denote what is to be communicated. Hence, this model serves as the foundation of a topic soon to be discussed: the mathematical model of communication. Those who concentrate their efforts in the area of model construction often produce versions that are so complex one questions the value of the product insofar as the model's ability to communicate anything to anyone is concerned. After reviewing several examples of these models, the reader should note that these perspectives share one characteristic with the various definitions presented within this chapter in that they all concentrate on the "power" of the theory with little to no regard for the "precision" component.

There is no question that the study of human communication has enjoyed a long tradition in the western world. These investigations concentrated primarily in the area of rhetoric until around the early 1900's when the work of several behavioral psychologists stimulated a somewhat different approach to the study of the communicative act (Bormann, 1980). By the 1930's theorists began to gather data through empirical means as research began to focus on experimental manipulations in the areas of opinion change, source credibility, organization or message content, and the like. However, this approach to the study of communication was spurred on after World War II to the extent that by the early 1950's clear theoretical divisions appeared in

the form of the mathematical, consistency, general semantic, as well as the more traditional (rhetorical) approaches to the study of communicative behavior.

Perhaps the best way to sum up this discussion of the concept of communication is through the Greek myth presented by Dance and Larson (1976) in which the authors discuss the Greek god Proteus. Proteus was regarded by the ancient Greeks as an older sea god or as one of the so-called wise men of the sea. One of his more prominent traits could be found in his prophetic capacities; however, in order to get Proteus to share his knowledge the inquisitor must first catch him and hold on to him. Of course, Proteus was a "shape-shifter" which required those in pursuit of his knowledge to hang on while he changed from form to form until he resigned himself, resumed his original shape, and would then begin to answer questions about the future.

As Dance and Larson explain, "The Greek sea deity Proteus takes shape in English as the word protean. Something protean readily assumes different shapes and roles. Communication is protean." (1976, p. 16). Therefore, if one is truly interested in gaining insight into the nature of communication one must "hang on" to the basic concept of communication as it undergoes myriad transformations in the hopes that it will at some point return to its original true form so that it can be examined thoroughly ("power") and

thus allow the observer the occasion to question its meaning for the future ("precision").

"Society can only be understood through a study of the messages and the communication facilities which belong to it." (Wiener, 1950, p. 7). Norbert Wiener has long been considered to be the father of the mathematical model of communication; however, the science of constructing machines to conduct the work of man goes well beyond the work of Dr. Wiener. In the mid-1800's the work of Charles Babbage produced a machine capable of solving mathematical equations via mathematical means (George, 1959). Babbage referred to his work as an analytic engine, but it is unfortunate that both his plans for his machine as well as the machine itself fell into disrepute as the result of certain activities well outside the realm of mathematics. Nevertheless, the works of Babbage presented the foundation on which the Harvard Mark I computer was eventually constructed which utilized Babbage's notion of the punched card method of feeding information to the machine (George, 1959). It is interesting to note, however, that there were individuals promoting the use of machines to perform the tasks of humans such as calculating insurance rates long before the work of Babbage (George, 1959).

Paralleling the development of the so-called computing machines has been the enhancement of mathematical logic. The works of many noted mathematicians such as Russell, Whitehead, Church, and Turing have expounded on the process of transposing everyday events into logistical equations which can be interpreted by computing machines (Reitman, 1965; George, 1959; Broadhurst and Darnell, 1970). The result has been the introduction of a new science which equates machine with man: cybernetics.

Wiener (1950) first coined the term cybernetics in 1947 while he served as an instructor in the department of mathematics at the Massachusetts Institute of Technology. The term generates from the Greek word for "steersman" or "governor" and has been used retrospectively to describe the whole field of communication and control (an inaccurate presumption at best) (George, 1959). The fundamental principle of this approach simply involves the notion that insofar as the process of communication is concerned, the human organism is not essentially different from a machine (Wiener, 1950; George, 1959; Broadhurst and Darnell, 1970; Bordon, 1971; Singh, 1966). As the father of the movement so aptly phrases the position:

> "When I give an order to a machine, the situation is not essentially different from that which arises when I give an order to a person. In other words, as far as my consciousness goes I am aware of the order that has gone out and of

> the signal of compliance that has come back. To me, personally, the fact that the signal in its intermediate stages has gone through a machine rather than through a person is irrelevant and does not in any case greatly change my reaction to the signal." (Wiener, 1950, p. 17).

To be sure, the notion that humans and machines are the same (or even interchangeable) prompts a severe emotional reaction on many fronts and, therefore, often leads to certain misconceptions as to the fundamental concept of cybernetics. Most people associate the word mechanical with automatic, unthinking contraptions that in no way resemble the human traits of thoughtfulness, reflection, and so on. However, the cybernetician would be happy to point out that the notion of the machine has now extended far beyond its original use to the extent that any organism can be reproduced in mechanical form. George (1959) even goes so far as to suggest that there is no reason why cyberneticians should not go ahead and construct machines that perform all the tasks the human performs, a position that will, in time, gain even wider acceptance than it currently enjoys.

One more historical note: the practice of developing machines to do the work of humans is not unlike many other innovations throughout history in that this notion was generated out of necessity. During World War II several problems arose as the result of the inability of the Allies to defend against the high-speed aircraft employed by the

Axis powers. Therefore, scientists developed machines to aid in the process of range-finding for the anti-aircraft guns, along with several other innovations that truly promoted the use of machines in areas where people proved to be ineffective (Broadhurst and Darnell, 1970).

As investigators explored the possibility of developing machines to perform operations that were once exclusively within the human domain, problems arose as researchers attempted to determine the exact quantity of information contained in any message to be transmitted as well as how they could consistently measure the data in a way that would facilitate the process of electronic transmission (Broadhurst and Darnell, 1970; Reitman, 1965; George, 1959). The work of Hebb (1949) along with that of Shannon and Weaver (1949) and Wiener (1950) resulted in the application of mathematical theory of communication to the then-emerging field of cybernetics. In short, the work of these noted mathematicians allowed for the transmission of every conceivable type of message ranging from the first attempts at language from a child to the incantations of the atomic scientist through the use of mathematical logic (Reitman, 1965; Broadhurst and Darnell, 1970). The only restriction placed on this process was that the communication in question had to be recognizable to the point that it could be mathematically processed.

The physically measurable quantity that cyberneticians refer to when they discuss the transformation of any communication into a precise mathematical language has been denoted as an "information bit" which is actually based on the observation that the human nerve cell assumes only two positions: an excited state or an unexcited state (Herdan, 1960). The human nerve cell does not ever assume a "gray" or uncertain position. Therefore, one could say the cell is either in a yes-no position, all-or-nothing state, or as the cybernetician would state, in a 0-1 situation. The last position is based on the principle of logic known as the "contradiction" and since language is nothing more than the "formulation of logical relations in terms of linguistic forms" (Herdan, 1960, p. 73), it is somewhat consistent to maintain that a dual or dyadic system of expression would be appropriate to the communication process (Broadhurst and Darnell, 1970).

Thus, the cybernetic approach to the study of communication is really based on the notion that language is in essence a code which is to be transmitted in the most efficient manner. As Claude Shannon relates, "information refers to knowledge that one does not have about what is coming next in a sequence of symbols." (Shannon and Weaver, 1949, p. 103). Hence, the fundamental concept in this frame of reference involves the transmission of information in an

effort to reduce what the cybernetician refers to as entropy (randomness or uncertainty) through the use of "bits" of information which, in turn, provides for an increase in predictability.

This point of view, to say the least, is by far the most technical approach to the process of communication; however, this perspective is very well received by the scientific community since it applies the basic principles of scientific inquiry. The guiding principle of the physical sciences is one that constantly seeks a reduction of randomness (entropy) in favor of precision and therefore control. Thus, when one examines the process of communication, one may quickly note that a significant percentage of all communication amounts to an exchange of information via language (Singh, 1966). Therefore, as one applies the fundamental principles of Aristotelian logic to the everyday discourse present in any given field, the researcher can systematically transform that discourse into a precise mathematical language which can then be transmitted through the appropriate channel to the receiver, and thus significantly decrease the chance of misinterpretation or randomness in favor of accuracy.

The technical problems associated with the transmission of symbols or signals should be recognized as the major thrust of the cybernetic approach to communication.

As George (1959) notes, the topic of interest here is control and unless the message can be systematically transcribed into a code, then no control can be exercised. Thus, the cybernetic model must embrace the same problem that confronts all communication theorists: language. The philosophical arguments concerning the relationship between language and thought do not appear to be particularly inviting to this scientific methodology; however, there is no escaping this basic philosophical debate. The study of cybernetics can also be described as the search for artificial or synthetic intelligence (Singh, 1966; Reitman, 1965). As one attempts to grasp the concept of synthetic intelligence, he or she must first investigate the origin of natural intelligence (Singh, 1966), a task that presents many problems insofar as the empirical accumulation of data is concerned, since it is often difficult to ascertain exactly what measurable response can be said to be representative of the individual's cognitive functioning. Many theorists agree that the means through which the scientist may observe cerebral life could be through the use of human speech, a product of the language function (George, 1959; Singh, 1966; Reitman, 1965).

Simply, the theoretical positions present in the fields of study relevant to cybernetics could be in trouble. There

is no argument that the reduction of randomness in the communication act in favor of precision is an ideal that, if achieved, would provide for instant analysis and subsequently very accurate predictions. Norbert Wiener makes the statement: "Such words as life, purpose, and soul are grossly inadequate to precise scientific thinking." (George, 1959, p. 65). Very well said, Dr. Wiener; however, what percentage of the world's population displays an overriding concern for "precise scientific thinking"? Hence, the relationship between language and thought presents a formidable challenge to the cybernetician in that the ultimate goal of artificial intelligence can never be resolved without a full understanding of the nature of natural intelligence and, unfortunately for scientific investigation, natural intelligence denotes human behavior.

Before closing this review of the mathematical theory of communication, one other point is worthy of discussion. Throughout this review of the cybernetic approach the writer has made consistent references to the work of Shannon and Weaver, Broadhurst and Darnell, Wiener, as well as F. H. George due to the fact that these individuals are not only the leaders of this field but are actually the "founders" of this application of mathematics to communication. These primary sources reveal a glaring weakness in their theoretical positions as each writer attempts to ex-

plain the relationship between language and thought. George represents this weakness best in his explanation of this relationship when he presents the analogy that language and thought are similar to the relationship between a map and the territory it purports to represent in that each suggests a structure or a pattern of reality, and words (or the map) may or may not represent this pattern accurately (George, 1959). A map can prove to be deceiving, just as a word may not be truly representative of the thought in question. This is, however, the fundamental principle of the non-Aristotelian theory of communication or general semantics.

In summary, the principles of the cybernetic perspective are of importance to the communication theorist in that this framework does provide for the analysis of the communication process through mathematical means. Through the use of Aristotelian logic in the form of the syllogism, the researcher can transform human messages into mathematical language which can then be transmitted (via the appropriate channel) to the receiver of the message in a precise form with little to no ambiguity. However, the use of this logistical transformation presents several problems with regard to the semantics of language. As George relates, a map does not always accurately represent the territory in question just as a word does not always convey the concept

in the mind of the message source; therefore, the use of the syllogism to transform messages into precise mathematical language is in direct contradiction to the map-territory argument. The argument presented by the mathematical model is very strong until the fundamental question of language is introduced. In order to create artificial intelligence or logistically process messages, the researcher must first successfully encounter the phenomenon of language. The mathematician responds to this phenomenon of language through the creation of a language (based on logic) that analyzes each communication situation in such a hair-splitting manner that the subsequent representation is far more debilitating to the communication process than it is facilitating. Clearly, the cybernetic approach does not appear to be an easily accessible response to the problems of day-to-day interpersonal communication, nevertheless, a fundamental understanding of these principles is essential to the researcher interested in the communication act.

Just as the reduction of ambiguity in favor of precision is the guiding force behind the mathematical model of communication, the repudiation of misleading conclusions that foster such conditions as ambiguousness and impreciseness prove to be the motivating force behind Alfred Korzybski's non-Aristotelian theory of communication. While one might wonder what such philosophical arguments

as the Aristotelian or non-Aristotelian theories of existence have to do with the establishment and maintenance of communication patterns between individuals, one must first recognize the impact of words on the human nervous system. Sloppy, inaccurate, or ill-prepared sources of information may have a significant impact on the receiver of the message. The use of certain phraseology or the method of distribution of the message as well as many other factors can influence the response patterns present within a given population. Therefore, this review shall prove most relevant as it unfolds in light of the developmental study of human behavior. As Korzybski will point out and Piaget, and Kohlberg will later reinforce, we humans do not all react or think the same (much to the displeasure of the cybernetician).

While Alfred Korzybski's system of general semantics strongly asserts that it is not a philosophy, psychology, or a logic, the works of prominent writers in the field surely do resemble that of a philosopher, psychologist, or logician. Nevertheless, this rejection of the Aristotelian theory of logic began in 1933 with the publication of Korzybski's Science and Sanity in which the author dismisses the existence of such noted theoretical positions as Newton's Laws or non-Newtonian systems of thought in favor of a clear-cut dichotomy: the Aristotelian and the

non-Aristotelian theories of being (Korzybski, 1933). The principle aims of this perspective are:

1. To construct or reconstruct the nature of language to correspond more closely to the world as modern science knows it.
2. To attack the existing Aristotelian language system which is based on the three principles of (A) identity, (B) contradiction, and (C) the excluded middle or either/or orientation (Gorman, 1958, p. 78).

As one should note at this first level of observation, such a "theory of sanity" rejects, at the outset, the fundamental concepts on which the cybernetic perspective has been conceived. However, Korzybski goes well beyond the rejection of the Aristotelian position through the presentation of nineteen postulates which the author feels his non-Aristotelian system successfully encounters. These postulates range from the resolution of the "mind-body" problem to a "physiological foundation for mental hygiene" or a general theory of "sanity" (Korzybski, 1933). The founder of the non-Aristotelian system states:

> "The explanation's astonishingly simply and easily verified. The present non-Aristotelian system is based on fundamental negative premises; namely, the complete denial of identity, which denial cannot be denied without imposing the burden of impossible proof on the person who denies the denial." (Korzybski, 1933, p. 10).

The writer must admit that the author of the above statement writes with a clarity previously reserved for political speech writers. Nevertheless, one must recognize that the ultimate denial in the Korzybskian frame of reference involves the notion that anything "is" anything. This "is of identity" concept is (or perhaps one should say "appears to be") the basic premise of the Aristotelian syllogism, a point to be discussed through a more thorough review of the non-Aristotelian literature.

Mickel (1958) points out that readers often confuse the work from the field of semantics with that of general semantics. Semantics involves the study of words, their statistical frequency, meaning changes, and so on; however, the field of general semantics goes beyond semantics in that this viewpoint delves into the study of factors that aid in the development of the communicative habits of people. Also, if one follows the works of Korzybski, this framework appears to go far beyond the study of communication to the point of espousing an overall theory of being. The principal aim of this perspective is actually based on an overall concept of reality which is described by the non-Aristotelian as scientific knowledge. This notion of "scientific knowledge" relates that the world is a continual process in which all events are related to each other (Gorman, 1958). As Mickel says, "no event ever

stops moving and changing, when we realize that only the abstractions of an event, or a representation, such as a movie, can be manipulated and stopped from changing, then the dynamic, ever moving structure of events in four-dimensional space-time, which we try to symbolize in static symbols, seems hopelessly complex." (1950, p. 4).

The notion that the world is an ever-changing series of events is one that gains the support of history in that those individuals who are often attempting to apply old solutions to new problems often have the pleasure of reaping the harvest they have so dutifully sown. This historical perspective becomes quite clear through an examination of the three stages through which communication has evolved:

1. The word is the thing,
2. The word is many things,
3. Evaluations are necessary

(Mickel, 1958, p. 2).

The classical, Aristotelian position of the "is of identity" (on which the mathematical model of communication is predicated) obviously appears as an outgrowth of the "word is the thing" point of view. One need not be a philosopher, psychologist, or communication theorist to note that while a great many people (due to cognitive structuring, a point to be supported later) might view the world as an "either-or" situation, there does appear to be a weakness

in the maintenance of such a position. The historical Age of Reason produced the philosophical position that the "word is many things" or at least the word has the potential to be many things. The thinkers from this point in time acknowledged the problems of attaching static symbols to ever changing events which, at least in part, brought about many of the revolutions of thought generated within this period of history.

This paper, in conjunction with the non-Artistotelian and the yet-to-be-developed consistency model, maintains the position that the "evaluations are necessary" stage of the development of communication is by far the more accurate. However, it is necessary to continue with the review of the general semantic literature before entering broad elucidations on this particular point.

The general semanticist maintains the position that people alone, of all living organisms, continually improve from generation to generation due to the ability to pass on information through the use of communication systems (Korzybski, 1933; Gorman, 1958). By far, the most important component of this inter-generational process is language (Korzybski, 1933; Gorman, 1958; Mickel, 1958). With each generation the symbolic function of language is either affirmed or transformed to fit the context of an ever-changing environment (Gorman, 1958; Hayakawa, 1941/1949).

The process is the core of the non-Aristotelian framework and can best be illustrated through Bordon's (1970) notion of the external and internal processes of communication.

Simply, in any perceptual event, the individual must experience a sensorial stimulation (external communication) from which the reception of this stimulation activates internal processes (the nervous system's reaction) that eventually applies some meaning to the original sensation (Korzybski, 1933/1950; Bordon, 1970; Gorman, 1958/1970). The level of sensation, denoted as the level of abstraction, is the "focal point of the general semanticist's investigation." (Hayakawa, 1949, p. 169). Therefore, in the process of day-to-day living the individual is constantly formulating a series of abstractions as he or she attempts to communicate with other individuals which, in turn, results in a situation in which the original stimulation (or sensorial experience) loses more and more impact. Thus, the individual employs the use of words since that person believes them to be accurate "maps of the territory" in question. In the previous section of this paper a note was made as to the "map-territory" problem in which one must realize that maps usually only point to specific items at the exclusion of all other demarcations (e.g. the map may point to the highways, but make no reference as to the railroads, scenery, etc.). With this in mind, the curious

observer might note that complex events are often referred to through the use of broad terms or "catch-all" phrases (as in the introduction to this work) at the expense of accuracy.

S. I. Hayakawa presents an interesting example of the "abstraction ladder" as he relates the various interpretations one might apply to a concrete object such as "Bessie the Cow" (1949, p. 169). Hayakawa points out that one might observe the animal as a conglomeration of atoms, electrons, and so on or may view "Bessie" as livestock or possibly only see "Bessie" as an asset among many other assets typically present in an agribusiness setting. From this, two conclusions follow: that it is not meaningful to talk about "Bessie the Cow", and that all observations are simply determinations made with respect to some more or less precise frame of reference. Korzybski maintains that the level of observation is a function of the notion of the abstraction ladder and that abstractions take place on two main levels with several subordinate levels (Korzybski, 1933). These levels appear in the following order:

A. The non-verbal levels of
    1. the sub-microscopic world,
    2. the microscopic world,
    3. the macroscopic world,

B. The verbal levels of

1. label or description,

2. inference,

3. inferences about inference" (Gorman, 1958, p. 80).

The central point of this discussion has to do with the idea that words have very different meanings at the different levels of abstraction; therefore, words have no general meaning since they are a function of the context in which they are used. As one employs a certain term in the context of a particular presentation that term elicits what the general semanticist calls a semantic reaction from each individual recipient of the message (Korzybski, 1933; Hayakawa, 1941). Thus, the presenter of any given message might want to consider the semantic reactions of others in the process of constructing the message.

The non-Aristotelian approach to communication is not too unlike the mathematical model of the same in that both perspectives beg a great many questions, which at face value, appear to be more of an attempt at hairsplitting philosophical discourse than a functional theory of communication. Nevertheless, the general semanticist presents this project with specific information that should be incorporated into an overall strategy for the establishment and maintenance of a communication system. The fact that the world is an

everchanging environment which mandates change in almost every phase of existence is an easily verifiable phenomenon. Thus, the repudiation of the notion of the "is of identity" does appear to be a more acceptable position than the Aristotelian syllogism. The idea of labeling a phenonenon within the context of its intended use appears to the writer as a much more appealing exercise than the use of broad representations that might suffer in accuracy from index to index.

There can be no doubt as to the dangers of the "map's-relation-to-the-territory" proposition since one often notices, as a function of daily interaction, that an individual's inferences toward a particular event often fail to acknowledge all of the circumstances surrounding that event. However, the basic product of the language function is the use of symbols (more often in the form of speech) to denote specific phenomena. Hence, in order to make accurate use of such a system, the sender of a given message should attempt to select those symbols that best represent the concept in question. The mathematical model attempts to do so by sterilizing the symbols to the point where they are devoid of the value component. The general semanticist employs a philosophical strategy that actually points to a need for more supportive research, a task which has been met by researchers in the field of

perceptual psychology.

Consistency theory presents a similar argument to that of the general semanticist in that both perspectives concern themselves with the impact of words on the human nervous system. The non-Aristotelian positions with regard to the abstraction ladder (the level of perception), concept of people, symbolism, or the meaning of words are all very well constructed philosophical presentations. Korzybski's "theory of sanity", while being somewhat hair-splitting, is a supportable point of view and does maintain credibility when viewed from other disciplines.

D. C. Barnlund echoes the opinions of noted sources from the consistency theory of communication when he suggests that the modern communication theorist has abandoned myth making in favor of functional/symbolic models that are worthy of empirical consideration (1970, p. 88). The consistency approach to interpersonal communication draws a great deal of data from the mathematical as well as the non-Aristotelian viewpoints in an attempt to present a comprehensive, though empirically rigorous, model. However, those theorists have also gone well outside the domain of the aforementioned areas to the point of incorporating a significant amount of research from the behavioral, Gestalt, and even psychoanalytic models of human psychological functioning.

The consistency theory literature supplies a point of view that is based on the internal processes of the individual and does not attempt to present a systematic set of principles concerning the mechanics of the perceptual process (Toch and MacLean, 1970). This framework does, however, cite the work of perceptual researchers (especially that of projective experimentation), but prefers to dwell primarily on the individual's internal processes while leaving the physiology to the physiologist.

The reader of the consistency theory literature can apply his or her own interpretation as to whether the individual attends to a certain phenomenon because that particular situation has proven rewarding in the past (behaviorism), or because the perceptual event fits into that person's understanding of similar events (Gestaltism, if you will). To the perceptual investigator, this point is irrelevant. What is relevant, according to Toch and MacLean, is that "perception seems to provide, within limits, the type of information the perceiver needs. . . perception, in other words, is invoked, suppressed, and modified in the context of what the rest of the person is about. . . therefore, perception must be flexible and active." (1970, p. 126).

Barnlund supports Toch and MacLean by stating that "meaning" is something that is assigned or provided as opposed to something that is "received" (1970, p. 88).

Thus, within the many situations in which communication may take place, "it is the production of meaning rather than the production of messages that identifies communication." (Barnlund, 1970, p. 88). This leads to Broadbent's (1958) notion of a filter that is present and operates within each individual's nervous system which allows certain information to penetrate to consciousness while preventing access to other kinds of information. This filter or set of biases can lead to the perceptual acceptance of certain stimuli while serving as a perceptual defense to unwanted sensations.

The consistency viewpoint regards perception as a continuous process that is "inextricably enmeshed in the enterprise of living" (Toch and MacLean, 1970, p. 127). Hence, as the individual encounters the many perceptions present within the experiences of day-to-day existence, that person is affected by both conscious and subliminal perceptions to the extent that he or she is constantly changing in an effort to incorporate these new perceptions (Dixon, 1955). In other words, the individual who rises in the morning is not exactly the same when he or she retires that evening due to the experiences of that day.

As Ittelson and Cantril (1954) point out, all organisms perceive since one can experimentally demonstrate how even unicellular microorganisms react to stimulations

within their environment. How the organism reacts to the stimulation is a function of the organism's central or internal processes. The "higher animals" maintain a broader frame of reference through which to determine the appropriate response. If an adequate response does not appear to be readily available the organism enters into a process that Kilpatrick refers to as "perceptual modification" (1961, p. 174). This concept of perceptual modification appears in two forms:

1. reorganizational learning: requires the individual to rearrange the information to fit an existing concept.
2. formative learning: requires the individual to accept new information on its own (Kilpatrick, 1961, p. 174).

(In the next section of this paper the reader should note the reappearance of these two concepts through Piaget's notion of accommodation and assimilation.)

Thus, to summarize at this point, this approach to communication maintains the position that the individual lives in a constantly changing field of perceptual experiences. As the individual encounters this myriad of perceptual stimulations, that person maintains a unique system of processing each individual perception to the extent of either accepting or rejecting the sensorial activation.

The transactional theorist chooses not to engage in a discussion of how these perceptual decisions are made (via behavioral, Gestalt, or whatever theory), but simply acknowledges the existence of the internal mediation through an examination of the subsequent behavior. Therefore, two individuals may perceive the same event at the same point in time, but produce two totally separate representations of what occurred. Hastorf and Cantril (1954) present an excellent example of this phenomenon in a discussion of a particularly rough Dartmouth and Princeton football game. The authors presented one hundred Princeton along with one hundred Dartmouth students with a film of the game just a few days after it had been played. As one might expect, the Dartmouth group "was thoroughly repulsed" by the behavior of the Princeton varsity whereas the Princeton students were "completely disgusted" by what they saw of the Dartmouth players (Hastorf and Cantril, 1954, pp. 129-134). The same perceptual event produced totally divergent representations due to a set of previously established biases.

Theoretically, researchers may attempt to determine what cognitive processes produce such a reaction on the part of the individual. However, the primary interest to the communication theorist is one of acknowledging the fact that the individual perceived an event and, due to his or her own internal frame of reference, produced a reaction.

Morris Massey refers to these "internal frames of reference" as the individual's "gut-level value system" which thereby provides this project with another outlook regarding the individual's personal means of reacting to perceptual stimulations (Massey, 1979, p. 3). This framework for understanding human behavior presents an excellent example of the transactional approach to interpersonal communication. Massey's notion of a gut-level value system is analogous to the concept of transactional bias in that both positions maintain that the individual's personal set of experiences will determine how that subject reacts (or fails to react) to any given situation (or perceptual stimulation). Massey even goes so far as to say that this gut-level value system serves as a "filter" for the interpretation of everyday events (1979, p. 5).

The Massey viewpoint is one in which the author reflects back on historical developments of the last seventy years or so, and then proceeds to group these events by the decade in which these events occurred. Massey contends that an individual who formed his or her value system in, say the 1930's, will react significantly differently from someone whose values evolved in the 1960's. While this viewpoint does not provide for the existence of individual cognitive structures, the focal point of this framework involves the impact of the environment on the development

of the individual's "gut-level value system". For example, an examination of the effect of an event such as the Great Depression of the late 1920's and 1930's might result in a whole generation of conservative stock brokers.

This outlook, especially when viewed in light of the consistency perspective, appears to maintain a high degree of credibility. One must acknowledge that even though individuals process information in diverse fashions, the weight or value the individual places on the information to be processed can be a function of such a phenomenon as a "gut-level value system". Thus, one can understand why a veteran of World War II and a veteran of the Vietnam "War" could have a difficult time discussing certain positions with regard to the nature of "war" (even though both individuals may demonstrate, via validated testing methods, that they process information in an identical fashion).

The consistency theory framework presents a rather interesting approach to the study of communication. Unlike the mathematical or cybernetic model, this position stresses the value, real or imagined, that the individual places on perceptual stimuli. The mathematical outlook is one that stresses the devaluation of words since the notion of value is not capable of withstanding a rigorous scientific interpretation; therefore, the cybernetician seeks to trans-

form any given message into a set of symbols devoid of value in the hopes of presenting an accurate representation of the event in question. While this is certainly of value to the study of communication, one must recognize that the transference of messages between individuals does happen to involve the human nervous system and therefore becomes subjected to the so-called "human condition".

The consistency model appears to be closely related to the non-Aristotelian or general semantics point of view in that both perspectives stress the impact of sensorial experiences on the human nervous system. While the non-Aristotelian system appears to be more of a philosophy than an empirically measurable model, the levels of abstraction through which the individual experiences a sensorial stimulation do appear to correlate with the consistency model notion of conscious or subliminal perception. For example, the agricultural broker who refers to "Bessie the Cow" as an asset as opposed to a biological organism does so due to his or her perception of the situation.

Does it matter if an individual reacts to the presence of a particular term in a given message due to a "gut-level value" reaction, a learned "transactional bias" reaction, or as the result of a "semantic" reaction? The writer thinks such an issue is irrelevant. What does appear to be relevant is the fact that the "reaction" occurs. If we

were all robots who did not place any value on the wording of a message in favor of simply receiving the message, then this project could stop here and recommend research in the area of computer programming. However, this does not appear to be the case. The topic of this presentation involves interpersonal, not intermechanical, communication, a fact which requires this work to forge on into a discussion of the most important single aspect of any communication attempt: the receiver.

As addressed in this paper's opening statements, there appears to be a significant gray area in these three approaches to the study of the communication process. In the writer's opinion, these similarities all point to certain concepts that appear to be supported by researchers in related academic disciplines. A brief review of these gray areas appears to be in order at this time.

The first, and perhaps most important, gray area is one which has been mentioned throughout this work; however, the point needs to be reviewed briefly in order to set the stage for further discussion. Various aspects are stressed more by certain approaches such as the cybernetician's emphasis on the selection of the proper codes/symbols (the message) and the channel since this viewpoint maintains that accuracy in those areas will produce accuracy in the reception of the communication. The consistency and non-

Aristotelian systems place a heavy accent on the message and receiver components due to the belief that the nervous system reacts to certain stimuli in an individual fashion. Nevertheless, all three maintain that if the sender selects the proper message he or she can elicit the desired response.

Borden (1970) has also examined the non-Aristotelian framework from the standpoint of the maintenance of equilibrium within the human's mental processes. The author points out that in order to ascertain such a phenomenon as a semantic reaction the researcher must seek insight as to the cognitive processes of the individual. He continues by pointing to the work of Piaget in the area of language development in children. Simply, Borden stresses that a semantic reaction must be the result of an upset equilibrium; therefore, an understanding of that concept (equilibrium) should benefit the general semanticist.

The consistency model approach to communication is actually a sub-set of an all encompassing study of communication/persuasion research. Since this project has no real interest in persuasion research, a thorough review of consistency theory is not viewed as being appropriate. However, the reader should note the work of Festinger (1957) in the area of cognitive dissonance, Hovland and Janis (1953), Osgood and Tannenbaum (1957), as well as Zajonc (1970). These writers all present excellent renditions on

the concept of internal consistency which can be viewed on a parallel with Piaget's notion of equilibrium. In other words, both outlooks maintain the position that the individual undergoes certain mental processes which ensure balance (whether viewed as equilibrium or consistency) between that individual's personal frame of reference and the various inputs present in a given field of experience.

In sum, all roads lead to the individual. In order to facilitate a communicative experience, the sender must have some insight as to the receiver of the message. One approach to the study of the individual can be found in the works of Jean Piaget and Lawrence Kohlberg. As the communication theorists have demonstrated, the developmental study of human behavior does appear to be relevant to the study of human communicative behavior.

The developmental study of human growth and behavior is not too unlike any other theoretical body of knowledge in that there are clear cut divisions of opinion between noted authorities in the field. The works of theorists such as Havighurst, Erickson, along with other writers from this area of psychology maintain different perspectives while sharing a basic overall philosophy. One such branch of developmental theory involves the work of the Swiss psychologist, Jean Piaget. Gallagher and Reid refer to the work of Piaget and his associates as "Genevan

theory" out of the need to separate the theoretical perspectives of this branch of developmental psychology from the research of other developmentalists (1981, p. 39).

Hunt (1969) divides the work of Piaget into three distinct periods, the first of which involved studies of the child's language and thought (Piaget, 1926), judgment and reasoning (Piaget, 1928), conception of the world (Piaget, 1929), and moral development (Piaget, 1932). The second period of Piaget's research consisted of a longitudinal study of his own children in which he examined the origins of intelligence through the interaction patterns (between the child and his/her environment) which appeared as the child grew older (Piaget, 1947). The third period of research extended to the formulation of specific tasks through which the observer could make assertions as to the child's level of development (Hunt, 1969). The end result of all those years of research was a comprehensive framework for the examination of human cognitive development.

As one reviews the literature present in the field of learning theory, one should note that most theories propose that cognitive development is the result of a series of discrete learning experiences. The Genevan frame of reference differs with such an assertion in that the Genevan perspective "focuses on development as the essential

process of growth and postulates that what children are capable of learning depends on the level of development they have attained." (Gallagher and Reid, 1981, p. 39). Hence, the heart of Genevan psychology involves the notion of "equilibration". As Hans Furth relates, "Piaget recognizes an internal principle of organization that determines all living processes or changes, so also he postulates the functioning of a self-regulating mechanism that governs the development of intelligence within the individual." (1981, p. 206). This concept of equilibration assists in the regulation of the internal and external changes which take place in the child during the formation of intelligence. Thus, the Genevan theory of intellectual growth recognizes that such growth appears as a function of the interaction of four discrete factors:

1. physiological maturation
2. physical experience
3. social experience
4. equilibration (Furth, 1981; Gallagher and Reid, 1981).

Piaget describes the cognitive style present within the individual at a given stage as that individual's schema (Joyce and Weil, 1980). This notion of a schema simply denotes the strategies employed by the individual in his or her attempt to manipulate variables within their

own environment. The Genevan approach relates that the individual employs two basic methods as he or she attempts to manipulate new variables in the environment. The processes of assimilation and accommodation are fundamental to the enhancement of cognitive capacities within the individual (Droz and Rahmy, 1972). Assimilation represents the individual's attempt to incorporate new experiences with previous experiences in hopes of gaining insight into the new stimulus. The concept of accommodation involves the reorganization of the individual's cognitive structure in the attempt to process a new experience since the individual does not have a similar experience with which to relate the new information (Joyce and Weil, 1980; Furth, 1981; Gallagher and Reid, 1981).

To sum at this point, the Genevan approach to cognitive development relates that the individual's stage of cognitive development may be characterized as a process of equilibration (the attainment of equilibrium states) which could be described as an internal self-regulating system using assimilation and accommodation processes to reconcile the rules of maturation, experience, and social interaction. The resulting schema provides the individual with a strategy through which that person interacts with the environment. Certain schema appear to be unique to specific stages of development, a point worthy of reviewing

through an overview of Piaget's four stages of cognitive development.

Evans (1973) presents an overview of the Genevan dichotomy which represents the various schemas present within each stage. These stages are said to appear in the following order:

1. the sensorimotor stage (0-2 years)
2. the preoperational stage (2-7 years)
3. the concrete operational stage (7-11 years)
4. the formal operational stage (11-15 years) (Evans, 1973).

Since the purpose of this project is to acquaint the reader with this literature with the aim of demonstrating the usefulness of such knowledge, there is no real need for an in-depth analysis of each stage. However, the reader should recognize certain characteristics present within each stage.

The sensorimotor stage is best characterized as the pre-language state of learning (Evans, 1973). Thus, the schema employed at this stage is one that involves the inborn reflex actions of the child and virtually nothing more. The preoperational stage denotes the advent of the use of symbols as the child interacts with his or her environment. The child begins to recognize the existence of objects that are removed from his or her immediate en-

vironment. Hence, the first appearance of conceptual thought through the child's use of symbols (Evans, 1973; Joyce and Weil, 1980).

The concrete operational phase marks the achievement of the operation Piaget refers to as the interiorization of coordinations which simply denotes the child's capacity to reverse any given action to its starting point. This is best demonstrated in the child's ability to refer to the past in his or her thought patterns as well as the ability to employ systems of classification, one-to-one correspondences, and the like (Evans, 1973; Joyce and Weil, 1980).

The last phase in Piaget's system involves the advent of formal operational thought in which the child begins to reason in an abstract fashion. During this stage of cognitive development the child's schema broadens to the extent that he or she can perform operations on operations (a process that truly expounds on the ability to recognize one-to-one relationships). As Joyce and Weil describe this phase, "Formal thinking marks the completion of the child's emancipation from reliance on direct perception and action." (1980, p. 110).

This very simplistic overview of the Genevan concept of development has great relevance to the field of interpersonal communication. Piaget relates "it is entirely possible that some people, for instance those in manual

professions, may reach the formal operational level in their particular professional domain, but not right across the board." (Evans, 1973, p. 27). In other words, not all individuals achieve the formal operational level and as a result develop schemas (a notion the writer will refer to later as "cognitive style") to process information which is based on that person's cognitive level of development. Therefore, as the sender of a particular message undertakes the task of constructing that message, he or she should recognize the existence of such a phenomenon as the variance of cognitive capacities among the potential receivers of that message.

The study of Genevan developmental psychology has the potential to be a most confusing exercise. This assertion is supported by the fact that several authors have even constructed books which prepare the reader for the study of this frame of reference. The construction of the Genevan framework is such that a great deal of criticism has surfaced in recent years due to what these authors feel to be an overall lack of empirical support (Hunt, 1969). The writer supports such an assertion to a certain extent; nevertheless, the value of this approach is inestimable even if one must pursue secondary research literature in order to process the primary findings.

The researcher interested in ascertaining the levels of cognitive development present in a specific population

might encounter several problems as he or she attempted to interpret data in the manner employed by the Genevans. One might find it rather difficult to determine if a subject is processing information concretely or formally unless that subject happened to be cooperative to the point of subjecting himself or herself to a series of "Genevan-type" manipulations. However, one researcher has managed to expound on the work of Piaget to the extent of presenting a unique format for the study of the impact of cognitive development on the decision making process. That researcher is Lawrence Kohlberg.

Lawrence Kohlberg expounds on the work of Piaget through a continuation of research into the notion of a cognitive/social developmental theory. Such a theory centers around the concept of an internal process which is directional over time, irreversible in nature, and contingent upon the acquisition of more adequate thought structures (Davison, King, Kitchner, and Parker, 1980). The fundamental point of investigation of such a theory involves a thorough exploration into the rationale employed by the individual as he or she enters into his or her individual decision making process and does not purport to probe into the subsequent behavior patterns (Duska and Whelan, 1975).

According to these positions, change from one stage to another is structural in nature in that such a change

involves a total reorganization of thought (Rest, Turiel, and Kohlberg, 1969). As Kohlberg and Turiel (1971) point out, this perspective notes that the higher stages within the framework incorporate the thinking of lower stages as well as the provision that stages cannot be skipped (leaping from stage one to, say, stage four). Thus, change is said to be an evolutionary product of the interaction between the individual's maturing cognitive capabilities and alterations in the environment which accompany aging (Davison, King, Kitchner, and Parker, 1980).

Kohlberg, currently a professor of education and social psychology at Harvard University, began his investigations into how moral decisioning processes were indicative of cognitive functioning in the late 1950's (Kohlberg and Turiel, 1971). Although there had been some classical psychological studies conducted in the area of moral behavior in the 1920's, and although Piaget had written on the subject, Kohlberg's doctoral dissertation really marks the beginning of this particular theoretical perspective (Phillips and Nicolayev, 1978). In the initial phases of his work Kohlberg selected a group of fifty American males ranging from ages ten to twenty-eight and interviewed each subject every three years for a period of eighteen years (Duska and Whelan, 1975). As a result, Kohlberg identified six generally distinguishable frameworks which eventually

became the foundation for his six stages of moral development. Since that time Kohlberg has extended his work to the point of interviewing subjects of diverse cultures as well as more representative American populations, all of which support his original premises (Duska and Whelan, 1975).

The interviewing strategy employed in Kohlbergian research involves the presentation of a moral situation or dilemma to the subject (see Appendix A). The researcher then begins to ask questions designed to uncover the subject's rationale behind his or her recommended course of action. Once again, the interest is not in the moral decision itself, but rather in the rationale for the decision offered by the subject (Kohlberg and Turiel, 1971; Duska and Whelan, 1975; Kohlberg, 1969).

The reader should note that in the first three stages of Kohlberg's structure, the moral conduct referred to is one that is based on a system of external rewards and punishments or, simply, a dependent approach to behavior. While the moral reasoning present in stages four through six stems from personal beliefs as well as conscience or an independent approach to behavior (Mattox, 1975).

Mattox also goes on to relate that these stages can be classified via a societal orientation. The author points out that the first two stages describe a "preconventional" morality level in which the individual appears to be less influenced by the accepted norms of that society (due to

an overriding concern for himself or herself), whereas the third and fourth levels have a "conventional" orientation which is directly related to social expectations of behavior (1975, p. 40). Mattox goes on by suggesting that stages five and six, the "post-conventional" level, extends beyond societal expectations to the point of delving into the individual's morality which springs from his or her personal conscience (1975, p. 40).

At this point, a review of Kohlberg's framework appears to be appropriate:

I. STAGE 0: PREMORAL STAGE

The individual neither understands rules nor judges good or bad in terms of rules or authority. At this point, good is what is pleasant or exciting while bad is painful or fearful. There is no idea of the concepts of obligation, should, or have to, even in terms of external authority. The individual is only guided in terms of what they can do and want to do. The pleasure search is not impeded by any considerations whatsoever.

II. PRECONVENTIONAL LEVEL

In the preconventional level the individual is responsive to cultural roles, labels of good and bad, right and wrong; however, he or she only interprets these labels in terms of either the physical or the hedonistic consequences of action (punishment, reward, etc.) or in terms of

the power of those individuals who enforce such rules and labels. This level is divided into two separate stages.

STAGE 1: "AVOID PUNISHMENT" ORIENTATION

At this stage the individual responds to rules and is primarily concerned with how authority will react, whether the behavior will be rewarded or punished, along with the subsequent label ("good" or "bad") placed on the behavior. The physical consequences determine whether an action is good or bad since decisions are based on a type of blind obedience to an external power source in an effort to avoid punishment or seek a reward.

STAGE 2: "SELF BENEFIT" ORIENTATION

At stage two, the individual comes to realize that every person has an idea of what is "right". Thus, individuals are concerned with the needs and motives of others along with the idea that one good turn deserves another. The concepts of fairness and sharing are interpreted in a practical manner with self-interest serving as the compelling motive. Also, human relationships are constructed on the premise of exchanging favors or seeking revenge. In other words, what is "right" is serving one's needs or the needs of others for a "fair" exchange.

III. CONVENTIONAL LEVEL

The conventional phase concerns the maintenance of the expectations of the individual's family, social group, or

nation regardless of the immediate and obvious consequences. This attitude goes beyond the conformity to personal expectations/social order in that there is a high degree of loyalty to the maintenance, support, and identification with other members of the societal unit in question. This level also is divided into two stages.

STAGE 3: "ACCEPTANCE BY OTHERS"

ORIENTATION

The individual in stage three determines what is "right" from another person's point of view in conjunction with his or her own perspective. The person displays concern for what others think and therefore strives to please these people. Stage three people concern themselves with the feelings of others, their expectations and approval, as well as a concern for what a virtuous person would do in any given situation. At this phase, people adopt the stereotyped images of acceptable majority behavior.

STAGE 4: "LAW AND ORDER" ORIENTATION

Within this stage there is an orientation toward authority, fixed rules or laws, and the consistent maintenance of social order. The individual examines the consequences of his or her actions in light of the group and society as a whole. Stage four people value doing their duty, respect for authority, rules as determiners of "right" behavior, along with fulfilling the requirements

of authority and society. Simply, laws and rules are "right" because they exist and are obeyed without question.

IV. POSTCONVENTIONAL LEVEL

The postconventional level demonstrates a clear effort to define the question or moral values and principles outside of, but in consideration of, the authorities (persons or groups) which espouse these positions. The individual may or may not place any value on the opinions of these authorities. The level in question maintains the final two stages.

STAGE 5: "CONTRACT FULFILLMENT" ORIENTATION

At stage five, the individual respects the laws and agrees to abide by them as long as such statutes respect the rights of the individual. Morality, from this perspective, is a matter of personal choice. Moral issues are therefore solved by the passage of laws founded upon general principles which are accepted within society and subject to change as such laws infringe upon human convictions. People at stage five prefer to change laws rather than break them; however, the individual at this level may choose to disobey what he or she considers an unjust statute. Such a position is in sharp contrast with stage four reasoning. The United States Constitution and the Declaration of Independence are based on these principles.

STAGE 6: "ETHICAL PRINCIPLE" ORIENTATION

Stage six morality is a decision of conscience based on the concept of universal ethical principles. The individual considers actions which are "good" in themselves and consistent with the principles of respect for each person's individuality. The stage six person makes decisions on this basis, but often complies with rules to avoid self-condemnation. (Kohlberg and Turiel, 1971; Duska and Whelan, 1975; Mattox, 1975).

One should note the existence of four factors which are present and influence the decision making process at each stage of Kohlberg's framework. These factors involve the "rules" orientation, the "pragmatic" orientation, the "justice" orientation, and the "conscience" orientation (Mattox, 1975, p. 45). These four factors interact within each stage; however, each factor's emphasis varies significantly during the decision making processes present within each stage. One should also note that each stage up to the postconventional level reacts on the basis of "right and wrong" with such decisions appearing as a function of a set of concrete evaluations as to acceptance by others, institutional allegiance, and so on.

Mattox makes one other point: Kohlberg announced in the spring of 1974 that he was considering the addition of a seventh stage to be denoted as a "faith" orientation

(1975, p. 46). Such a stage would expound upon the traits present in stage six, but would delve further into the so-called "meaning of life" and would appear primarily as a "cosmic" point of view.

Before closing this discussion of Kohlbergian thought the writer feels an examination of some of the criticisms of Kohlberg's strategy could prove beneficial to this work, especially in light of the discussions regarding communication theory. Rest (1980) reacts to several attacks on the Kohlbergian frame of reference in which writers have claimed that the research conducted by Kohlberg and his associates represents a measure of language sophistication more than a preference for certain stages or moral reasoning. These critics of Kohlberg's work claim that certain manipulations indicate the subjects respond more to the selection of terms present in the interview than to the moral dilemma in question. Another very interesting critique involves the research of Johnson, Hogan, and Zonderman (1981) in which the authors assert that the descriptions offered by Kohlberg (of the various stages) represent a political ideology (conservative vs. liberal) that in fact discredits the bulk of his research. The writer views these criticisms with a great curiosity in light of the review of the general semantics and consistency viewpoints regarding the impact of

language. While Kohlberg has produced the empirical support to solidify his assertions, these critics have a point in the condemnation of Kohlbergian research. A point which, in fact, supports the basic premise on which this project has been conceived.

Thus, the work of Kohlberg and his associates does provide insight into the decision making processes the individual employs as the result of that person's level of cognitive development. Clearly, as Piaget supports, a significant percentage of the overall population does not appear to reach the formal operational level which results in the decision making strategies presented by Kohlberg's research. Insight as to the means by which individuals process moral decisions provides insight as to how that person functions intellectually. The level of intellectual functioning of the receiver of any communication attempt has great bearing upon the eventual success or failure of that attempt. However, before entering a discussion as to how one might ascertain the cognitive make-up of a given population, this project will probe one step further into the styles of processing information that evolve as a result of an individual's level of cognitive development.

Goldstein and Blackman refer to the notion of "cognitive styles" as the "ways in which individuals con-

ceptually organize their environments." (1978, p. 1). The authors relate that there are basically two categories in which any individual's style can be said to fall: 1) The "S-R" approach maintains that behavior can be best predicted through the study of the functional relationships between stimuli and the subsequent responses whereas the adherents of the "S-O-R" model subscribe to the position that the relationships between stimuli and the responses can be understood best through an examination of the intermediary processes present within the organism (Goldstein and Blackman, 1978, p. 1). The developmental approach to cognitive functioning is clearly a product of the "S-O-R" point of view due to the overwhelming concern for the development of the "intermediary processes".

A great many theorists concentrate their research efforts on the notion of mediating processes. Freud's concept of the ego represents an example of a structure that is conceptualized as mediating between the environment and the organism's response to environmental stimulations. Guilford (1959) notes that most psychologists reject the S-R model in favor of an examination of the mediating processes present within the organism. Mahoney supports Guilford by saying, "There are numerous indications that psychology is undergoing some sort of 'revolution' in the sense that cognitive processes have become a very popular

topic." (1977, p. 5). Mahoney continues by suggesting that one major component of the current cognitive-learning surge involves the notion that the organism responds to its cognitive construction of the environment rather than to the so-called objective reality.

Brody (1972) presents several common characteristics that appear to be present among the cognitive theorists:

1. the recognition of individual differences in styles of thinking as the starting point for research
2. the emphasis of style over content
3. the acceptance of the assumption that cognitive styles are in fact related to other characteristics of the individual
4. the treatment of cognitive styles as individual characteristics which are independent of situational influences, thus implying consistency.

Messick (1976) concurs with the fourth characteristic in his definition of cognitive style in that he regards such a process as being a consistent pattern of organizing and processing information. Coop and Siegel also support the fourth assertion since these authors use the term "cognitive style" to denote "consistencies in individual modes of functioning in a variety of behavioral situations"

(1971, p. 152); however, these writers display an "S-R" orientation by equating cognitive style with behavor rather than a function of intermediating processes. Nevertheless, Coop and Siegal as well as Scheere (1954) do note the resemblance between the concept of cognitive style and the Gestaltists' notion of "silent organization" in that both positions describe cognitive structures that are not tied to specific behaviors, but serve to guide behaviors.

The suggestion as to the existence of such a phenomenon as "silent organization" leads to the work of Harvey and Schroder (1963) and their claim of the pressence of a "filter" which appears in the form of a style in which the individual ascribes meaning to environmental stimuli. This claim is remarkably similar to those espoused by the consistency theory approach to the study of communication.

Thus, the reader should note that there does appear to be some general agreement among theoreticians regarding the existence of individual strategies through which a person interacts with his or her environment. Also, there appears to be some agreement regarding the assertion that such styles are viewed as being secondary to the individual's level or stage of cognitive development (Kogan, 1973). Therefore, the existence of personal reactions, whether described as a semantic reaction or transactional bias, does appear to be a function of that individual's level of

cognitive development and his or her subsequent style of processing information. If one could somehow remove the value ascribed to specific terms, then the cybernetician would achieve the dream of reproducing the human communication act; however, this does not appear to be a realistic goal in light of the information presented thus far.

Through this review of the literature, this paper has attempted to present the reader with information that might lead to the formation of two distinct points with regard to the communication process. The first involves the impact of "words" upon the human nervous system, while the second point relates the notion that each individual maintains a unique system of processing information which appears as the product of that person's level or stage of cognitive functioning.

The review of the cybernetic, general semantic, and consistency theories of communication suggests the capacity of words to either facilitate or debilitate any communicative attempt. These theoretical frames of reference are divided over the philosophical argument of whether the world consists of a static environment or an ever-changing series of events. The former viewpoint represents the mathematical perspective which leads to the formation of a theory that attempts to employ static symbolism that relies on the devaluation of words in the process of communication.

Such a devaluation, in turn, promotes accuracy as well as an increase in predictability and, therefore, ensures control (the ultimate goal of scientific investigation). The latter viewpoint represents the non-Aristotelian and the consistency positions in that both frameworks stress the idea that the human condition is constantly in a state of change. Therefore, the use of static symbolism to represent an ever-changing environment is bound to produce gross misrepresentations that severely debilitate the communication process. These two positions point to the impact of "words" on the human nervous system in an attempt to demonstrate the need for the careful selection of terminology in the construction of a message.

As people recognize the impact of words on the individual receiver of a given message, they should note that any reaction on the part of the receiver will be the product of that person's internal or central processes. Thus, the ways in which the individual processes information play a central role in the communication act. This project presents one approach to the study of the individual's cognitive abilities which relates that the way an individual develops a certain strategy for processing information is contingent upon that person's stage of cognitive development. The developmental study of cognitive functioning stresses the uniqueness of each person's style of process-

ing data. These styles can often be observed through an examination of how the person reacts to a specific set of circumstances. The Kohlbergian research methodology provides insight into this phenomenon.

In summary, the interested observer can note the interaction between the concepts of a semantic reaction or a transactional bias and the notion that all individuals process information in a highly unique fashion. This recognition has tremendous implications for the construction of messages which are intended to elicit desirable responses from a designated population.

The writer is not attempting to suggest that any individual wishing to establish a communication network with a specific population should undertake the task of determining how each member of that population "thinks" and then provide that individual with a specifically designed message. However, one goal of this project does involve the promotion of an awareness that individuals do think in different fashions and, as a result, react to certain words quite differently. Hopefully, that goal has been realized through this review of the literature.

CHAPTER III

As discussed in chapter two, one should recognize that all individuals process information in an individually unique fashion just as one should note that certain words often vary in meaning from setting to setting as well as from person to person. It should also be noted that the members of a specific population display the tendency to gather information from a variety of sources and, as a result, often ascribe different levels of significance to the messages which generate from those sources. Often the wording of a message plays a secondary role to the source of the message. Many sources, both formal and informal, extend such a high degree of credibility, in the receiver's view, as to overcome any deficiencies present within the message itself.

While this paper dedicated its review of the literature to the subject of individual differences with regard to cognitive style and the possible implications of such a phenomenon on the communication process, this project does not purport to acknowledge the existence of any plan which could reasonably provide insight as to each individual's method of processing information. However, the writer does suggest

that there is a methodology available which can provide data as to where certain segments of an overall population gather their information as well as the significance those individuals ascribe to that source (or sources). Through a recognition of where the information is procured along with the value placed upon it in conjunction with an understanding of the concepts presented in chapter two, the person interested in the establishment and maintenance of a communication system with a specific population can forgo guesswork in favor of a systematic operation.

Hand (1948) writes that for many years educators (usually in the form of the school board of education) would sit about and guess as to the effectiveness of their attempts to meet the needs of their constituency. The author contends that such practices must be eliminated in favor of the innovative techniques of public opinion polling since these methodologies displace guesswork with scientific information gathering. The situation alluded to by Mr. Hand appears to be analogous to many of the communication methodologies employed by institutions of various orientations. Many organizations maintain the official organizational goal of responsiveness with regard to the needs of their service population (Schein, 1980). However, the strategies employed in the process of establishing rapport with that organization's constituency often reflect either a lack of

a comprehensive strategy or the application of an across-the-board formula that in no way considers the individual population in question.

The methodologies present in the field of public opinion polling represent an across-the-board formula by requiring the implementation of certain basic procedures in order to ensure the accuracy of the sample. Thus, the techniques espoused by public opinion researchers do not satisfy the aims of this project in and of themselves. This project chooses to introduce several of the basic postulates of the fields of adult education and community development. This approach to the provision of educational experiences rejects, in totality, the implementation of across-the-board formulas in favor of a more systematic, yet situation specific, process (Biddle and Biddle, 1968). As Biddle and Biddle suggest, the advisor who attempts to utilize these textbook methodologies or formulas without first considering the population in question might not enjoy the degree of success he or she would like to claim. Thus, this approach stresses a reliance upon those people who are, in fact, representative of the population in question to devise an instrument which is constructed with the particular population to be served firmly in mind. Hence, this project promotes the use of the standard procedure present in the field of public opinion polling in

conjunction with the philosophy of promoting a high degree of citizen involvement throughout the process.

Before venturing into a discussion of the process of assembling a group of individuals to construct a survey which is designed to gather certain data relevant to this project, one point should be stressed. As Snow (1955) points out, before attempting to enlist public support for an organization through the establishment of an active interaction pattern, those individuals designated to undertake this task should make certain determinations at the very outset. These determinations really involve the resolution of one basic question: is the organization in question worthy of its constituents' confidence and respect? If an objective examination of the organization produces an affirmative response to this basic question, then the process stands a very good chance of achieving this goal; however, if the objective evaluation does not produce a positive response, the task of sustaining public support is an unreasonable goal (unless, of course, the organization decides to engage in unethical practices). In sum, it would be a mistake to assume that any effort to promote interest and good will can actually be regarded as separate and distinct from the other aspects of the organization (Snow, 1955; Sheats, Jayne and Spence, 1953; Knowles, 1972).

In the process of constructing an instrument to survey a given population most organizations merely appoint members of the organization to an ad hoc type committee, brainstorm over the inclusion of specific items, and conclude by producing a document that proves to be very representative of the committee (Knowles, 1972). In the writer's view, such a procedure would only be appropriate to an in-house survey of organizational members as opposed to the goal of gathering data pertaining to individuals external to the organization. Thus, the inclusion of the methods employed by adult educators, community developers, or any other group of individuals interested in constructing an instrument to gather information about a population that is, in fact, representative of that population would be considered to be relevant to this project. As Knowles relates: "There appears to be a law (or, at least, a tendency) of human nature that goes like this: Every individual tends to feel committed to a decision (or an activity) to the extent that he has participated in making it (or planning it)." (1972, p. 42).

To expound on Knowles, the incorporation of individuals who are representative of the population to be diagnosed into the process of constructing the instrument to be utilized in the data gathering procedure will result in a survey instrument that is more likely to gain acceptance

within the community, prompt a response from the surveyee, decrease the possibilities for miscommunication as the result of poor or inappropriate semantics, as well as increase the probability of sincere subjective responses. As discussed earlier, the individual's reaction to a particular communication stimulus is a function of that person's "schema" (in Piagetian terminology). This schema is a product of that person's level or stage of cognitive development in conjunction with the individual's environment. Therefore, since the party interested in the establishment of a communication system will encounter a great many problems in the assessment of individual labels of cognitive development the focus of inquiry should be on the individual's environment. Hence, the best way to gather data as to the individual's environment is through the incorporation of those with similar environments into the process of constructing the data gathering instrument.

The process to be discussed is one which the writer feels can be generalized to most data gathering situations. The first step in such a process, of course, involves the determination of what type of information is needed (in this case the point of inquiry centers on where the population gathers its information and the credibility they extend to that source). This may be the one decision that can and

should be made prior to the assemblage of a representative group to aid in the instrument construction phase. The leader or facilitator should have articulated the goal of the project before entering into the recruitment of committee members. All other decisions should be discussed within the group in order to promote the participatory nature of the group decision making process.

As clearly stated in the public opinion polling literature, the interested pollster can be assured of an accurate sample only if he or she has, in fact, sampled the opinions of all segments of the population (Blankenship, 1943; Gallup, 1948). The field of adult education/community development concurs with that assertion as noted sources from the field discuss the formation of a representative committee to discuss relevant topics. Knowles relates, "the committee will be most effective if it includes representatives of the various points of view, special interests, and friendship circles... members of any organization tend to accept and support programs to the extent that they perceive their special interests to have been adequately represented." (1972, p. 68).

This is of particular importance to the goal of establishing communication with members of a specific population. Unless the organization specifically wishes to avoid interacting with an identified segment of the overall

population, an attempt should be made to include a representative sample of all subgroups present within that overall population. Once again, this "degree of acceptance" is of fundamental importance to the subsequent success or failure of the project.

Knowles (1972), Biddle and Biddle (1965, 1968), along with Sheats, Jayne and Spence (1953) present conceptual models for the facilitation of the committee experience. The primary point offered in each framework involves the notion that the process is always unique to each specific situation and is, therefore, not repeatable (in exactly the same form) in other situations. However, all of the models do appear to agree upon certain characteristics each committee member should display. These characteristics include:

1. an interest in the organization and the objectives of the committee
2. a willingness to serve
3. educability with regard to the work of the committee
4. availability
5. the ability and inclination to work with other committee members
6. a position of influence with significant elements of the community (Knowles, 1972; Biddle and Biddle, 1965).

Once again, if it is possible to reach out to all segments of the population to the point of assembling a committee that is both representative (in number) of that population as well as capable of meeting the aforementioned criteria, then the task of gathering information regarding any aspect of that population stands a much better chance of enjoying success. In conjunction with that success, the organization will also have initiated an informal network among community leaders that may aid tremendously in future endeavors.

A few other points should be made with regard to this phase of the project. The first relates to the performance, or lack thereof, of this committee structure. Simply, this is an organizational decision which is contingent upon specific organizational aims and objectives. The organization may decide to formulate and maintain the committee structure or to allow it to assume an ad hoc capacity which would require its termination upon the completion of the task. Another point involves the role of the individual(s) designated by the organization to arrange and conduct this activity. The degree of success or failure which such a process enjoys is usually directly related to the leadership style of the individual(s) selected to oversee the activity. The writer maintains the rule: as one seeks cooperation, one should seek to cooperate. Thus, the leader-

ship role in this case is not one of power. The power, in this case, can be found within the group itself. As the work of many noted organizational psychologists has demonstrated, the increase of productivity, inter-work cooperation, and so on can be directly attributed in a great many instances to the participatory style of management present within the organization (Marrow, Bower, and Seashore, 1967). This participatory style of management could possibly be considered as the guiding principle on which this project has been founded.

To summarize this particular phase of the project, the organization interested in determining the specific attributes of a given population does have a methodology available that cannot only gather the data in question, but actually increase the probability of a more accurate assessment due to the degree of citizen involvement. Through the recruitment of individuals from all segments of the population, the organization can formulate a committee to construct an instrument to be employed in ascertaining data that can actually avoid several of the pitfalls of a poorly constructed message (improper semantics, bias, etc.) while promoting a sence of community involvement (it's "our" survey as opposed to "their" survey). The representatives of the organization merely decide upon the "direction" of the survey and therefore open all other decisions to the com-

mittee in an effort to promote the participatory nature of the delegation. The organization need only abide by the one rule of this proposed procedure: each situation must be treated individually. This methodology involves a "process" and not a strict "formula" which can be applied consistently from setting to setting. With this in mind, it is now time to move into the survey instrument itself.

George Gallup (1948) displays a fondness for an expression coined by James Bryce whenever Gallup wishes to introduce the coneept of public opinion polling. Bryce asserts that the next level in the development of democracy would be reached "if the will of the majority of citizens were to become ascertainable at all times." (Gallup, 1948, p. 5). Gallup concurs: "Leaders who do not know what the public thinks, or the state of the public's knowledge on any issue, are likely to be ineffective and unsuccessful leaders, and eventually to lose their opportunity to lead." (1948, p. 8). George Gallup is one of the foremost authorities in the field of public opinion polling, therefore, his expositions should be taken seriously.

"The basic principle of the survey is that the reactions of a group of persons similar in their characteristics to the entire population will approximate reactions of the entire population." (Blankenship, 1943, p. 18). Gallup and Rae elucidate by citing the basic rule of polling:

"to see that each segment of society is properly represented." (1940, p. 13). Thus, one can easily note the writer's insistence upon ensuring that the committee selected to produce an instrument to survey the characteristics of all the people actually consist of accurate representatives of all the people.

Whenever one discusses the results of a survey or poll with those who are not familiar with such techniques the question as to the size of the sample population usually arises. Most people view the size of a sample to be inextricably linked to the subsequent accuracy of the findings. This is simply not the case, in fact, the size is among the least important variables. The basic concern in an exercise of this nature involves the accuracy with which the persons chosen to be surveyed "mirror" the total population in question. Secondary concerns would involve the wording of items within the survey instrument as well as a control for possible bias which might arise as a result of the instrument or the interviewer (Gallup, 1948; Cantril, 1940; American Marketing Association, 1937). The use of the committee structure will aid tremendously in this effort to control for inaccurate samples, item wording, and so on; however, the facilitator of the experience should do whatever is necessary to aid in the control of these factors. As Gallup and Rae relate: "The road to hell and the road to inaccurate polling results are both paved with good

intentions." (1940, p. 98).

A. B. Blankenship (1943) provides an outstanding step-by-step procedure for the process of surveying a specific population. The author points to an eight phase plan for such an endeavor:

1. Stating the problem
2. Method of collecting data
3. Development of the instrument
4. Selecting the respondents
5. Preparing and distributing materials
6. Collecting the information
7. Summarizing the results
8. Preparing the report.

In any investigative procedure the purpose of the study must first be determined if the organization or individual proposing the research is to successfully achieve any goal at all. Within this framework, the "stating of the problem" can be achieved outside the committee structure unless, of course, the purpose appears to be much more complex than the determination of where individuals gather their information and the value they place upon that source. However, the facilitator should articulate the goal to the best of his or her ability in order to aid in the process of recruiting committee members. Once again, if the issue in question is rather complex the facilitator may wish to for-

mulate the specific goals of the project within the committee structure.

Without question, the process through which the data are to be gathered is the most important aspect of this methodology. There are basically three alternatives from which the committee may choose:

1. The Telephone Method
2. The Mail Questionnaire
3. The Personal Interview (Blankenship, 1943; Gallup, 1940; American Marketing Association, 1937).

The telephone interview is a quick and inexpensive method that can often prove to be particularly useful when respondents are difficult to contact (Blankenship, 1943). The committee structure can prove useful in this approach since their familiarity with the individual subjects of the population can drastically increase the probability of ensuring the maintenance of a representative sample. Otherwise, this design may encounter problems with regard to the accuracy of the cross-section of respondents. The method is not too complex in that the field workers (either committee members, organizational staff, or others) merely sit at telephones, dial numbers (provided by the committee), and ask the relevant questions.

However, the list of questions must be short and direct since the respondent can terminate the interview at his or her pleasure (Blankenship, 1943).

The telephone interview has several distinct advantages as well as a few disadvantages that should be noted. A special advantage would involve the speed of this method. This is especially true if the researcher is interested in gathering facts (as is the case here) rather than opinions since the respondent need only react to the question (Gallup and Rae, 1940). The use of the telephone is also much more cost effective (in terms of costs-per-interview) than either the mail questionnaire or the personal interview (American Marketing Association, 1937). Many writers argue that the major weakness of this technique can be found in its inability to obtain a representative cross-section of the overall population since many individuals do not have telephones; but, as mentioned earlier, the committee can drastically reduce the probability of such an occurrence. Nevertheless, there is a significant amount of research that suggests that telephone owners often display different tendencies from non-telephone owners (Blankenship, 1943). There is also the problem of establishing rapport over the telephone as a result of a lack of awareness as to who is calling and so on (American Marketing Association, 1937). However, once again, the committee format provides

a unique awareness that can significantly reduce these types of problems.

The mail questionnaire is another method which can be employed in a venture of this nature. This technique can be inexpensive (depending upon the method of production) and does aid significantly in the reduction of possible "interview bias". The questionnaire is usually accompanied by a letter seeking to enlist the cooperation of the respondent (Blankenship, 1943) which can be drafted as well as endorsed by the members of the committee. Knowles (1972) maintains, along with others, that a representative sampling can be attained through the use of voter lists, telephone directories, tax lists, organizational mailing lists (clubs, societies, etc.) and the like. This process can be deeply enhanced through the committee structure. There is also the problem of securing a representative return rate from the total population (Reilly, 1929) but the committee can prove very helpful in this regard as well.

The most commonly claimed advantage for this approach is the so-called economic consideration (Blankenship, 1943). As the author points out, this may appear to be the case on the surface since all the researcher needs to do is print up the instrument and mail it (not to mention the return postage costs). However, this argument does have its weaknesses in that if the return ratio is rather low (and

often, according to Blankenship, return rates do not exceed 15%) the cost of the overall project may be said to be rather cost prohibitive as opposed to cost effective (especially when viewed in light of the personal interview technique). But, the mail questionnaire does have a few advantages that are somewhat beyond reproach. This method can prove useful when a wide distribution of respondents is required and it does totally eliminate the potential for several types of interviewer bias to occur (Gallup and Rae, 1940; Cantril, 1940). In conjunction with these advantages, the mail questionnaire allows the respondent the opportunity to react to the items without fear of consequences due to the anonymity of the situation (Blankenship, 1943).

The disadvantages of the mail questionnaire usually center around the notion of a lack of an acceptable response pattern (return rates) insofar as the maintenance of a representative pattern of responses (among the various sub-populations) is concerned. There is also a problem in the types of responses generated from this design in that respondents often provide brief and superficial answers as well as the fact that someone other than the intended recipient may actually complete the questionnaire (Blankenship, 1943). Thus, one can note several problems with this partic-

ular procedure; however, it should be noted that the committee structure recommended by this project would attempt to counteract a great many of these drawbacks.

The third method involves the use of personal interviews. This technique provides for rigid control over the sample size, the use of longer questionnaires, as well as the opportunity for the interviewer to probe more "deeply" into the respondent's statements (Blankenship, 1943; Gallup and Rae 1940; Reilly, 1929; Knowles, 1972). Nevertheless, this design is, by far, the most expensive and has a tremendous potential for the occurrence of interviewer bias due to the face-to-face method of data collection (Blankenship, 1943).

This technique is generally considered to be one of the best available methods due to the aforementioned factors. The scope of the questions presented in the two previous methods is severely limited when viewed in light of the personal interview approach. The cost of this design can be prohibitive, but one must not forget the "hidden" costs of other techniques when espousing this position. This approach also often hinges on the competence of the individual interviewer; therefore, the writer would recommend what Knowles refers to as a "training session" to acquaint the field workers with some of the basic rules of the interviewing process. Most of the disadvantages, outside of the

time factor, of this method can be successfully countered through the use of the committee structure. Clearly, these procedures offered by the public opinion pollsters are deeply enhanced through the incorporation of a representative committee from the particular population to be surveyed if for no other reason than the fact that the process sheds the connotation of being "just another survey".

Second only to the method through which the data are gathered is the development of the questionnaire to be employed. The use of the committee structure recommended by this project plays a central role in this task due to the reasons presented in chapter two. All of the sources researched in the process of developing this model from the public opinion polling frame of reference strongly suggest the use of local terminology (jargon) as well as the distribution of sample questions to members of the chosen population to ensure the efficacy of these items with regard to the local language structure. Thus, the reader may now understand the inclusion of chapter two within this project as well as the introduction of the "citizen involvement" techniques from the field of adult education/community development. Through an understanding of these concepts, the organization interested in such a data gathering activity can, once again, forgo "pot

luck" activities in favor of a rather elementary, systematic procedure.

In reviewing the following criteria set forth by George Gallup with regard to item or question construction, the reader should consider the value of the proposed committee structure in this process:

1. The questions should be as brief and to the point as possible. Long conditional or dependent clauses tend to confuse people.
2. The words and phrases should be simple and in common day-to-day use, among all groups in the community.
3. The questions should not include words which have a strong emotional content.
4. The questions must avoid all possible bias or suggestions in favor of or against a particular point of view.
5. The questions should include all the important alternatives which may emerge on a given issue.
6. Where the individual is being asked to choose between different alternatives, this choice of alternatives must be given as clearly as possible.
7. In cases where the choices in question are lengthy or numerous, it is preferable to list these on a card which the respondent can read.

> The average person is not likely to be successful in retaining a long list of alternatives, or complex questions, in his mind (Gallup and Rae, 1940, p. 101).

Thus, through the use of a representative committee from the population to be diagnosed, the researcher can encounter each of Gallup's criteria before the first subject member of that population is ever approached. The organization and/or individual desiring to gather data gains a great deal from the decision to utilize the concept of citizen involvement in the form of positive attitudes, a degree of acceptance in the population to be assessed, as well as the increased probability of gaining a response from the individual interviewee.

Blankenship also sets forth some specific criteria for the construction of individual items to be included within the questionnaire (see Appendix B and C). The author's recommendations basically involve the ordering of questions, phraseology, and so on. This information can prove to be very useful in this phase of the operation to the extent that the facilitator may wish to present this information to the committee as a framework from which to work. To be sure, the presence of unintentional bias within a particular item in the questionnaire can severely hamper that item's ability to ascertain what it was intended to discover. An example

could be found in an item such as this:

"Do you think liquor advertising should be prohibited?"

While this item definitely appears straightforward upon first glance, Gallup reports that tests have indicated that respondents have a definite tendency to associate the word "prohibited" with the liquor as opposed to the item in question: "advertising." Therefore, the facilitator should pay dutiful attention to the construction of items to be included on the instrument as well as provide the opportunity for committee evaluation with regard to the semantics of the document.

The fourth element of Blankenship's methodology involves the selection of respondents to participate in the diagnostic evaluation of the overall population. As stated previously, the size of the sample is not of importance due to the method employed in this design. As Gallup philosophically, relates, "human beings would never achieve a thing in daily life if they were not able to judge the world around them by abstracting from the total experience." (1940, p. 56).

Blankenship suggests that there are two considerations in this fourth element: the nature of the sample and the number of questionees. Mr. Blankenship maintains that there are basically two choices with regard to the nature of the sample: it can be either random or controlled. Due to the many, many problems with the maintenance of a representa-

tive cross-section of the overall population when employing the random sample, the writer strongly supports the controlled sampling format. Therefore, researchers must be instructed to secure information from specific age groups, races, socioeconomic backgrounds, and so on (American Marketing Association, 1937). Once again, the committee structure recommended by this project will prove to be of tremendous value in the selection of a representative sample which will, in turn, reduce the size of the sample. If the cross-section is gathered as suggested here, the size of the total number of respondents may very well be among the least of all possible concerns. To tap into the wisdom of George Gallup, "everyone knows that a representative sample of lemon pie must include the meringue on top, the lemon in the middle, and the crust on the bottom." (1940, p. 64). Therefore, one need observe only one slice of pie in order to determine its basic composition.

The preparation and distribution of materials, Blankenship's fifth element, is said to be somewhat different from the method of collecting data phase; however, this element does appear to be a sub-set of the second phase. Nevertheless, a few more comments with regard to the method of assessment do appear to be in order. As the group enters into the decision making process concerning the data collec-

tion, the facilitator should mention such considerations as the method of duplicating any materials that might be needed (stencils, printing, etc.), training for those involved in any interviewing that might be required, the time of day/day of week considerations for interviewing, as well as the construction of the cover letter to accompany any written materials (Blankenship, 1943; Knowles, 1972; Reilly, 1929). These discussions should continue within the committee until all involved parties feel comfortable with each aspect of the project. The sixth element of Blankenship's format speaks to this need as he relates the necessity to discuss the pitfalls of interviewer bias, the dynamics of interviewing, the selection of the field force, along with other variables that may arise. The committee structure suggested here can drastically minimize many of these problems through the use of this representative-participatory format.

The last two phases of this methodology involve the summarization of the results and the preparation of the final report. Blankenship denotes five operations within the summarizing component:

1. Questionnaire editing
2. Classification of replies
3. Planning the tabulations
4. Examining the data

5. Preparation of tables.

These processes will reveal exactly what data have been gathered to the extent of presenting all involved parties with a precise, manageable report of the findings. Of course, the processes of eliminating errors, translating numerical representations, placing responses in the proper category, ensuring the representativeness of the cross-section, along with the production of the final tabulations are as important as any other; however, these exercises often prove to be less of a "chore" since all involved parties seem to be enjoying a sense of accomplishment (Blankenship, 1943).

The final component of this process, the presentation of the final report, should always be pursued keeping the audience to receive such a report firmly in the mind of the authors (Blankenship, 1943). The conclusions, recommendations, tables, and discussion of procedures should be arranged in a manner that promotes readability. While this aspect of the data gathering project may not appear as valuable to the success of the endeavor as others, the final report is often the sole basis on which the process will be evaluated by individuals outside the committee structure. Therefore, the facilitator should exercise a high degree of professionalism in the preparation and distribution of this final product.

The process of assessing the opinions of a few who are representative of the total population is not without its problems. As Weiss (1979) points out, pollsters often employ biased samples, misconstrue events, slant items to ensure the desired response, along with other nifty little tricks that skew the results of a public opinion analysis. Weiss cites the example of a group that became alarmed by the fact that the Congress was on the verge of passing a bill that would create an agency to oversee that group's activities. The group in question quickly arranged for a polling service to survey the attitudes of Americans towards the creation of such an agency. To the group's delight, the poll showed that seventy-five percent of the country opposed the Congressional act; therefore, the Congress quietly shelved the bill (Weiss, 1979).

Webb (1973) adds to this discussion of possible dangers/pitfalls of the process of conducting citizen surveys through a presentation of eight possible hazards present in such an activity:

1. Beware of polls on complex issues about which citizens lack information
2. Beware of citizens' responses reflecting short-run considerations to the neglect of long-term problems

3. Beware of the timing of surveys
4. Beware of using surveys to hide from controversy and responsibility
5. Beware of question wording...what is said or not said can be misleading
6. Beware of non-representative results if inadequate procedures are used
7. Beware of sensitive issues and questions that tend to elicit silence or misleading answers
8. Beware of antagonizing citizens who consider interviews an invasion of privacy (Webb, 1973, p. 33-36).

As the reader may note, there are many possible problems within the public opinion polling process; however, this project has taken steps that can severely limit the opportunity for several of these potential dangers to occur through the introduction of the representative-citizen committee structure. The infusion of this strategy into the established methods of public opinion polling can result in a process that considers the individual characteristics of the many sub-populations present within the total population. Therefore, the party interested in gathering data concerning almost any topic can do so while minimizing the possibility of arousing semantic reactions or transactional bias among respondents since the committee structure will embrace these problems

long before the first respondent is asked the first question.

In summation, a review of this process appears to be in order:

1. Decide on topic and population to be assessed
2. Seek the cooperation of leading citizens from each segment of the population to be assessed
3. Select the mode of survey, approximate costs, and degree of accuracy desired
4. Design the instrument
5. Design the sampling plan
6. Recruit/train interviewers (if necessary)
7. Conduct survey
8. Edit, code and tabulate data
9. Analyze and interpret findings
10. Prepare report
11. Use information for decision making

Throughout this conceptual overview the writer has refrained from presenting specific items or suggestions regarding the basic premise of this project (where individuals gather their information and the weight placed on that source) due to the need to promote the basic structure of this methodology. This format can be used to ascertain any type of information that might fall within the parameters of an ethical research plan. The following chapter will continue

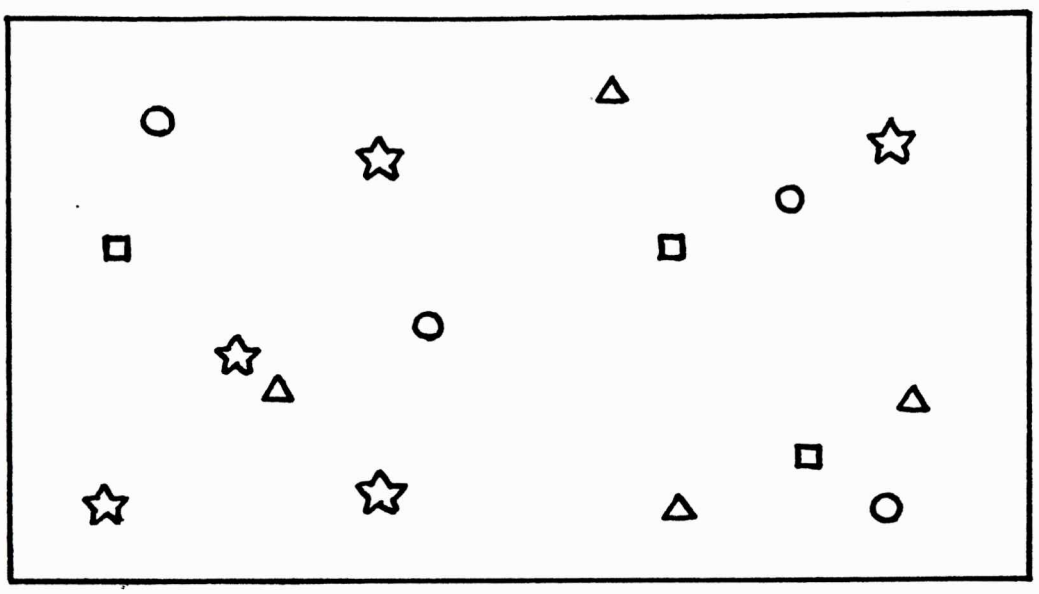
in this presentation by providing a conceptual representation of the model outlined in this chapter.

In conclusion, the reader should note from chapter two that all individuals process information in an individually unique fashion which, therefore, provides for the many interpretations one might expect from a given communication stimulus. In order to gather information as to the composition of a given population, the interested party will be served through a process that can lead to an accurate assessment as opposed to haphazard guesswork. This chapter has attempted to present such a methodology.

CHAPTER IV

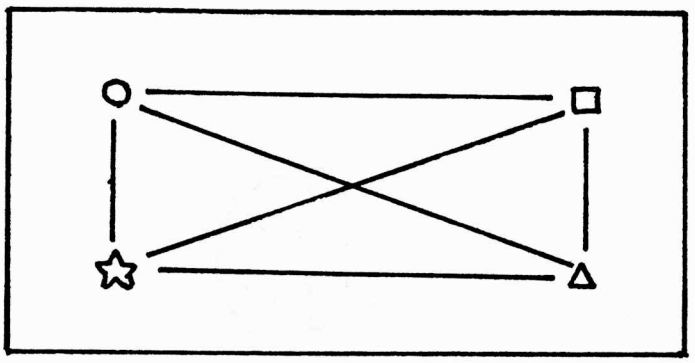
The preceding chapters of this project present to the reader a specific set of concepts from several diverse fields. However, it is the writer's contention that these independent, yet inter-related, frames of reference do manage to present a conceptual framework which can successfully embrace activities centered around the assemblage of information regarding a specific population.

The basic principle upon which this paper expounds is one which involves the recognition of personal differences with regard to the cognitive composition of the individual members of any specific population. In light of this recognition this project presents a methodology which is designed to encounter such a diversity through the representative sample format recommended by public opinion pollsters as well as community developers/adult educators. Thus, the individual(s) interested in gathering data which relates to some particular characteristic of a designated population might encounter a population which could be represented in this fashion:



As the interested committee achieves the goal of clearly identifying the population to be diagnosed, the individual(s) responsible for the data gathering process should recognize the presence of individual differences within the population. These determinations, of course, are restricted to the extent that they can only be reached on the basis of such overt factors as age, race, socioeconomic positions, and the like; however, these fundamental characteristics can prove useful in the formation of the committee structure upon which this model is conceived. Simply, through the assemblage of people from the population in question that do, in fact, represent the many diverse sub-populations present in most settings the process of

gathering data from that designated group can be deeply enhanced. Therefore, the committee structure advocated by this project might appear as follows:



The committee structure as represented above is intended to demonstrate the representative function of this methodology through the inclusion of one representative symbol from all of those available in the overall population to be assessed. The failure to include any segment of the population to be diagnosed can (and probably will) result in a data collection that is skewed toward or away from some specific sub-population. If the goal of the interested committee is to reach out to all segments of the population, then such an omission can have a tremendously negative impact upon the realization of that goal.

Just as in any group process situation, the leadership qualities which manifest in the form of the facilitator's leadership style are as important to the eventual success of this model as any other component. As stated within the

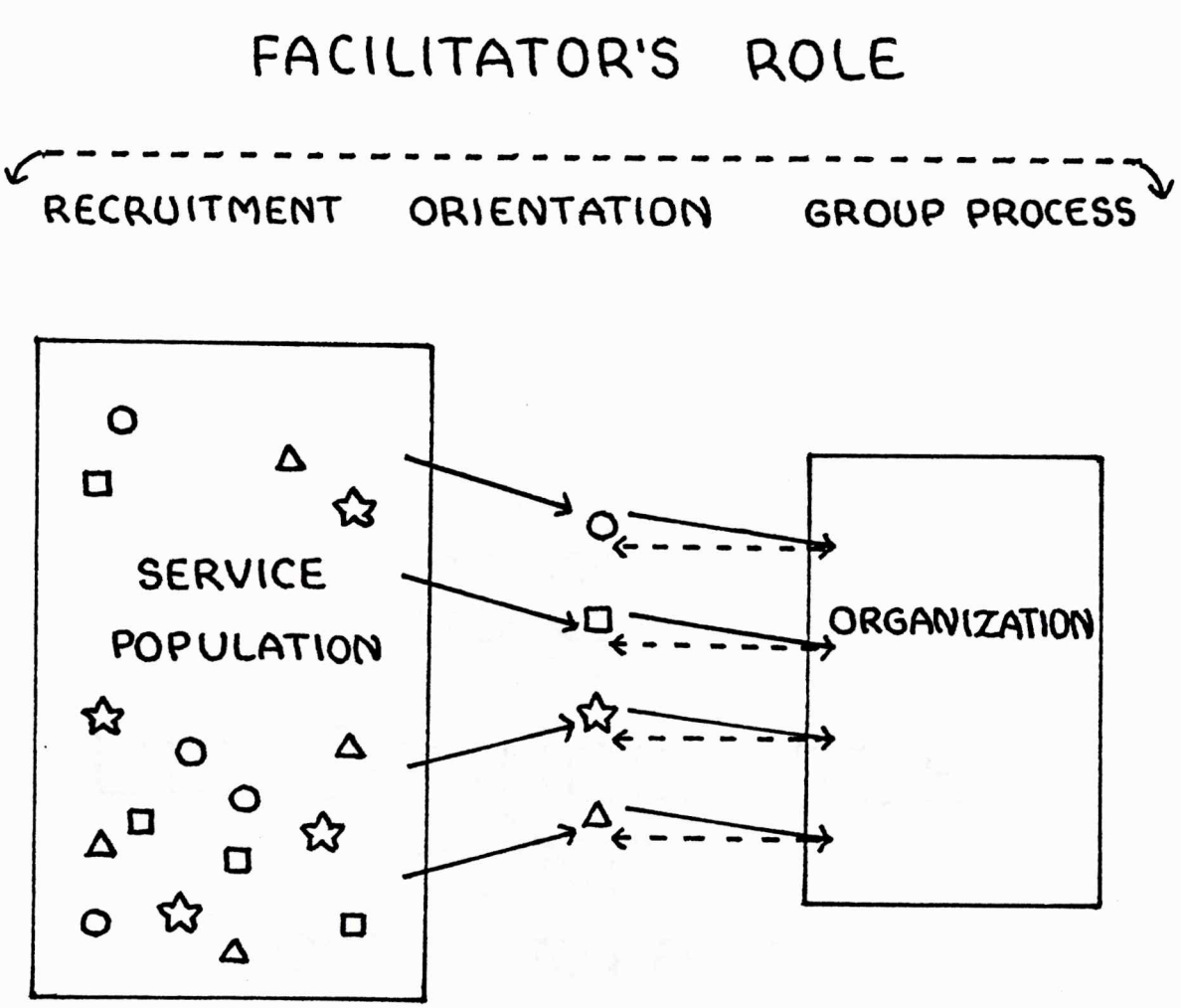
context of this project, the ways in which the facilitator represents the organization throughout the procedure can drastically effect the committee process. Therefore, the interested organization should exercise the best available control over the selection of that individual or those individuals responsible for the facilitation of this experience.

Once the recruitment process has been completed to the point of assembling a representative group, the committee must be completely oriented as to the aims/objectives of the organization interested in the accumulation of this data as well as the organization's projected treatment of the data. This orientation process will provide each member of the committee an opportunity to gain first-hand insight as to the rationale behind the project and its objectives.

During the presentation of the literature in chapter three the writer consistently pointed to the need for an open committee process if this approach is to enjoy the degree of success it is capable of attaining. If for some reason the composition of the committee currently assembled appeared to be prohibitive to such an open format, then the facilitator would have no other choice than to dismantle the committee entirely. This need to recycle in case of a possible committee breakdown (or a leadership breakdown for that matter) appears to be the sole remedy for such

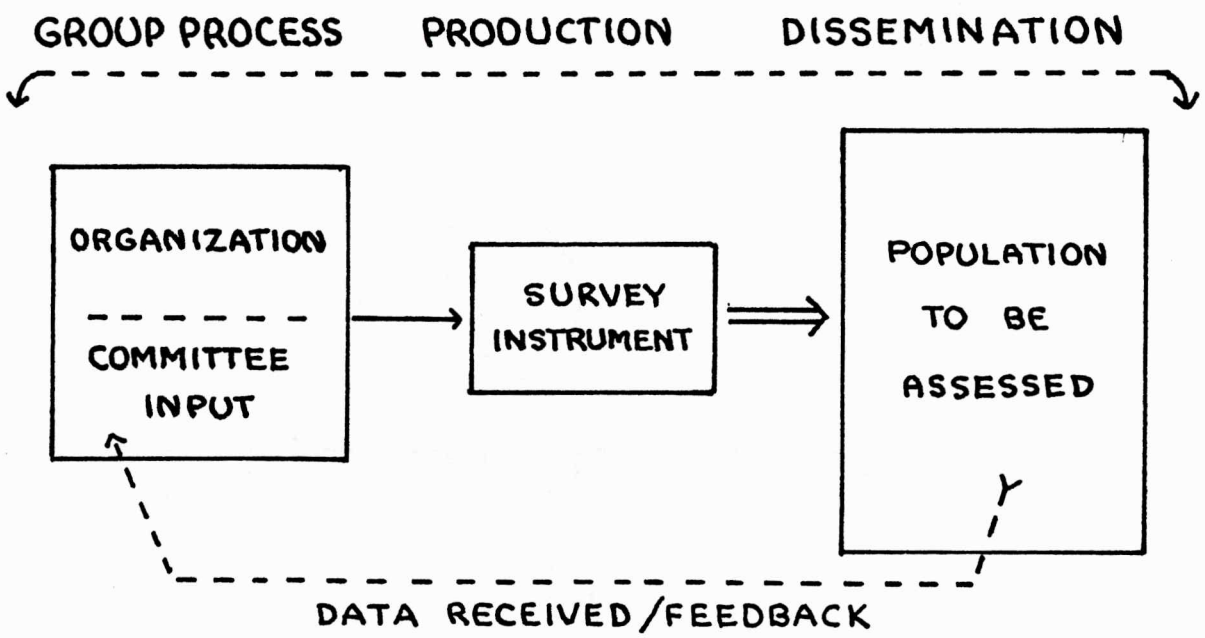
situations since the removal of a single member could create an atmosphere within the group which is not consistent with the fundamental design of this model.

Thus, the committee process advocated by this model might appear as follows:



As stated in the opening paragraph of this chapter, it is the writer's contention that this model can be effectively applied to most data gathering situations. However, the specified goal of this particular project involves the selection of the appropriate communication stimuli necessary to achieve as well as maintain an effective pattern of communication between the interested organization and its constituency. This goal would be clearly stated in both the recruitment and orientation phases of the project in order to promote the sense of openness and direction that is central to this technique.

The next few phases of this model might be depicted in the following manner:



To sum at this point, a committee of individuals who are representative of an overall population has been assembled by an organization interested in gathering certain information about that overall population. Thus, the facilitator of this committee experience has led the group through a process which is designed to allow each member of that committee the opportunity to provide input into the construction of a survey instrument designed to ascertain specific behavior patterns present within that overall population. The committee will be afforded the opportunity to make all decisions with regard to the wording of items, the method of dissemination, as well as have significant input into the treatment of the findings under the direction of the interested organization. Of course, each committee decision will be rendered in light of the organization's capacity to respond to that recommendation.

As mentioned in the opening paragraphs of this project, too often an organization interested in the establishment and maintenance of a communication network with an identified population relies upon a procedure that fails to consider specific components of the communication process. The review of the literature presented in chapter two was offered in an attempt to relate the importance of one specific variable of any communication attempt: the individual receiver of the message. Through the recognition of the highly unique and

individual means through which people "process" information, the reader may note the need to gather some data as to which particular stimuli appear to be the most effective of all of the stimuli present in any given field.

The writer maintains the position that any diagnostic procedure designed to assess the effectiveness of any set of stimuli will encounter a rather high degree of difficulty unless certain considerations are entertained. Simply, the committee structure advocated by this model can embrace a great many of those considerations (regional semantics, dissemination procedures, return rate, etc.) before the first instrument is released. While some parties might support the "in-house", closed style of instrument construction/dissemination to the point of employing that particular methodology, the organization truly interested in accurate data collection should at least consider this method.

Hence, the basic question to be answered by the organization interested in gathering some information regarding an identified population is one which involves the decision to undertake a process such as the one advocated by this paper or to engage in a product oriented procedure as in the "in-house" example. This decision is not only reflective of the organization's stance with regard to this matter, but could also be viewed as being an indicant of

that organization's administrative composition. In the author's view, the decision making process is one which involves an assemblage of information concerning the variables that are relevant to that particular decision making situation. Thus, the closed-door, isolated styles often employed in the decision making process should be viewed as being inadequate and prohibitive to an effective decision making exercise.

Therefore, this project has attempted to present the reader with one methodology which might be effectively employed in the information gathering phase of any particular decision making process. However, this model is designed specifically for situations that attempt to gather information from a designated population. History has demonstrated the ineffectiveness of procedures which exclude those who are to be effected by a given decision. In turn, recent history clearly points to the success many organizations have realized as a result of the open-data-gathering-feedback decision making process. Just as one should attempt to learn from history, hopefully models such as the one presented in this project will prove to be beneficial to those organizations interested in realistic decision making procedures.

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APPENDIX A

Kohlbergian Moral Dilemma

APPENDIX A

Kohlbergian Moral Dilemma

"In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times the amount the drug had cost him to make. He paid $200 for the radium and charged $2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1,000, which is half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. The druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate, and broke into the man's store to steal the drug for his wife."

(Duska and Whelan, 1975, p. 44)

APPENDIX B

Phrasing of Questions

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Phrasing of Questions

Types:
A. Yes-No Questions
B. Multiple-choice
C. Assignment of weights or alternatives
D. Free-response

1. the introduction and opening questions must create rapport with respondent
2. questions must not be ambiguous
3. questions must be phrased in psychologically concrete and specific terms
4. whenever possible, questions should refer to objective behavior
5. the intensity of phrasing will influence results
6. the questions must be worded so as to not damage the pride of the responsent
7. the questions must be nonemotional and unbiased
8. if a check-list is used, its influence must be carefully considered (while it promotes ease in scoring the order of alternatives, etc., can influence the return)

(Blankenship, 1940)

APPENDIX C

Assembly of Questionnaire

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Assembly of Questionnaire

1. opening question must create rapport
2. the first few questions must be simple
3. the first few questions must be ones on which respondents can and will express themselves
4. any personal questions should be placed well in the body of the questionnaire
5. questions that may reflect upon the respondent's intelligence must be placed well in the body of the questionnaire
6. questions with little respondent interests must be placed well in the body of the questionnaire
7. sequence of questions can bias the subsequent responses

(Blankenship, 1940)

VITA

VITA

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