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WHITE, HELEN BAKER

KINESICS AS A LINGUISTICS STUDY: WITH A SPECIAL EMPHASIS ON CLASSROOM BOREDOM

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Helen Baker White

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WITH A SPECIAL EMPHASIS ON CLASSROOM BOREDOM

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ABSTRACT

KINESICS AS A LINGUISTIC STUDY:
WITH A SPECIAL EMPHASIS ON CLASSROOM BOREDOM

by Helen Baker White

The purpose of this dissertation is to demonstrate the interrelationship between linguistics and kinesics and to show that verbal and kinesic boredom indicators within the college classroom can be identified, analyzed, and the knowledge utilized in improving teaching effectiveness.

The review of historical perspectives concerning the study of human communication reveals that interest in kinesic behavior, particularly in regard to the use of gestures, dates back to the writings of early Greece and Rome. In the eighteenth century, physiognomist John Caspar Lavater postulated that personality traits could be read in facial and bodily expressions. Anatomist Sir Charles Bell in the first half of the nineteenth century developed an anatomical-diagnostic approach for the study of emotions. Bell's method provided the basis for the comparative biological approach used by Charles Darwin; in 1872 Darwin published his findings in The Expression of the Emotions in Man and Animals, now considered to be the earliest, most significant attempt to explain the relationship between bodily activity and human interaction.

Helen Baker White

In the first half of the twentieth century, E. Kretschmer and W. H. Sheldon conducted studies concerning the correlation of physique and temperament. William T. James, in 1932, set forth the coordinating relationship of facial expression, gestures, and posture. However, David Efron's seminal work Gesture and Environment, published in 1941, is considered the most significant contribution of this era because it established the field of gesture as one worthy of serious study.

Beginning in the 1950s research on kinesic behavior expanded greatly in amount and complexity. Much of the growth is attributed to Raymond Birdwhistell's two significant contributions: (1) his theory that the analytical methods used by the linguist could also be used by the kinesic researcher, and (2) his implementation of a system for recording kinesic behavior.

Nonverbal behavioral studies reflecting disciplinary perspectives mushroomed in this same period. Anthropology uses a broad cultural approach to the study of communication, whereas psychology concerns itself with the way an individual learns the spoken language and other communicative behaviors. Sociology focuses upon a group of interrelated people or institutions for study. Social psychology looks at the dimensions of human relationships and how they are communicated. Psychiatry views nonverbal

behavior as clues to personality. "Effort-Shape" pro-
ponents analyze the flow of movement and the forms the
body makes in space. Ethologists study the nonverbal
expressions of man in relation to the behavior of animals.
The ethological perspective originated in 1872 with
Darwin; however, his findings virtually were ignored until
the 1970s.

The individual disciplinary approaches to the study of
nonverbal behavior now are being combined into a unified
holistic systems approach which utilizes a multi-channel
analysis. As the study of human communication has become
more scientific and more systematized, the interrelation-
ship between linguistics and kinesics has become more
apparent.

Systems for classifying nonverbal behavior were designed
to afford a common vocabulary of terms. Examples of terms
used for major categories are body motion, physical charac-
teristics, haptics, proxemics, paralanguage, and artifacts.

In the light of the historical and disciplinary per-
spectives concerning kinesics, identification and analysis
of boredom indicators within the college classroom were
made by studying videotapes of a linguistics class at
Vanderbilt University and through surveys of students and
faculty at three institutions. According to the surveys,
the strongest indicators of boredom were: (1) yawning,

nodding, and dozing; (2) excessive glances at a watch;
(3) restlessness and (4) facial expressions. From the
analysis of the videotapes and surveys, five behavioral
areas were suggested for additional research: (1) posture-
related activities, (2) notetaking behavior, (3) preening,
(4) length of pause between instructor's question and
student response, and (5) patterns of student response.

ACKNOWLEDGEMENTS

The author wishes to express her sincere gratitude to those persons who have been of assistance during this study, especially Dr. Reza Ordoubadian whose capable guidance, interest, and encouragement throughout all phases of the doctoral program were of immense value. Dr. William Holland made many helpful suggestions leading to the completion of this study.

Appreciation is expressed to the students and faculty at Motlow State Community College, Middle Tennessee State University, and the University of Tennessee Space Institute who participated in the surveys. Special thanks go to Professor Walburga von Raffler-Engel who so kindly permitted use of her Classroom in Action videotapes and who provided counsel concerning the analysis.

The author is indebted to the administration of Motlow State Community College whose support and assistance made possible the completion of this project.

Sincere gratitude is expressed to my husband, Warren; my son, Jim; and my son-in-law and daughter, Luke and Margaret McMillan, for their understanding and patience throughout the doctoral program. To them this dissertation is dedicated.

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Chapter I

INTRODUCTION

The kaleidoscopic nature of human communication has
fascinated scholars in various disciplines for centuries.
Each turn of the kaleidoscope into a new era has brought a
new view or approach, another attempt at explaining the way
in which, through communication, one human being shares
meaning with another. Slowly a pattern comprised of verbal
and kinesic elements has emerged into a recognizable, many-
faceted whole.

Perhaps because the kinesic aspects of language were
thought to be less precise and their function less suitable
for scientific investigation and analysis, serious scholarly
attention was not devoted to this area of human communica-
tion until the middle of this century. Among the first of
researchers to recognize the significance of the kinesic
function in communication was Raymond L. Birdwhistell,
whose study and analysis of the subject has earned him the
appellation "founding father of kinesics." His work,
along with that of those who have followed him, has added
much to our understanding of human communication. But

1

there remains much to know, particularly of the inter-
relatedness between the verbal and kinesic aspects of
language. The relationship between the two will be the
focus of this study, beginning with a brief review of com-
munication theory.

According to Birdwhistell, the traditional view of
communication is that of an action in which one individual
imparts knowledge to another.[1] It is a one-way action in
which the emphasis is on constructing, organizing, and
delivering the message. Meaning, it is thought, is carried
solely through words. It is the responsibility of the
speaker to attach the "correct" meaning to the words he
uses, to speak them plainly, and to eliminate any "distract-
ing mannerisms" that might interfere with the listener's
understanding of the words. If the listener goes to sleep,
it is the speaker's fault for not keeping him awake. He
should have spoken louder, used more gestures, or chosen a
subject with more appeal. This approach to the understanding
of human communication is far too simple.

Going a step beyond the one-dimensional perspective
presented above is that of "you talk; I answer." The sender
and receiver of the message take turns. Each exchange is

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[1] Ray L. Birdwhistell, Kinesics and Context: Essays on
Body Motion Communication (Philadelphia: Univ. of Pennsylvania
Press, 1970), p. 11.

independent of those preceding and following, except that
one message may cause the next one, as illustrated in the
following exchange:

> Sender: "May I go with you to the opera?"
>
> Receiver: "Yes, if you can be ready by the time
>   I wish to leave."

Thus, the message contained in the response by the receiver
would "cause" the next message since the sender, no doubt,
would need to ask when the receiver plans to leave. As in
the previous theory, meaning is conveyed through the words
that are spoken. Although this perspective does offer an
advance in understanding human communication, it, too, has
its flaws, as Gail E. Myers and Tolela Myers point out:

> . . . our communication is not divided into Ping
> and Pong, stimulus and response, shot and return,
> action and reaction. Rather it is a flowing,
> spiraling process of interweaving; each sender
> is also receiver at the same time (catching the
> flow of the message sent and its impact) and each
> receiver is also sender (maintaining a stance of
> interest, attention, boredom, dismissal--both
> nonverbally and possibly verbally.)[2]

Even the "spiraling" theory advocated by the Myers is
not inclusive enough. There are other essential elements
that cannot be omitted. A communication act does not spring

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[2] Gail E. Myers and Michele Tolela Myers, The Dynamics
of Human Communication: A Laboratory Approach, 2nd ed.
(New York: McGraw-Hill, 1973), p. 5.

fully grown from the head of some mythical beast; it has

both a history and a future.[3] The transactional view of

communication incorporates this broader function:

> That communicative act which we try to stop and
> look at . . . has been born in the mind of the
> speaker and relates to the mind of the listener,
> and these minds are not just appearing in front
> of each other as the words are said. They've
> lived in many places; they have said many things
> before, possibly to each other.[4]

Thus, according to those who embrace the transactional view

of communication, "we are who we are in relation to the other

person with whom we are communicating."[5]

Although this perspective goes beyond the preceding

two, the emphasis is still on conveying meaning through word

symbols. The interpretation of the verbal symbols is

determined by the participants in the interaction, the

decoding in no small way influenced by their past experiences

which may or may not have been shared. A systematic,

scientific approach to the study of communication does not

ignore these factors but goes beyond them. Birdwhistell,

for example, believes that "our communication system is not

[3] Myers and Myers, p. 5.

[4] Myers and Myers, pp. 5-6.

[5] Myers and Myers, p. 6.

something we invent but rather something which we [have]
internalized in the process of becoming human."[6] He goes
on to say that in order for a child to communicate, he
"must learn to comprehend and enunciate a complex hierarchy
of systems which makes up the language."[7] These symbols
are both linguistic and kinesic in nature. According to
Birdwhistell, only about thirty-five percent of a message's
meaning is carried through words with the remainder coming
through nonverbal or kinesic channels.[8] These include such
elements as body movement, facial expression, gesture, the
tone of voice, and the spatial relationship.

Mary Ritchie Key goes a step further in the importance
she attaches to the nonverbal aspects of communication. She
declares:

> Human communication is body movement. Movement of
> the vocal apparatus results in speech, the verbal
> act, or paralanguage, a nonverbal act. Movement
> of other muscular and skeletal apparatus results
> in kinesic communication, another kind of nonverbal
> act.[9]

Birdwhistell adds that the primary task of the linguist
and kinesicist is that of isolating structural meaning, i.e.,

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[6] Birdwhistell, Kinesics and Context, p. 15.

[7] Birdwhistell, Kinesics and Context, p. 16.

[8] Birdwhistell, Kinesics and Context, pp. 157-58.

[9] Mary Ritchie Key, Nonverbal Communication: A Research
Guide & Bibliography (Metuchen, N.J.: Scarecrow Press, 1977),
p. 5.

seeking "to order vocal and body motion behaviors in a way which will make it possible for us to understand their structural properties."[10] Nonetheless, he cautions against "subsuming all social behavior under a linguistic, kinesic rubric."[11] Knowledge of the nature of the social context within which the particular communicative acts take place is essential in deriving social meaning, but social meaning is dependent upon an understanding of the nature of the linguistic and kinesic systems themselves.[12] Birdwhistell carries the importance of the interrelatedness even further, concluding:

> My own research has led me to the point that I am no longer willing to call either linguistic or kinesic systems communication systems. All of the emerging data seem to me to support the contention that linguistics and kinesics are infracommunicational systems. Only in their interrelationships with each other and with comparable systems from other sensory modalities is the emergent communication system achieved.[13]

The foregoing suggests that human communication is multidimensional and can be studied from many perspectives. This study, however, will focus mainly on the interrelatedness of

[10] Birdwhistell, _Kinesics and Context_, p. 96.

[11] Birdwhistell, _Kinesics and Context_, p. 98.

[12] Birdwhistell, _Kinesics and Context_, p. 96.

[13] Birdwhistell, _Kinesics and Context_, p. 127.

kinesics and linguistics. Birdwhistell offers ample justi-
fication for such an approach.

> We must, if we are to do more than impressionis-
> tic or lexical studies of the meaning of the
> events that make up the communicative process,
> understand the nature of the linguistic or kinesic
> systems themselves. We need to know how these are
> related to each other and what the emergent com-
> municational units are.[14]

STATEMENT OF THE PROBLEM

The purpose of this study is to establish the inter-
relatedness between the linguistic and kinesic aspects of
oral human communication. An overview of communication
theory and different approaches to the study of kinesics,
or nonverbal communication, will be presented. The final
portion of the project will consist of the following:

1. Analyses of video tapes made during actual class-
room sessions in a course at Vanderbilt University.

2. Comments made by students concerning boring
classes.

3. Responses to a survey of both students and faculty
at three different institutions concerning nonverbal
indicators of classroom boredom, particularly as it relates
to interaction between students and teachers.

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[14] Birdwhistell, Kinesics and Context, p. 96.

These research questions will be addressed in the following manner:

1. Should kinesics and linguistics, as interrelated elements of the communication process, be studied together?

2. Can boredom indicators be identified and analyzed?

3. Can boredom indicators be both verbal and nonverbal?

4. Are students' and teachers' perceptions of boredom similar?

5. Can knowledge of boredom indicators assist an instructor in improving teaching effectiveness?

DEFINITIONS OF TERMS USED

In this study, the term communication means a generally predictable, multi-level, and continuous process of the sharing of meaning through symbol interaction, excluding written communication. Communication can be internal (intrapersonal), which includes such acts as thinking, worrying, and daydreaming; or it can be external (inter-personal), which is communication involving at least one other person and would include such acts as talking, listening, or sharing feelings. An interaction is an event in which "the behavior of one participant influences the next behavior of at least one other participant, and this

influence in turn is discernible in whatever action comes next."[15]

Other terms used in analyzing communication are source, encoder, or sender, the originator of the message; decoder or receiver, the interpreter of the message; message, the information that is conveyed either intentionally or unintentionally; channel, the way in which information moves from one person to another, such as through the spoken words or a gesture; feedback, the response given the sender by the receiver; and noise, any interference with the accurate transmission and reception of the message. Either participant can be affected by internal or external noise. Internal noise might be a sender whose speaking anxiety would affect adversely his ability to transmit the message. An example of external noise could be conversation taking place nearby that distracts from the speaker's message.

The term language is used to refer to a system of verbal and kinesic symbols by which information is conveyed from one human being to another.

A symbol is "something which stands for something else. The something else is usually called a referent."[16] The

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[15] Myers and Myers, p. 17.

[16] Albert E. Scheflen, "Models and Epistemologies in the Study of Interaction," in Organization of Behavior in Face-to-Face Interaction, eds. Adam Kendon, Richard M. Harris, and Mary Ritchie Key (The Hague: Mouton Publishers, 1975), p. 74.

symbol may be a lexical construction, such as the word
"tree," or it may be the lifting of an eyebrow to indicate
puzzlement.

Birdwhistell defines kinesics as "the system and study
of body movement in communication."[17] Kinesics includes all
nonlinguistic aspects of communication except proxemics (the
system and study of tactile relationships between human
beings). Nonverbal communication is the all-inclusive term
used to designate the exchange of information by any means
other than lexical. The terms "kinesic" and "nonverbal" are
used interchangeably in much of the literature on communica-
tion.

Linguistics refers to the study of all aspects of
language production. These include units, nature, structure,
semantics, development of language or a language, and
psycholinguistics, sociolinguistics, neurolinguistics, etc.

Metacommunication is a relatively new term and is used
to describe communication about a communication. For example,
if a speaker tells an inappropriate story, the listener may
behave metacommunicatively by frowning or raising his eye-
brows.

Paralanguage is a system of "extra verbal" elements
that accompany speech, including voice quality, vocal
qualifiers, and vocal segregates.

[17] Birdwhistell, Kinesics and Context, p. 180.

A _system_ is a set of interrelated elements. There
must be elements and relationships. In a communication
system, two people could be the elements, and they are
related by the messages they exchange.[18]

Other terms will be defined as the need arises within
the text.

ORGANIZATION OF THE REMAINDER OF THIS STUDY

This study is divided into six chapters. While each
chapter contributes to the general concerns of the study
as a whole, each chapter is a complete and integral dis-
cussion of some phase of the study. Chapter titles are
used to limit and define the concerns of each chapter.
The remainder of this study contains the following chapters:
Historical Perspectives and Approaches to the Study of
Nonverbal Communication.

Chapter II traces the emergence of nonverbal communi-
cation as a subject for scientific study. Although the
emphasis on nonverbal research is primarily a phenomenon
of the second half of the twentieth century, the nonlinguis-
tic aspects of oral communication were acknowledged by
ancient Greek and Roman orators.

[18] Randall Harrison, _Beyond Words: An Introduction to_
Nonverbal Communication (Englewood Cliffs, N.J.: Prentice-
Hall, 1974), p. 38.

This chapter also will show that the study of non-verbal behavior has never been the province of any one discipline. Moreover, each discipline has developed its own approach to the subject, and these various approaches are described. For example, the anthropologist studies nonverbal communication from the viewpoint of how it relates to the whole of a society. On the other hand, the psychologist focuses in on the individual. Unlike the anthropologist who examines a particular society, the psychological school wants to know the way a person learns communicative behavior and how one individual's use of the verbal and non-verbal language within a group may differ from that of others within the same societal sphere. Discarding both of these approaches, the ethologist studies the nonverbal expressions of man in relation to the behavior of animals. Other disciplines, such as sociology, social psychology, and psychiatry, may borrow from these and others detailed in the next chapter; however, each discipline leaves its own distinct imprint upon its contributions to the understanding of nonverbal communication.

The Interrelatedness of Linguistics and Kinesics

Chapter III explores in detail the interrelatedness between linguistics and kinesics. The methods and findings

of Ray L. Birdwhistell, the founding father of kinesic
research, are set forth and are used as a backdrop for an
analysis of current research.

Kinesic Cues and Classification

Chapter IV describes individual kinesic cues, includ-
ing gestures, movements of the body, limbs, hands, head,
feet and legs, facial expressions, eye behavior, and
posture. A system for classifying kinesic acts is pre-
sented.

Classroom Boredom

Chapter V consists of an analysis of Walburga von
Raffler-Engel's edited video tapes made for her Classroom
in Action project at Vanderbilt University, a discussion
of corollary research by Raffler-Engel and of comments by
students in a Middle Tennessee State University literature
class concerning their "most boring" class, and an analy-
sis of responses to a survey of both faculty and students
at Motlow State Community College, Middle Tennessee
State University, and the University of Tennessee Space
Institute concerning their perceptions of classroom
boredom indicators.

Summary and Conclusions

Chapter VI summarizes the findings of the research, with emphasis on their implications and suggestions for their implementation in classroom interaction.

Chapter II

HISTORICAL PERSPECTIVES AND APPROACHES TO THE

STUDY OF NONVERBAL COMMUNICATION

A mother presses her index finger to her lips, and the
baby she is holding responds by hushing his jabbering. An
act of communication has taken place, yet not a word has
been spoken. The infant already can translate at least a
portion of the nonverbal code that enables him to live,
respond, and operate within society. This early ability
to translate the nonverbal code is what Edward Sapir is
referring to when in 1927 he wrote:

> . . . we respond to gestures with an extreme
> alertness and one might almost say, in accord
> with an elaborate and secret code that is written
> nowhere, known by none, and understood by all.[1]

Despite the intriguing nature of Sapir's comment, serious
and scientific investigation into the unraveling of this
"elaborate and secret code" did not get underway until after

---

[1] Edward A. Sapir, "The Unconscious Patterning of
Behavior in Society," in Selected Writings of Edward Sapir
in Language, Culture, and Personality, ed. David G. Mandel-
baum (Berkeley, Univ. of California Press, 1949), p. 556.

World War II. This is not to say that the subject had been
ignored totally, for there were a few important "early
tributaries of knowledge."[2] For example, writings on the
use of gestures in oratory, mime, and dance date back to
early Greece and Rome.[3] Although such ancient Greek and
Roman rhetoricians as Aristotle and Quintilian instructed
orators in what today would be labeled nonverbal or
kinesic elements in communicating, they did not recognize
these factors as having communicative power of their own.
Only the spoken words actually conveyed meaning, they
believed; gestures, facial expressions, posture, and vocal
qualities were "modifiers" that either added to or detracted
from the verbal message. Attention was focused solely on
the words and behavior of the speaker. Thus it was important
for the speaker to learn and practice the "mechanics" of
good oratory. In fact, a discipline emerged called "elocu-
tion" in which teachers vigorously instructed their students
on how to use proper diction and enunciate distinctly, how
to breathe, how to stand, how and when to gesture, and how
to focus the eyes on a spot on the back wall "just over"
the heads of the audience. In essence, the skillful orator
was a trained performer. In a sense, then, it is incorrect

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[2] Mark L. Knapp, Nonverbal Communication in Human Inter-
action, 2nd ed. (New York: Holt, 1978), p. 27.

[3] Shirley Weitz, ed., Nonverbal Communication: Readings
with Commentary (New York: Oxford Univ. Press, 1974), p. 127.

to say that the nonverbal aspects of communicating were ignored until well into the twentieth century. It is more a case of their function and meaning neither being understood nor pursued by scientific investigators. There are a few exceptions.

Ray L. Birdwhistell gives credit to two forerunners of scientific kinesic study--John Caspar Lavater of the eighteenth century and Charles Darwin of the nineteenth. Lavater, a Swiss poet, theologian, and physiognomist, stressed "physiognomical character analysis . . . [and] wrote with certainty about the various facial characteristics as indicants of basic character."[4] According to Lavater's theory,

> . . . there is a basic set to each man's character which is displayed in his facial and gestural behaviour, that there is the skin, the musculature and in the bone structure a composite which can be read by the talented and experienced observer.[5]

As a physiognomist, he is not concerned with communicating per se but with character analyses. For him, the interest lies with the participant in the interaction and not with

[4] Ray L. Birdwhistell, "Background Considerations to the Study of the Body as a Medium of 'Expression,'" in The Body as a Medium of Expression, ed. Jonathan Benthall and Ted Polhemus (New York: E. P. Dutton, 1975), p. 44.

[5] Birdwhistell, "Background Considerations," p. 46.

the interactional sequence. Likewise, he is not concerned

with the effects of an expression on others nor with whether

the expression is intentional or unintentional. Birdwhistell

concludes that Lavater's most important contribution to

kinesic research was "his certainty that not only does every

body set or position, and every facial set or expression

have a meaning, but also that meaning could be read in what-

ever setting it might appear by a sufficiently talented

observer."[6] Other researchers point out that although

Lavater was not the first to claim to read traits of per-

sonality in facial and bodily expressions, he was the first

to structure a system of observation in the name of science.

In addition, he set forth for future investigators the

importance of the comparative method, of making minute

observations of easily overlooked bodily features, and of

training the eye to perceive what is ordinarily passed over

or treated as intuition.[7] It was Lavater also who originated

the analogy of body expression to language. He writes:

> I do not promise, for it would be the height of
> folly to make such a promise, to give entire the
> immense Alphabet necessary to decipher the
> original language of Nature, written on the face
> of man and on the whole of his Exterior; but I
> flatter myself that I have been so happy as to
> trace a few of the Characters of that divine
> Alphabet, and that they will be so legible, that

---

[6] Birdwhistell, "Background Considerations," p. 46.

[7] John Spiegel and Pavel Machotka, Messages of the Body
(New York: Free Press, 1974), p. 6.

a sound eye will readily distinguish them wher-
ever they occur.[8]

Because of Lavater's desire to educate the public in the
art of observation, physiognomy became for a time almost a
parlor game. Lavater was pleased, but the fad soon passed.

Then in 1872 Charles Darwin published The Expression of
the Emotions in Man and Animals. Many researchers now point
to this work as the earliest most significant attempt to
explain the relationship between bodily activity and human
interaction. Darwin saw the relationship but could not
determine completely how the pieces of the puzzle fit to-
gether. However, his concern with the subject is expressed
in the following:

> The power of communication between the members
> of the same tribe by means of language has been
> of paramount importance in the development of
> man; and the force of language is much aided by
> the expressive movements of the face and body.
> . . . Nevertheless there are no grounds, as far
> as I can discover, for believing that any muscle
> has been developed or even modified exclusively
> for the sake of expression.[9]

Although Darwin could see only through the glass
darkly, Birdwhistell cites three major contributions made

[8] Spiegel and Machotka, p. 8.

[9] Charles Darwin, The Expression of the Emotions in
Man and Animals (Chicago: Univ. of Chicago Press, 1965),
p. 354.

by this early researcher to the fledgling field of kinesic
study: (1) his recognizing the importance of interactional
processes "to a naturalistic and unified description of man
and nature"; (2) his realization that, in order to under-
stand man, it is also necessary to understand the means by
which man gathers and transmits knowledge in ways similar
to and differing from his animal forebears; and (3) his
providing himself as a model of a natural historian "who
did not shrink from the lessons he learned through disci-
plined observation of both animal and human behaviour in
naturalistic settings."[10] With all this reservoir of ideas,
Darwin's work, nevertheless, lay dormant for almost a
hundred years and is just now receiving the acclaim it
deserves.

Birdwhistell, for one, admits a personal indebtedness
of "immeasurable" proportions to Darwin. He reveals that
it was after long hours of argument with himself and with
Darwin that he was led to the conviction that social
organization and communication are interdependent.[11] Bird-
whistell, having been thus convinced, charted his course
toward a discovery of how this interdependency functions.

[10] Birdwhistell, "Background Considerations," p. 43.

[11] Birdwhistell, "Background Considerations," p. 43.

Researcher Mark Knapp in commenting on Darwin's legacy
to the field of kinesics says that The Expression of the
Emotions in Man and Animals was "perhaps the most influential
pre-twentieth century work" and served to spawn the modern
study of facial expressions.[12]

Knapp also recognizes the contribution made in the
second half of the nineteenth century by French teacher and
musician Francois Delsarte. He set forth a prescriptive set
of rules for managing both "voice culture" and body movements/
gestures, which he called "the science of applied esthetics."
Simply, it was a somewhat crude attempt to identify and
manage bodily expressions in the tradition of the elocu-
tionists. He was not concerned with the intricacies or
meaning of social interaction but with developing a style
that would enhance a musical or speaking performance.[13]
Like Darwin who had observed that "the force of language is
much aided by the expressive movements of the face and body,"
so, too, had Delsarte--but he went a step beyond. If these
expressive movements could be embellished or improved, then
the force of the language would be that much greater in
proportion. In other words, body expression complemented
the verbal expression, and the speaker well trained in the

[12] Knapp, Nonverbal Communication, p. 27.

[13] Knapp, Nonverbal Communication, p. 27.

"science of applied esthetics" was supposed to be able to
exercise as much control over the nonverbal dimensions of
communicating as he could over the words that came from
his mouth. Delsarte's approach now may seem somewhat ridic-
ulous; however, the elocutionary movement stood for over a
hundred years as mute testimony to its popularity.

Another nineteenth century scholar of importance in
the history of kinesic research is Sir Charles Bell, author
of The Anatomy and Philosophy of Expression as Connected
with the Fine Arts (1844). Bell, who was an anatomist,
surgeon, neurophysiologist, and artist, first became
interested in the expression of the emotions. He discovered
that all strong emotions--fear, rage, grief, or sexual
excitement--are accompanied "by alterations in breathing,
and in the muscles of the face and trunk as they affect and
are affected by the changed respiratory patterns." He con-
cluded that the expression of an emotion can only be under-
stood with detailed knowledge of the anatomy of facial and
thoracic musculature. This anatomical-diagnostic approach
used by Bell and physicians who followed him helped pave
the way for the comparative biological approach used by
Darwin.[14] Bell's findings, to be sure, were but a small
piece of the human interaction puzzle, but small pieces
make the larger ones easier to lock into place.

[14] Spiegel and Machotka, p. 10.

The first important contribution of th. century was
made by E. Kretschmer through his work in devising a
classification for types of physique and then correlating
these with two types of temperament. In his book Physique
and Character (1925), he sets forth three types of body
build--the asthenic (skin and bones), the pyknic (roly-
poly), and the athletic (muscular). The two types of
temperament which he used for correlation were the schizoid
(characterized by withdrawn, bizarre, and sometimes delu-
sional behavior) and the cycloid (characterized by wide
fluctuation in mood within the normal range). Kretschmer
thus was able to extend the general strategy of diagnostic
correlation begun by Bell.[15]

Another important twentieth century forerunner of
contemporary scientific kinesic research is the study on
bodily posture done in 1932 by William T. James in which
he set forth "the coordinating relationship of facial
expression, gesture, and posture." He believed that study-
ing each of the three elements separately was justified for
the purpose of analysis; however, he argued that "the total
should be recognized as a unit for the function of expression."
He identified four basic types from the 347 different postures
included in the experiment. These are: (1) approach, which

[15] Spiegel and Machotka, pp. 8-10.

conveys such things as attention, interest, scrutiny, and curiosity; (2) withdrawal, which is recognized by a drawing back or turning away and indicates negation, refusal, repulsion, and disgust; (3) expansion, which is revealed by an expanded chest, erect trunk and head, and raised shoulders (conveying pride, conceit, arrogance, disdain, mastery, and self-esteem); and (4) contraction, which is characterized by forward trunk, bowed head, drooping shoulders, and sunken chest.[16] James' findings are still highly regarded by communication scholars and researchers.

Adding to the growing foundation was the work of W. H. Sheldon. In his publication entitled The Variations of Human Physique (1940), he refined and renamed the categories of physique given by Kretschmer. He also developed objective methods of measurement for his system of somatotyping. His categories were given these designations: ectomorph (skin and connective tissue), endormorph (fatty and digestive tissue), and mesomorph (muscular tissue). Each physique classification corresponded to a personality type: the ectomorph with a cerebrotonic temperament (over-intense, anxious, introverted); the endomorph with a viscerotonic temperament (sociable, amicable, complacent); the mesomorph

[16] Mary Ritchie Key. Paralanguage and Kinesics: Non-Verbal Communication (Metuchen, N.J.: Scarecrow Press, 1975), pp. 78-79.

with a somatotonic temperament (assertive, courageous,
adventurous). Although this high degree of correlation
between body type and personality has been challenged
repeatedly by other researchers, it is generally accepted
that there is some degree of association between them.[17]

The fourth and possibly the most significant study of
the first half of the twentieth century was that done by
David Efron. Published first in 1941 and republished in
1972, Gesture and Environment focused on the observation,
recording, and analysis of hand and head movements. Limited
attention was given to space and posture. Its significance
stems from its inauguration of the field of gesture as one
worthy of study and its emphasis upon the effects of the
social process of assimilation on the intimate psychological
world of gesture.[18] In describing Efron's methodology, Mark
Knapp notes that Efron used hundreds of different interactive
settings, environments, and types of people. In addition,
he accumulated over two thousand sketches of communicators
in natural settings and analyzed more than five thousand
feet of film from these same subjects. According to Knapp,
Efron's work served as "the intellectual springboard for some
of the later observational systems of Birdwhistell, Hall,

[17] Spiegel and Machotka, pp. 10-11.

[18] Knapp, Nonverbal Communication, p. 27.

Ekman, and others."[19] Efron's work remains a classic in the field of human communication.

A lesser work was Charlotte Wolff's <u>A Psychology of Gesture</u>, published in 1945. In this study she ties in her observations of children and mental patients to a general theory of emotional expression. As one authority points out, Wolff's work is cited often by workers in the Labanotation theory, but it has had little influence elsewhere.[20] Nevertheless, it should not be discounted totally, for it, too, was another small piece of the puzzle.

The modest, but important, studies and findings of the first half of the century gave no indication of the mammoth amount and complexity of nonverbal reserach that was to follow beginning in the 1950s. More detail will be given later in the chapter when various approaches to the study of nonverbal communication are presented. However, some of the milestones during the past three decades need to be noted from their historical perspective. Among those of the 1950s that have had the most impact are the following:

1. Birdwhistell's <u>Introduction to Kinesics</u> (1952)--
    anthropologist by profession, Birdwhistell took
    some of the principles of linguistics and applied

[19] Knapp, <u>Nonverbal Communication</u>, p. 390.

[20] Weitz, p. 128.

them to nonverbal elements. He called this new scientific approach to the study of body movement "kinesics."

2. Edward T. Hall's Silent Language (1959)--Hall, also an anthropologist, conducted studies on the ways space is handled in communication settings. From his initial work, a new field of study labeled "proxemics" has emerged.

3. G. L. Trager's "Paralanguage: A First Approximation" (1958)--According to Mary Ritchie Key, it was in this publication that Trager introduced the term "paralanguage" to linguistics.[21] In addition, he increased the precision with which vocal cues could be classified and studied by designating the components of paralanguage.[22]

4. Jurgen Ruesch and Weldon Kees' Nonverbal Communication: Notes on the Visual Perception of Human Relations (1956)--Knapp says that this was probably the first book to use the term "nonverbal communication" in its title. However, its major contributions to the fledgling science of kinesics are that it provided additional theoretical insights into the origins, usage, and coding of nonverbal behavior

[21] Key, Paralanguage and Kinesics, p. 10.

[22] Knapp, Nonverbal Communication, pp. 27-28.

and also provided much visual documentation for the communicative role of environments.[23]

5. The association of Birdwhistell and Gregory Bateson with the "Palo Alto team"--consisting of Norman A. McQuown, Charles Hockett, Frieda Fromm-Reichmann, and Henry Brosin--and with Henry Lee Smith, Jr. and George L. Trager at the University of Buffalo. These groups provided an opportunity for multidisciplinary correlation of speech and body motion which resulted in the establishment in 1956 of a working abstraction of the American macrokinesics structure.[24]

6. Lawrence K. Frank's "Tactile Communication" (1957)-- This study suggested a number of testable hypotheses for analyzing touching behavior. Labeling skin as "the envelope which contains the human organism," Frank pointed out that every human being's contact with the outside world is through his skin.[25]

From the above it can be seen that the research of the 1950s established the parameters for the study of nonverbal communication. The emphasis on the speaker and practiced

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[23] Knapp, Nonverbal Communication, p. 28.

[24] Birdwhistell, Kinesics and Context, p. 115.

[25] Lawrence K. Frank, "Tactile Communication," Genetic Psychology Monographs 56 (1957), 209-55.

delivery techniques had shifted dramatically to the total
act of communication. So many facets had been revealed as
important parts of communicating that it was necessary that
each be investigated along with its relationship to the
other parts. Thus, according to Knapp, the extensive pro-
grams of research in the 1960s dealt primarily with specific
areas of the body and how they figured into the act of
communication. He cites the following as exemplary of this
focus:

> . . . [Ralph V.] Exline's work on eye behavior;
> the [Joel Robert] Davitz work on vocal expressions
> of emotion which culminated in the book The Com-
> munication of Emotional Meaning in 1964; [Eckhard
> H.] Hess' work on pupil dilation; [Robert] Sommer's
> continued exploration of personal space and design
> (Personal Space, 1969); Goldman-Eisler's study of
> pauses and hesitations in spontaneous speech; and
> the study of a wide range of body activity by
> [Allen T.] Dittman, [Michael] Argyle, [Adam] Kendon,
> [Albert] Scheflen, and [Albert] Mehrabian. . . .
> Perhaps the classic theoretical piece of the 1960s
> was Ekman's and Friesen's article on the origins,
> usage, and coding of nonverbal behavior.[26]

The 1970s offered yet another perspective. Whereas
Lavater's work on character analysis through the study of
facial expression and features had only limited success as
a parlor game, the decoding of "body language" cues and
their interpretation gained widespread and continuing
popularity among the American public. Paperback volumes

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[26] Knapp, Nonverbal Communication, p. 28.

were consumed in the millions as people of varying ages and economic levels anxiously read the pages that purportedly taught them how to improve their skills in making a sale, detecting "rip-off" artists, asserting one's dominance, and obtaining a partner for sex. Although the lofty aim of such best-sellers as Julius Fast's Body Language and Nierenberg and Calero's How to Read a Person Like a Book was to make understandable and usable nonverbal findings, in actuality the covers of these books often promised more than the pages could deliver. Nonetheless, "body language" publications still are selling extremely well, and the subject is sure to elicit much interest in any conversational situation.

The above should not be construed to mean that parlor psychologists have taken over the nonverbal field, for the current decade has produced an abundance of serious, scientific studies of nonverbal human behavior. A cursory look at just a few will illustrate the scholarly diversity:

1. Ray L. Birdwhistell's Kinesics and Context: Essays on Body Motion Communication (1970)--Through this collection of the author's essays, some previously unpublished and the others available only in widely scattered places, Birdwhistell sets forth his systematic empirical study of body motion and human communication in which he also presents an analogy between linguistics and kinesics. This

book is considered to be the most influential

work on modern day kinesic research.

2. Ashley Montagu's Touching: The Human Significance
   of the Skin (1971)--Montagu's principal concern is
   the manner in which tactile experience or its lack
   affects the development of behavior. At the time
   Montagu began his research, very little experimental
   data on the subject existed; today extensive research
   on the subject continues. In fact, Montagu was a
   recent guest on the nationally televised Phil
   Donahue talk show in which he discussed his more
   recent findings and answered questions from the
   audience.

3. Paul Ekman's Emotion in the Human Face (1972)--
   Ekman's concern is the relationship of nonverbal
   behavior to inner feeling states and to the
   decoding of these states by others. Weitz offers
   an interesting distinction in Ekman's research
   focus. She says that Ekman is more interested in
   the psychological problem of communication of
   emotional state rather than with the structural one
   of the nature of the communication system itself.[28]

4. Albert Mehrabian's Nonverbal Communication (1972)--
   In this study the author explores the meaning of

[28] Weitz, p. 13.

nonverbal cues of immediacy, status, and responsive-

ness. Much of his current research is directed

toward an analysis of multichannel communication,

a more complex approach to the study of nonverbal

communication. The premise underlying this focus

is that a human being does not "transmit" messages

one at a time through one channel, such as the

eyes; rather all sorts of messages are given off

simultaneously in competing channels.[29]

5. Albert E. Scheflen's Body Language and the Social

    Order (1972)--This researcher's theory is that body

    language in combination with spoken language

    primarily serves to control human behavior and to

    maintain the social order.[30] His current research

    in kinesics and language focuses on their relation

    to culture and social organizations. Like Mehrabian,

    Scheflen also is moving toward a more holistic view

    of communication.[31]

6. Eckhard Hess' The Tell-Tale Eye (1975)--Perhaps

    it should be noted that the intriguing title of

    this publication reflects the popular interest in

[29] Weitz, p. 261

[30] Albert E. Scheflen, Body Language and Social Order:
Communication as Behavioral Control (Englewood Cliffs, N.J.,
Prentice-Hall, 1972), p. 10.

[31] Scheflen, Body Language, pp. xii-xiii.

and the writer's and publisher's desire to capitalize upon the decoding of nonverbal behavior. This study of pupilometrics concerns pupil dilation and constriction as a possible indicator of mental and emotional states. Hess also theorizes that pupil response might be an index of attitudes, i.e., pupils will dilate for positive attitudes and constrict for negative ones. No support has yet been found for this theory, however.[32]

7. Michael Argyle's Bodily Communication (1975)--In this important study, Argyle sets forth four primary uses of nonverbal communication: (1) expressing emotion; (2) conveying interpersonal attitudes, such as like/dislike and dominance/submission; (3) presenting one's personality to another; and (4) accompanying speech for the purposes of managing turn-taking, feedback, and attention.[33] This classification offers yet another way to study non-verbal communication.

8. Mary Ritchie Key's Paralanguage and Kinesics (1975) and Nonverbal Communication: A Research Guide and

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[32] Knapp, Nonverbal Communication, p. 314.

[33] Michael Argyle, Bodily Communication (New York: International Universities Press, 1975), pp. 3-4.

Bibliography (1977)--Key's principal contribu-

tions have been in delineating the similarities

and differences in paralanguage and kinesics, in

summarizing current nonverbal research data and

findings, and in providing complete categorized

bibliographies of all types of publications about

nonverbal communication.

9. Walburga von Raffler-Engel and Bates Hoffer's

Aspects of Nonverbal Communication: A Handbook

(1977)--This collection of essays by several

researchers is a "practical handbook" designed

"to serve as a guide to the beginner in nonverbal

communication."[34] I list the book as important

because the two editors make a strong argument

that valid nonverbal research is not restricted to

a few select authorities.

10. Shirley Weitz's Nonverbal Communication: Readings

with Commentary (revised 1979)--This book contains

a collection of essays by leading nonverbal com-

munication researchers covering all areas of

endeavor in the field. Most helpful is the back-

ground material provided by Weitz in an introduction

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[34] Walburga von Raffler-Engel and Bates Hoffer, eds.,
Aspects of Nonverbal Communication: A Handbook (San Antonio,
Texas: Trinity University, 1977), p. vii.

and then in more detail at the head of each of

the book's five divisions. She excels in describ-

ing how one field of endeavor relates to another

and in suggesting the past and future directions

of development by citing relevant research. If

a person could read only one book on nonverbal

communication, this one would be my recommendation.

The above sampling is intended to show only an example
of the diversity of nonverbal research that has taken place
in the 70s. Not to be overlooked is the unbelievable number
of periodical articles on the subject that saturated both
popular and scholarly magazines in a variety of areas. For
example, the July, 1979, issue of Psychology Today carried
an article with the attention-grabbing title of "People Who
Read People." The content, however, is not as simplistic
as the title might lead one to believe. The author, Daniel
Goleman, purports to show the way in which the tenets of
"Neurolinguistic Programming" (NLP) can be applied success-
fully in fields such as psychotherapy and business relations.[35]
A quick look through several issues of most popular magazines
will reveal many articles dealing in one way or another with
some aspect of nonverbal communication or "body language."

[35] Daniel Goleman, "People Who Read People," Psychology
Today, 13, No. 2 (1979), 69.

Professional journals as well reflect this same
interest in human communication, and particularly in the
nonverbal aspects of the process. In face, the periodical
Semiotica is devoted primarily to current research in the
field. Additionally, The Journal of Communication, Journal
of Personality and Social Psychology, Linguistics, Journal
of Verbal Learning and Verbal Behavior, Psychiatry, and
Anthropological Linguistics usually contain at least one
article per issue relating to some phase of nonverbal
communication.

Just from this somewhat limited listing of books and
periodicals, the conclusion can be drawn that nonverbal
communication is truly a cross- and multi-disciplinary study.
As would be expected, the various approaches used in the
research studies usually reflect the disciplinary background
of the investigator. Although such diversity surely has
many advantages, it has also resulted in much confusion.
The dust now seems to have settled somewhat, but Albert
Scheflen offers the following wry analysis of what it was
like no longer than ten or twelve years ago:

> A decade ago a conference on communication used
> always to end up as an argument among three
> points of view. The psychological theorists
> advocated an expression theory; the social-
> psychological people advanced an international
> approach which was then a stimulus-response or
> an action-reaction concept. And the culturally
> oriented participants advanced concepts of codes,
> linguistic or kinesic. Then the members of each

of these fronts would fall to arguing with each
other. The expression theorist would disagree
about what was being expressed: traits, drives,
emotions, values, and so on. The interactionalists
would argue about aspects of information theory
and almost everyone argued that verbal was more
important than nonverbal, or vice versa. Still
other points of view could have been argued if
political scientists, economists, architects,
environmentalists, and others had attended panels
of communication in those days. In short, there
were models of communication of each of the classi-
cal disciplines and it seemed important to determine
WHICH [emphasis his] was true.[36]

In order to avoid the confusion about which Scheflen
writes, this writer will examine, in order, each of the
major disciplinary approaches from which modern day research
stems and then will conclude with a description of the
systems approach to the study of communication, a method
currently reflected in much of the literature. As a starting
point, the five disciplines named by Flora Davis in her book
Inside Intuition will be explored: anthropology, psychology,
sociology, psychiatry, and ethology.[37]

The anthropological approach to the study of nonverbal
communication has received much attention, perhaps occasioned
by Birdwhistell's having started from this viewpoint. Randall
P. Harrison in his book Beyond Words: An Introduction to

[36] Scheflen, "Models and Epistemologies," pp. 63-64.

[37] Flora Davis, Inside Intuition: What We Know About
Nonverbal Communication (New York: McGraw-Hill, 1973),
pp. 2-3.

Nonverbal Communication describes the way the anthropologist

looks at nonverbal communication as follows:

> The anthropologist takes a broad view. He looks
> at whole societies. He looks at the evolution
> of culture over centuries. He is likely to con-
> clude that "culture is communication." If that
> is the case, then communication includes work,
> play, defense, territoriality, sex, learning,
> and so on. The exchange of verbal symbols
> between two people may be only a small part of
> the total communication spectrum.
>   The anthropologist would like to account for
> the pattern or structure which persists over time,
> even though the individuals may change. In other
> words, our language was here before we came. We
> use it while we're here. We may modify, invent,
> delete. But when we leave, the same language,
> more or less, will be going on in new generations.
> It is this ongoing system the anthropologist would
> like to understand.[38]

Even though Birdwhistell is the most notable researcher
to employ this approach in his investigations of communica-
tive behavior, he was not the first. Birdwhistell himself
gives this credit of being the first to David Efron, who, in
1942, made an anthropological analysis of gestural activity.
In this seminal study, Efron tested the hypothesis that
there is a direct correlation between the previous social
environment of European immigrants to America and their
gestural systems. Birdwhistell, in recognition of the
importance of Efron's study, said: "Although Efron's thesis

[38] Harrison, p. 29.

correlating certain ecological factors with respective gestural systems remains inconclusive, his work demonstrated the social genesis of the evident variation in the gestural systems of these two groups."[39] Thus another window with a different view of human communication had been opened--but ever so slightly.

Bringing a broader view to this new anthropological window were Weston LaBarre in 1947 and Gordon Hewes in 1955. Their contribution, according to Birdwhistell, was their making field workers aware of the importance of recording and analyzing the gestural behavior of human groups.[40] Barely detectable at this early stage, the desire emerged for a scientific way to study human communicative behavior in which findings could be replicated and verified.

The most important anthropological contributions to the development of the study of body motion as a communicational system is accorded, by Birdwhistell, to the work of Margaret Mead and Gregory Bateson. In 1942 they made a comparative study of infant bodily expression in America and Balinese societies from which they were able to deduce that specific acts of bodily communication are learned and are not "natural."[41] Therefore, from these findings the deduction

[39] Birdwhistell, *Kinesics and Context*, p. 183.

[40] Birdwhistell, *Kinesics and Context*, p. 183.

[41] Birdwhistell, "Background Considerations," pp. 15-17.

could be made that bodily expression is subject to socio-
cultural variation. Birdwhistell summarizes the effect of
Mead and Bateson upon the study of the communication process
and his own endeavors as follows:

> Their concern with the relationship between
> socialization and communication, assisted by con-
> siderable skill with and appreciation for the
> camera as a research instrument, set the stage
> for the development of kinesics as a behavioral
> science. Not only has their field work provided
> a body of materials for cross-cultural study, but
> their insights into the systemic quality of the
> communicational process have prevailed upon the
> writer to take up his profitable association with
> the linguists.[42]

Another important contributor from the anthropological
school is Edward T. Hall, who is best known for his role in
establishing the science of personal space, or "proxemics."
In his writings, especially The Silent Language (1959) and
The Hidden Dimension (1966), Hall emphasizes the analogy
between proxemic behavior and language. Weitz sees Hall's
major addition to the study of human communication as his
delineation of four social distances (intimate, personal,
social, and public), which seem to be present in all cultures.
He based his theory upon his findings after researching
five cultures: Germany, England, France, Japan, and
several Middle Eastern countries. From these studies, he

[42] Birdwhistell, Kinesics and Context, p. 183.

also was able to conclude that national character is tied
in to the use of space.[43] Much of Hall's strategy focused
upon the direct observation of people in communicative
settings. From these observations he has determined that
each of us carries around a personal bubble of space,
which if intruded upon causes a person to feel much dis-
comfort. An example of such a violation would be a crowded
elevator filled with acquaintances or strangers. In such a
situation, there is usually very little, if any, conversation;
and most people stare intently at the floor indicator.
Although the study of proxemics can become very technical
for the scientific investigator, it has attracted much
interest from the general public. Proxemic research is
flourishing.

Although the work done by Efron, LeBarre, Hewes, Mead,
Bateson, and Hall has had and continues to have much impact
upon the establishment of nonverbal communication as a
legitimate field for scientific inquiry, it is Birdwhistell
who stands at the front of the line as the premier contribu-
tor and proponent. A scholar trained in both anthropology
and linguistics, Birdwhistell says that "the paramount and
sustaining influence upon my work has been that of anthro-
pological linguistics."[44] His research, he states, "has

[43] Weitz, pp. 200-201.

[44] Birdwhistell, Kinesics and Context, p. 25.

always centred upon social relationships as behaviourally

constituted."[45] This cultural focus led to his concern

with communication and to the belief that body movements,

like word symbols, have communicative value. These

movements, like the spoken language, are learned within a

culture. Moreover, like verbal language, they have a

complex, multilevel structure. With these similarities in

mind, Birdwhistell deduced that the methods used by the

linguist in analyzing the structure of the spoken and

written language should be useful for studying "body

language."[46] With the delineation of this analogy between

the structure of verbal and nonverbal languages, the

science of "kinesics" came into being with the anthropologist-

linguist Birdwhistell as its founding father. The relation-

ship between linguistics and kinesics will be explored more

fully in Chapter III.

Whereas the anthropologist in his study of communication

focuses upon a particular society or a culture as a unit,

the psychologist is interested in the individual. He wants

to know the way in which a person learns the spoken language

and any other communicative behavior. He looks for individual

differences, seeking to find why some members of the same

[45] Birdwhistell, "Background Considerations," p. 52.

[46] Harrison, p. 70.

culture are one way and others are different. Albert
Scheflen labels this as the "organismic focus," which he
describes in this way:

> . . . the focus is upon one person at any time.
> One looks at the behavior of this person as
> either an expression of traits or organismic
> events, as a response to external stimuli or
> both of these together. And this view of person
> and behavior can be reversed so to speak; the
> quality of behavior can be used to make inferences
> about the person who is behaving.
> In this case the behavior of a participant is
> related to a classification of kinds of behavior
> and kinds of people. When a next subject is
> observed his behavior, too, is related to an
> Aristotelian class, and thus the subjects become
> members of a set of cases in a series.[47]

Scheflen goes on to point out that the organismic focus is
classical not only in psychology but in medicine and biology
as well. Not all communication researchers from the psycho-
logical persuasion use this focus, however. In fact, they
are generally divided into three camps.

One group argues that communication is primarily a
verbal phenomenon. Thus, explains Randall Harrison, "when
we see a nonverbal event, such as a painting, we translate
the experience, inside our heads, into verbal labels; the
brain, in short, processes, stores, and retrieves using
verbal mediators' or word-like tags."[48] This view has
been very popular in American psychology.

[47] Scheflen, "Models and Epistemologies," pp. 64-65.

[48] Harrison, p. 30.

The opposing side argues that information processing in the brain is completely different from the verbal languages people use in interpersonal communication situations. These psychologists postulate that "what happens in the head is essentially a nonverbal process, involving imagery and perhaps something like holography, the modern technology which produces three-dimensional pictures."[49]

The third position, and one that is growing in acceptance, suggests that the brain works both verbally and nonverbally. Information can be converted from one mode to the other very adeptly, with some individuals excelling as "nonverbal thinkers" and others as "verbal thinkers."[50]

Another interesting facet of communication research from the psychological perspective is that the psychologist examines the whole stream of body motion by picking out units of behavior to study, e.g., eye contact, smiling, touching, or even a larger unit like facial expression. Paul Ekman and Wallace Friesen are two of the leading researchers using this particular approach. Their system for classifying nonverbal behavioral acts is still the

[49] Harrison, p. 30.

[50] Harrison, p. 30.

most widely used model with only a few adaptations and will
be presented in detail in Chapter IV of this study.[51] They
have also received wide acclaim not only for their extensive
analyses of facial expressions but also for the way they
were able to use layman's language in presenting these
scientific findings in their book entitled Unmasking the
Face.[52]

An additional major concern of Ekman, Friesen, and
other psychologically-oriented communication researchers
has been that of intent, i.e., to what degree is a person
conscious or unconscious of what he is doing and why.
Randall Harrison, in discussing this aspect of nonverbal
cueing, poses these intriguing questions:

> What if an artist, without realizing it, fills
> his paintings with phallic symbols: is that
> communication? Or what if he has read Freud,
> and is doing it on purpose? And in either case,
> does there have to be a receiver who responds
> before we have full communication? And how
> aware does this receiver have to be? Is it only
> communication if the viewer is a psychiatrist,
> who is fully aware of all the phallic symbols
> and their import? Or how about the young woman
> who is strangely moved by the painting but does
> not realize that phallic symbolism is involved?[53]

[51] Paul Ekman and Wallace V. Friesen, "The Repertoire
of Nonverbal Behavior: Categories, Origins, Usage, and
Coding," Semiotica, 1 (1969), 49-98.

[52] Paul Ekman and Wallace V. Friesen, Unmasking the
Face: A Guide to Recognizing Emotions from Facial Clues
(Englewood Cliffs, N.J., Prentice-Hall, 1975), pp. 1-9.

[53] Harrison, pp. 30-31.

Harrison then utilizes these situations in explaining Ekman's

and Friesen's classification of three behavioral levels:

(1) informative, (2) interactive, or (3) communicative:

> . . . If, for example, our young woman blushed
> while looking at the paintings, this might be
> informative to an observer. The woman did not
> intend to "communicate" about her embarrassment;
> but an observer sees a cue which informs him
> about some inner state. Similarly, if the
> psychiatrist notes the symbols in the painting,
> and makes some inferences about the painter, that
> is informative.
>   Some cues may be interactive in that they
> influence the interaction. Someone, seeing the
> young woman's blush, might decide he would like
> to interact with such a nice, modest person.
> Someone else might decide just the opposite.
> More typically, we engage in a whole range of
> nonverbal behaviors, such as head nods, eye
> contact, and smiling, which have a strong impact
> on human interaction. Yet they appear to be
> performed with little awareness or intent on the
> part of the sender; and they are reacted to with
> little awareness on the part of the receiver.
>   Finally, Ekman and Friesen reserve the term
> communicative for those behaviors that are done
> with an intent to communicate. If the painter
> purposefully inserts his phallic symbolism,
> that's "communicative" (whether anyone else
> interprets it or not). If he does not do it with
> intent, then it still may be "informative" (to
> the psychiatrist), or it may be "interactive"
> (to the blushing maiden who turns away). But it
> would not be communicative.[54]

In addition to illustrating how the psychological approach

is employed in communication study, the above analysis serves

to make clear the necessity for the investigator to have some

framework in which to place his findings. Early explorers,

[54] Harrison, p. 31.

such as Birdwhistell, Ekman, and Friesen, began their voyages

on uncharted seas. The discovery by Birdwhistell that the

tools and methods of the linguist also could be useful in

the study of kinesics has made the sailing some easier,

but each discovery has opened a new world for exploration

that requires still more research and reporting.

Thus far we have examined two approaches--the anthropo-

logical and the psychological. Because Birdwhistell stands

as the most distinguished leader of the anthropological

school and Ekman as perhaps the most eminent and influential

of the psychological researchers, Weitz uses them in comparing

the methods of the two disciplines:

> Ekman . . . is not trying to establish a grammar
> of body language, or even to study the communica-
> tion process per se, as Birdwhistell is. Rather,
> his concern is the relationship of nonverbal
> behavior to inner feeling states and to the
> decoding of these states by others. His more
> recent work on facial expression is clearly in
> this area. Ekman also does not integrate the
> verbal spheres, a primary goal of the Birdwhistell
> school. Ekman is concerned with the psychological
> problem of communication of emotional state,
> rather than the structural one of the nature of
> the communications system itself.[55]

An approach that falls somewhere between the anthropo-

logical and psychological ones is that used by sociologists.

Initially, according to Scheflen, they took as their focus

a group of interrelated people or institutions for study.

[55] Weitz, p. 131.

Lines of communication or the channels of connection were identified.[56] Harrison sees this approach as occupying a position midway between the cultural view of the anthropologist and the individualistic stance of the psychologist, what he calls "the middle ground." Commenting further, he points out that although a psychologist might be willing to define communication in terms of a single individual, serving as either a sender or a receiver, the sociologists want at least two communicators engaged in some degree of interaction or transaction.[57]

From the sociological school has come the interesting assertion that whenever an individual is in the presence of another person, he cannot not communicate, that no matter what he does, he is sending the other interactant some message. The receiver's reaction, in turn, sends a message back to the original sender. Thus, according to Harrison, silence and rigid inactivity may convey the message that the interactant is angry, depressed, hostile, fearful, or annoyed. In such an instance, it is obvious that nonverbal activity is a part of communication whether or not the action is intentional or unintentional.[58]

[56] Scheflen, "Models and Epistemologies," p. 65.

[57] Harrison, p. 31.

[58] Harrison, pp. 31-32.

Another concern of the sociologically-oriented
researcher in human communication has been the role of
verbal and nonverbal activity in human interaction. Flora
Davis describes one such theory:

> . . . [sociologists] have observed and described
> a kind of subliminal etiquette to which nearly
> all of us conform and which shapes our behavior
> in both large and small ways. For example, we
> all know how to avoid a head-on collision on a
> busy sidewalk though we would be hard put to
> say exactly how we do it. We know how to appear
> involved but not overinvolved in a conversation.[59]

What Davis has labeled "a kind of subliminal etiquette,"
the psychiatrist and kinescist researcher Albert Scheflen
sees as the primary function of communication, i.e., to
control human behavior and to maintain the social order.
Thus when we meet on that busy sidewalk, an orderly inter-
action occurs. When someone does not know or ignores the
"rules" for the greeting ritual, confusion results as
both interactants simultaneously go to the right and then
to the left in an effort to pass. Usually both come to
a virtual halt, agree on passage, and then proceed after
an exchange of embarrassed smiles or frowns.[60]

Sociologist Erving Goffman concurs with Scheflen's
theories and offers related ones. He, too, has observed

[59] Davis, p. 4.

[60] Scheflen, <u>Body Language</u>, pp. 37-39.

that universally men seem to develop their own ground rules
for routine encounters, such as that described in the pre-
ceding paragraph. Then, whether we are maneuvering on a
crowded sidewalk or standing in a crowded elevator, we
know the rules that apply in such a situation. Goffman,
in studying public order, selects normal behavior and
analyzes the rules that normally apply. He has found that
in these common encounters people trust one another to the
point that the rules for the interaction become semiconscious
assumptions.[61] Goffman also has focused on the rituals that
people go through in forming and maintaining relationships,
the concept of territoriality, and the use of face-saving
devices.[62] His research and published findings have done
much to advance the understanding of human communication
from a sociological point of view.

Not too distantly related from the sociological school
is that of the social-psychological. This focus, according
to Scheflen,

> involves looking at one person and then another
> and relating the behavior of the first to the
> behavior of the second, and vice versa. The
> behavior of one participant was often viewed as
> a stimulus for the first fellow, and so forth.
> This action-reaction model used to be dressed

[61] Davis, pp. 198-99.

[62] Harrison, p. 32.

up in the lingo of statistical information
theory.[63]

Social-psychologist Albert Mehrabian perhaps is the
most representative of this disciplinary approach. He
looks at the dimensions of human relationships and how
they are communicated. He believes the most important
function of nonverbal communication to be the transmission
of feeling inasmuch as we react emotionally to our environ-
ment.[64] Also, as a result of his research, he has found
three dimensions to be present in the making and maintain-
ing of relationships: (1) the immediacy dimension in which
the degree of liking or disliking is conveyed; (2) the
power dimension, which reveals status and the degree of
dominance or submission; and (3) the responsiveness dimension,
which communicates awareness and reaction. These major
messages, he argues, may be communicated by a number of non-
verbal behaviors, e.g., body movement, posture, eye contact,
head nods, or smiles.[65]

One of his most famous investigations has been to
determine the influence of vocal cues against facial and

[63] Scheflen, "Models and Epistemologies," p. 65.

[64] Knapp, Nonverbal Communication, p. 87.

[65] Albert Mehrabian, Nonverbal Communication (New York:
Aldine-Atherton, 1972), pp. 179-80.

verbal cues in the perceiving of attitudes. From his

findings, he was able to construct the following formula:

Perceived attitude = .07 (verbal) = .38 (vocal) =
.55 (facial)[66]

It is interesting to note that in attitude formation the

spoken words contribute only seven percent to the process,

according to Mehrabian. When the caution is given to "watch

what you say," perhaps the admonition should be extended to

include "and especially how you say it."

Although the social-psychological approach is a valid

one, it does have some shortcomings. Scheflen summarizes

them as follows:

> This early concept of interaction . . . ignored
> determinants in the behavior of the participants
> other than the behavior of each other. It was
> not observed, for instance, that the participants
> were taking turns according to a format. And
> the notion of alternate response did not take
> account of the fact that each participant's con-
> tribution could be determined by what he knew
> would come next as well as by what had just
> happened before.[67]

It might be said of each approach presented thus far that

the scholars may have been afflicted to some degree with

disciplinary tunnel vision. However, each area and its

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[66] Knapp, Nonverbal Communication, pp. 323-24.

[67] Scheflen, "Models and Epitstemologies," p. 65.

various facets had to be discovered and analyzed before the parts could be fitted into the whole.

The field of psychiatry has contributed much to the storehouse of knowledge on human communication. Psychiatrists have long been interested in the study of body movements as important clues to a person's character, emotions, and reaction to other people. Walburga von Raffler-Engel points out that a psychiatrist "looks at body movements primarily in their function of expression of self, and as an aid to establish the self in society."[68] As mentioned previously, Scheflen, the foremost spokesman for the psychiatric approach, asserts that language, verbal and nonverbal, primarily serves to control human behavior and to maintain the social order.[69] Arguing against the theory that the chief purpose of communication is the transmittal of new or novel information or the expression of individual feelings or thoughts, Scheflen states:

> . . . we must agree, of course, that both language and body movement can be used in this way. But ordinarily the transmittal is of old information and doctrines to new organisms or group members who become indoctrinated by the transmittal. Any sweeping claim that communication has the purpose [emphasis his] of individual expression or social change must be regarded as idealized myth--or else as a political gambit to give us the illusion of a freedom we rarely attain.[70]

[68] Raffler-Engel and Hoffer, p. x.

[69] Scheflen, Body Language, p. 10.

[70] Scheflen, Body Language, p. 132.

Scheflen, then, in perceiving of language as the regulatory glue that holds society together, sees as an absolute necessity a more holistic view of human communication, what he calls "the need to paint on a larger canvas." He dislikes the psychological slant currently in vogue in which, he says, "bodily behaviors are merely given psychodynamic meanings." Such an approach, he warns, leads us "to believe that crossing the legs 'means' that a person fears castration or that a particular facial expression or touch 'means' that one loves his mother." He concludes that this oversimplistic view "makes us vulnerable to political and economic machinations."[71]

A unique route taken in the study of nonverbal communication is designated the "effort-shape movement." Here the focus of concern is the "how" of body movement rather than the "what." For example, the effort-shape analyst "looks at the flow of movement--at tension and relaxation, strength and lightness, suddenness, and so on--and at shaping, . . . the forms the body makes in space."[72]

This unusual approach began with a system of dance notation devised by the European Rudolph Laban, originally an architect and painter. However, in the early 1900s he turned to choreography and put together his system for

[71] Scheflen, Body Language, p. xiii.

[72] Davis, p. 183.

recording dancer's movements. The system is called
"Labanotation" and has been used for over forty years for
recording ballet, folk and modern dance.[73] However, Laban's
work did not end with the devising of this system.

In fact, the work he had done on the dance notation
system was to serve him well for his next assignment,
investigating efficiency and fatigue in British industry.
His approach to these industrial studies differed from the
traditional Time-Motion study approach of finding the
shortest and quickest way to do things. Instead, Laban
tried "to design movement sequences that would be comfortable
and nonmonotonous." From these efforts came the Effort-Shape
system for describing and analyzing movement. The differences
between the Labanotation and Effort Shape can be explained
this way:

> In a sense, what Labanotation records is analagous
> to the notes and keys of music, while Effort-Shape
> is like music dynamics: pianissimo, forte, and
> so on. Laban found that with the same terms he
> could now notate, not just dance, but any inter-
> action, even people sitting around and discussing
> something together. Furthermore, his system
> described how a man related to the outside world
> (space) and how he discharged and modified his
> energy (effort). In demonstrating the interrela-
> tionship of these two things, he was attempting
> to get at the biological root of man's communica-
> tion. And he was able to be both objective and
> exact. As one of Laban's disciples, Irmgard
> Bartenieff, explained, "we can describe a 'proud'

[73] Davis, p. 183.

> posture, a 'seductive' walk, a 'demanding'
> gesture in terms of specific, objective move-
> ment features."[74]

Effort-Shape, according to Davis, has been applied in
many ways other than as a perspective for the study of
human nonverbal communication. Among these she lists
studies in child development, psychotherapy, and cross-
cultural research.[75] With the rapid and growing use of the
holistic approach to the study of communication, Effort-
Shape may assume an even greater role because of its
objectivity and exactness.

An approach that differs in almost every way from that
of Effort-Shape is the ethological one. It originated in
1872 with the publication of Charles Darwin's The Expression
of the Emotions in Man and Animals. This focus incorporates
the whole animal as the unit of analysis. Moreover, the
animal is studied within its natural setting with perhaps
certain behavioral patterns isolated for special attention.
Weitz points out that if the animal happens to be human,
no special adaptation of technique is considered necessary.
Since the ethologist nearly always comes out of a natural
science rather than a psychological background, she argues
that he is already a committed evolutionist who "does not

[74] Davis, p. 184.

[75] Davis, p. 184.

need to be convinced of the continuity of form and function

between human and other animals."[76] She offers this

additional explanation:

> Ethology can be thought of as a way of studying
> behavior in the same way that any other biological
> process, for example, digestion is studied.
> Naturalistic observation is the chief technique
> used, without experimental intervention, the hall-
> mark of behavioral psychology. Guiding theoreti-
> cal concerns are absent, at least at this stage
> of ethological work.[77]

Studying the nonverbal expressions of man in relation

to the behavior of animals seems such a practical approach

that it is difficult to understand why Darwin's observations

lay dormant for almost a century, only now to emerge as

"powerful insights."[78] No doubt, Darwin's association with

the theory of evolution damaged his professional credibility

in other areas. In light of modern-day findings, his con-

clusions seem mild and harmless, as this brief summary shows:

> Darwin's essential point was that expressive
> behaviors have survival value to the species and
> are maintained or dropped in the same ways as
> physical structures. Expressive behavior was
> viewed as being the vestige of biologically use-
> ful movements, which later became innately linked
> to emotional experience. Darwin felt that emotions
> were expressed in similar ways across species and
> that the expressive system was an important innate
> component of human and animal behavior.[79]

[76] Weitz, pp. 11-12.   [77] Weitz, p. 11.

[78] Harrison, p. 32.   [79] Weitz, p. 13.

Indeed, according to Davis, modern ethologists have found so many "startling similarities between the nonverbal behavior of man and that of the other primates" that some are now devoting themselves to "human ethology." They are concerned with such human physical behaviors as courting, rearing children, dominating others or signaling submission, and quarreling and making-up. Comparisons are then made with the way monkeys and apes handle the same relationships.[80]

Lest someone should feel that these "human ethologists" are going too far, Knapp offers hope. He cautions that although these remarkable similarities have been discovered in human and nonhuman primates, they should not bar our acknowledging some important differences, which he outlines as follows:

> We humans make little use of changes in body color, but we do have an extensive repertoire of gestures which attend our verbal language. We also seem to have a greater variety of facial blends. Our response repertoire is not nearly so limited to immediate and direct stimuli. And, although other animals are capable of complex acts, the level of complexity, control, and modification shown by this human animal may be hard to match--for example, smiling for purposes of ingratiation as well as to show pleasure.[81]

Other important work in nonverbal communication utilizing the ethological perspective has been done by R. A.

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[80] Davis, p. 4.

[81] Knapp, _Nonverbal Communication_, pp. 51-52.

Hinde (1972), who studied spontaneous nonverbal behavior in humans; N. Blurton Jones (1972), who compiled a series of ethological studies of child behavior; T. Alloway, L. Krames, and P. Pliner (1972), who collected a series of studies on comparative communication of affect; and S. Chevalier-Skolnikoff (1973), who identified clearcut similarities between primates and man in their nonverbal response systems.[82]

Another approach to the study of nonverbal communication is the cross-cultural one. According to Key, this perspective not only encompasses language groups but also is concerned with sub-cultures within a language group as well.[83] This method is still relatively unexplored as most investigations thus far have centered around Western societies and have been done by Western researchers.[84] In spite of these limitations, significant findings have resulted.

Perhaps the two most important studies from this perspective are those done by David Efron and I. Eibl-Eibesfeldt. Efron delineated the significant role of culture in shaping many of our gestures through a comparative study of body movements among Jewish and Italian

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[82] Weitz, pp. 12-13.

[83] Key, Nonverbal Communication, p. 136.

[84] Key, Nonverbal Communication, p. 50.

immigrants on New York's Lower East Side. It is interesting

to note that Efron's motivation for the study, according to

Davis, was a desire to refute the claims of Nazi scientists

that gestural differences are racially inherited. Efron

succeeded in proving his point, as Davis reveals in this

summary of his findings:

> What he found, to begin with, was that there were
> actually considerable differences in gestural style.
> Jews, when they gesticulated, kept their hands
> fairly close to the chest and face. Their upper
> arms were often held close against the sides of
> their bodies, so that movement began at the elbow.
> And their gestures were mostly one-handed: choppy,
> staccato, and full of nervous energy. Two people
> talking together would often gesticulate simulta-
> neously, and the speaker might move in close and
> actually seize the other by his lapels. . . . The
> Italian immigrants, in contrast, used more of the
> acting-out and sketching-out gestures, which tended
> to be expansive, sweeping, two-handed, symmetrical.
> Their hands moved in all directions, sometimes
> flowing out to arm's length. The Italians were
> also more apt to touch their own bodies than those
> of their listeners and their movements were
> spirited and forceful but also smooth and even.
> Efron went on to study first-generation Italians
> and Jews and found that those who maintained the
> traditional ties to the ethnic community retained
> its gestural style, while those who became assimi-
> lated to American life began to lose it. Efron
> even turned up hybrid gestures that partook a
> little of both the different styles.[85]

Davis adds an interesting footnote to history about Efron and

his controversial findings, which were published in 1941 in

a book entitled <u>Gesture and Environment</u>. In concern for his

[85] Davis, pp. 85-86.

personal safety, Efron dropped out of sight for the next
twenty years following the book's publication. Paul Ekman,
another communication researcher, traced him to Geneva,
where he had been on the staff of the International Labor
Organization. His book was republished in 1972.[86]

Eibl-Eibesfeldt takes a slightly different stance than
that used by Efron. He works from the cross-cultural premise
that "whole syndromes" of behavior manifest cross-cultural
similarities. He gives the following example:

> . . . one of the expressions people of different
> cultures may produce when angry is characterized
> by opening the corners of the mouth in a particular
> way and by frowning, and also by clenching the
> fists, stamping on the ground and even by hitting
> at objects. Furthermore this whole syndrome can
> even be observed in those born deaf and blind.[87]

Other syndromes of behaviors have been found among such
diverse cultures as those of Europeans, Samoans, Balinese,
Africans, Papuans, and Waika Indians. These include coyness,
embarrassment, and flirting. For example, one pattern of
embarrassment is the hiding of the face or just the mouth
behind one hand. Eibl-Eibesfeldt also has isolated certain
cross-cultural patterns for the expression of grief, such as

[87] I. Eibl-Eibesfeldt, "Similarities and Differences
Between Cultures in Expressive Movements," in Nonverbal
Communication: Readings with Commentary, ed. Shirley Weitz
(New York: Oxford Univ. Press, 1974), p. 22.

sagging shoulders, and for such basic expressive movements as those signaling "yes" or "no."[88]

Naturally, the commonality of these patterns intrigues one as to their origin. Eibl-Eibesfeldt has wrestled with this question and offers this opinion:

> It is highly improbable that these similarities are due to chance. It remains to discuss the various possible ways in which they could have arisen. Many of the expressive behaviour patterns in man are certainly passed on by tradition. This is clear with patterns that are unique to one culture, such as the lifting of the hat. Often the historical origin of such patterns, their spread and the way in which they are learnt during ontogeny, can be followed. However, whether there are universals that are culturally traditional still needs to be explored. Since those behaviour patterns that are culturally learnt vary between cultures (for example, the development of dialects and languages-- Erikson, 1966), it seems less probable that expressive patterns which occur as universals are culturally learnt. It is more likely that their universality is due either to common conditions in early upbringing channelling learning in a common manner, or that they are inborn.[89]

And so on this indecisive but intriguing note we conclude our look at the various disciplinary approaches. Although our review has been a brief one, it is sufficient to show the need for interdisciplinary study in the many-faceted field of nonverbal communication. In fact, so many views from so many different perspectives have been argued that Mary Ritchie

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[88] Eibl-Eibesfeldt, p. 25.

[89] Eibl-Eibesfeldt, p. 20.

Key's analogy of her own frustration at trying to devise

an orderly system for nonverbal communication research with

the story of the blind men and the elephant seems appropri-

ate for repeating. She laments:

> While I am trying to describe the tail, someone
> is shouting about the ear; when I get engrossed
> with the leg, voices clamor concerning the side
> of the elephant. I am somewhat amused these days
> to "tell it like it is!" The speaker is only
> able to tell what his [emphasis hers] part of the
> elephant is like! and even that part will change
> as the elephant gets older and fatter![90]

Another researcher, Adam Kendon, in writing of an inter-

disciplinary conference on face-to-face interaction, made

these observations about the participants and their subject:

> In the present conference (1975) psychology,
> linguistics, anthropology, ethology, mathematics,
> and sociology are all represented. Yet, at
> this conference at least, in listening to the
> discussion, one would not so readily recognize
> these different backgrounds. This would appear
> to be because each participant recognized that
> the study of the behavior of face-to-face inter-
> action is not adequately encompassed by any one
> discipline. . . .
> Several members of the present conference
> expressed some surprise at the apparent ease with
> which representatives of such a diverse range of
> disciplines were able to have profitable discus-
> sions. This ease could be accounted for by the
> joint recognition that no one existing discipline
> had an adequate language in which the phenomena
> could be discussed. . . .
> If there was a good sense of agreement among
> the participants that there is indeed a coherent
> field of study, yet one that cannot be contained
> within any existing discipline, there was also

[90] Key, Paralanguage and Kinesics, p. 13.

> agreement that this field is still in an emergent
> state. It was generally agreed however that an
> increasingly common set of approaches is emerging
> or, perhaps, an increasing degree of recognition
> of how the different approaches that different
> investigators follow fit together.[91]

What Kendon is describing, it seems to me, is the new holistic approach to the study of communication, an approach that is still many-faceted, but one in which an attempt is made to fit all the pieces together and then see what is there. One of the newer approaches to emerge from this broader concept is that of semiotics. It takes as its subject matter "patterned communication in all modalities," and its concern ranges from animal communication to linguistic analysis. According to Thomas A. Sebeok, an initiator of this focus, human semiotic systems consist of two varieties: (1) anthroposemiotic systems, chiefly language communication, unique to man, and (2) zoosemiotic systems, paralinguistic and nonverbal behavior, characteristic of other animals as well as man.[92] Weitz points out that linguistics is the science concerned with the first category and nonverbal communication with the second. Semiotics, she says, urges an ultimate joining of the two concerns.[93]

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[91] Adam Kendon, "Introduction," in Organization of Behavior in Face-to-Face Interaction, ed. Adam Kendon, Richard M. Harris, and Mary Ritchie Key (The Hague: Mouton Publishers, 1975), pp. 6-7.

[92] Weitz, p. 266.   [93] Weitz, pp. 266-77.

Another researcher who has employed the semiotic or
multichannel approach to the study of human communication
is Starkey Duncan. In his analysis of turn taking in con-
versation, he has found that various paralinguistic, linguis-
tic, and kinesic cues are combined to indicate that a speaker
has ended his statement and another may speak. These cues
may be displayed either singly or together. If together,
they may occur simultaneously or in tight sequences. Duncan
briefly summarizes these signals as follows:

1. Intonation: the use of any pitch level--
   terminal junction other than 2 2/ at the end
   of a phonemic clause. Following the Trager-
   Smith (1957) notation, the 2 refers to an
   intermediate pitch level, neither high (3) nor
   low (1). The single bar juncture "/" at the
   end of the clause refers to a sustention of
   the pitch at the level previously indicated.
   Thus, 2 2/ refers to a phonemic clause ending
   on an intermediate pitch level, which is sus-
   tained, neither rising nor falling, at the
   juncture between clauses. . . .
2. Paralanguage: Drawl: drawl on the final
   syllable or on the stressed syllable of a
   terminal clause.
3. Body motion: the termination of any hand
   gesticulation used during a speaking turn or
   the relaxation of a tensed hand position
   (e.g., a fist) during a turn. . . .
4. Sociocentric sequences: the appearance of one
   of several stereotyped expressions, typically
   following a substantive statement. Examples
   are "but uh," "or something," or "you know.
   . . ."
5. Paralanguage: Pitch/loudness: a drop in
   paralinguistic pitch and/or loudness in con-
   junction with one of the sociocentric sequences
   described above. When used, these expressions
   typically followed a terminal clause but did
   not often share the same paralanguage.

    6.   Syntax: the completion of a grammatical
        clause, involving a subject-predicate com-
        bination.[94]

Taking still a broader view of multichannel communica-

tion than does Duncan are Albert Mehrabian and Sheldon

Ksionzky. Their concern has been the determination of

certain basic verbal and nonverbal factors that can be used

to describe and measure social interaction. The six factors

they have derived through the use of a factor analytic

approach are (1) affiliative behavior, which is indicated

by such cues as talkativeness, positive verbal content, head

nods, hand and arm gestures, and pleasantness of facial

expression; (2) responsiveness, which is "primarily an index

of one's awareness of another's presence and one's reaction

to him"; (3) relaxation, which implies dominance and is

related to the "power" factor; (4) ingratiation, a "part of

a somewhat forced attempt to elicit a harmonious relation-

ship with another"; (5) distress, which is shown by active

avoidance of another by walking about and preoccupation with

various objects in the interaction setting; and (6) intimate

position, which is indicated by a close position. According

to the researchers, the first three factors are of major

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[94] Starkey Duncan, Jr., "Some Signals and Rules for
Taking Speaking Turns in Conversations," in Nonverbal Com-
munication: Readings with Commentary, ed. Shirley Weitz
(New York: Oxford Univ. Press, 1974), pp. 303-04.

importance and serve to characterize both actual social
behavior and the perceptions and judgments of social events,
persons, and objects. They are also significant in a wide
range of social situations.[95]

Because of the importance of this group of factors, the
method for determining them needs to be examined. The six
measures resulted from the factor analysis of twenty-six
"reliably scored" behavioral cues. Two hundred fifty-six
subjects and twenty-two "experimental confederates"[96] were
placed in a contrived social situation in which several
experimental manipulations were used to elicit a variety of
behaviors and to relate these to the individual differences
of the participants. The factors and the multichannel
components are presented in Table 1.[97] Mehrabian and Ksion-
zky conclude that "most of the results obtained in this and
related studies can be integrated, and additional future
ones anticipated in terms of the concepts of (1) expectation
of positive reinforcement and (2) expectation of negative
reinforcement from social interaction with another."[98]

[95] Albert Mehrabian and Sheldon Ksionsky, "Some Deter-
miners of Social Interaction," in Nonverbal Communication:
Readings with Commentary, ed. Shirley Weitz (New York: Oxford
Univ. Press, 1974), pp. 312-19.

[96] Each experimental confederate was trained for one hour
before his participation in the study and served as a confed-
erate with approximately twelve subjects (Mehrabian and
Ksionzky, p. 361).

[97] Mehrabian and Ksionzky, pp. 312-16.

[98] Mehrabian and Ksionzky, p. 328.

Table 1

FACTORS OF SOCIAL BEHAVIOR

Loading Direction
on factor

Factor I: Affiliative Behavior
    Total number of statements per minute   (+)
    Number of declarative statements per
      minute   (+)
    Percent duration of eye contact with
      confederate   (+)
    Percent duration of subject's speech   (+)
    Percent duration of confederate's
      speech   (+)
    Positive verbal content   (+)
    Head nods per minute   (+)
    Hand and arm gestures per minute   (+)
    Pleasantness of facial expressions   (+)

Factor II: Responsiveness
    Vocal activity   (+)
    Speech rate   (+)
    Speech volume   (+)

Factor III: Relaxation
    Rocking movements per minute   (-)
    Leg and foot movements per minute   (-)
    Body lean   (+)

Factor IV: Ingratiation
    Pleasantness of vocal expression   (+)
    Negative verbal content   (-)
    Verbal reinforcers given per minute   (+)
    Number of questions per minute   (+)
    Self-manipulations per minute   (+)

Factor V: Distress
    Percent duration of walking   (+)
    Object manipulations per minute   (+)
    Arm position asymmetry   (+)

Factor VI: Intimacy
    Shoulder orientation away from
      confederate   (+)
    Distance from confederate   (-)
    Head turns per minute (looking around)   (+)

Source: This is a modified version of Table 8.3 of Mehra-
          bian's <u>Nonverbal Communication</u>, published by
          Aldine-Atherton, Inc., in 1972. This version is
          contained in an article entitled "Some Determiners
          of Social Interaction," by Albert Mehrabian and
          Sheldon Ksionzky, in <u>Nonverbal Communication:</u>
          <u>Readings with Commentary</u>, ed. Shirley Weitz (New
          York: Oxford University Press, 1974), p. 314.

Extending multichannel analysis even further is the
systems approach to the study of communication. Scheflen,
in describing this perspective, says that "a new order of
thinking" has emerged in the last generation which has
resulted in the development of three models of human com-
munication: (1) programmatic, (2) spatial, and (3) cogni-
tive.[99] Each will be examined briefly.

In the programmatic models, which Scheflen also calls
the "format and signal models," the focus is upon inter-
action, but an interaction that is governed by a convention
or format. Cues or signals that regulate the process are
of analytical importance. Although these programmatic
models go beyond seeing communication in simple expression
or response terms, Scheflen feels they are inadequate in a
number of ways.[100]

First, he argues, they ignore the relation of the
format to institutional and cultural contexts, thereby
suggesting that "the formats of an interactional event

[99] Scheflen, "Models and Epistemologies," p. 71.

[100] Scheflen, "Models and Epistemologies," p. 71.

spring de novo from the minds of the participants or else
are universal for homo sapiens."[101] The interactional
event does not occur in isolation but has both a past and
a future.

A second difficulty in using the paradigmatic format
is the tendency of the psychotherapists and social psychol-
ogists to describe interaction as a relationship between
two people or between a person and a group of people in
institutional dyadic situations. The roles are usually
asymmetrical with one member of the dyad doing most of the
talking. Scheflen points out that this situation results
in the interaction being "pictured as a long monologue to
which rather short responses are occasionally made." Of
course, such a picture gives a distorted view of a typical
communicational interaction.[102]

A recent offshoot of the paradigmatic format described
above is the seminar. Here participants are said to take
turns in speaking, but, Scheflen cautions, the emphasis
usually is upon the speech behavior of the participants with
other forms of communicative behavior "relegated to positions
labeled 'subverbal,' 'nonverbal,' or 'coverbal.'"[103]

[101] Scheflen, "Models and Epistemologies," p. 72.

[102] Scheflen, "Models and Epistemologies," p. 72.

[103] Scheflen, "Models and Epistemologies," p. 72.

Scheflen cites the selection of participants as another
major difficulty with using academic activities or psycho-
therapy as a paradigm for human interaction. For example,
if the researcher selects subjects from among students or
clients, they, in all likelihood, will be relative strangers.
Thus their strongest affiliations are with people who are
not present at the interactions under study. Both verbally
and nonverbally, individuals act and react differently among
strangers than among friends. Hence, if the investigator is
studying verbal and nonverbal interaction during a meal, the
results will be very different for strangers than for friends.
Among strangers, a person tends to hold his body and emotions
in check; among friends, an individual "feels free" to relax,
flail his arms, laugh heartily, and show approval or disap-
proval with appropriate facial expression.[104] In the
contrived situation, the participants are not "themselves";
they are actors.

Scheflen also is concerned with the practice of inter-
dicting courtship and other important nonlanguage sequences
into academic scenes and psychotherapy in which the political
and economic contexts of everyday interactions are absent.
He objects not only to the artificiality of the situation
but also to the overemphasis he feels is given the lexical

[104] Scheflen, "Models and Epistemologies," p. 72.

or verbal parts of the interaction. He concludes his

analysis this way:

> . . . the use of lexical interaction is one
> shape of communicational behavior which charac-
> terizes academic and other institutional meetings.
> We academics have been so devoted to the study of
> this kind of human activity that sometimes we
> have failed even to include task and nonlanguage
> activities in our definition of communication.
> And we have spoken as though communication has,
> of necessity, an interactional form. Now,
> obviously, I am not denying the right of academic
> workers to study such scenes nor do I wish to
> denigrate their importance in human affairs, but
> I am saying that WE MUST NOT USE THESE SPECIAL
> TYPES OF COMMUNICATIONAL STRUCTURE AS PARADIGMS
> FOR HUMAN COMMUNICATION IN GENERAL [emphasis
> his]. We must also avoid another simplistic idea
> about human communication. We cannot afford to
> fall into a dichotomy which holds that the language
> behavior of a communicational event is interac-
> tional or communicational and the nonlanguage
> behavior is simply a means of cueing who is to
> speak or signaling what is supposed to happen.[105]

In order to compensate for these inadequacies inherent

in the format and signal models, Scheflen advocates a more

complex approach that embraces a great many kinds of

communicational behavioral activities heretofore not included

in the simpler models. He points out that to limit the

model just to the interactional sequence in which the

behavior of one participant influences the next behavior of

at least one other participant, and so on back and forth, is

to ignore the fact that behavioral interdependence is highly

[105] Scheflen, "Models and Epistemologies," p. 73.

relative in degree and implication. He cites the following

examples:

> . . . At one extreme, two participants can become
> so involved with each other that they disregard
> the actions of others, ignore the setting and
> violate the customary agenda. In some cases the
> behavior of a first speaker does nothing more
> than tell a second when he can begin to speak.
> In still other situations participants try to
> shout each other down in order to state positions
> which they came prepared to advance. Thus their
> behavior shows no discernible influence of one on
> another.
> In still other communicational events two or
> more participants do show a marked degree of inter-
> dependence of behavior, but they do not respond to
> each other sequentially. Instead they carry out
> separate parts in a conjoint task and so on at the
> same time. Or they speak together in agreement.
> Or one states a position to which others nod
> assent. So in these cases we must describe a
> format of coaction.[106]

In addition to the coactional and interactional communi-

cational behaviors just described, Scheflen also includes a

category which he calls regulatory or instructional behavior.

This kind of communicational behavior can be linguistic,

paralinguistic, tactile, kinesic, postural, and/or proxemic.

Moreover, it can be built into the shape and decor of the

setting and into the dress and movement styles or parakinesic

qualities of movement. Scheflen concludes that this "class

of behavior serves to clarify ambiguities in the meaning of

statements or acts, qualify what is being said or done,

[106] Scheflen, "Models and Epistemologies," pp. 73-74.

designate role and speaking order, direct timing and co-

ordination, and so on." Thus, these behaviors, he asserts,

"have a regulatory or cybernetic function to the performances

of a communicational program" and are distinguished from the

official communicational activities. He calls them "meta-

communicational," borrowing a term coined by Bateson. The

prefix "meta-" describes a relation of behavior; thus

"metacommunicational" describes a relation of regulatory

behavior to customary format activity. The following

examples of metacommunicational behavior help to explain

this concept:

> In the simplest case a participant simply adds
> a metacommunicative act to his performance. For
> example, a speaker drops his pitch, eyes and head,
> sits back and folds his arms as he finishes speak-
> ing and thus relinquishes the floor. He shrugs
> his shoulders as he declares that he is not sure
> about what to do. He turns and gazes at the
> others, raises his pitch and his eyebrows and thus
> signals that someone else is to speak in response.
> But one participant can behave metacommunicationally
> AS SOMEONE ELSE SPEAKS OR ACTS [emphasis his]. He
> raises his eyebrows, for instance, or imitates the
> stereotyped look of disgust with his face.
> But sometimes these metacommunicative acts are
> carried out in concert. ALL listeners raise
> their brows, for instance, or several of them
> object to what has just been said. And metacom-
> municative activity may not be directed to the
> actions of a single other, but instead, to the
> nature of the relationship within the group. Thus
> frowns or other behaviors of censure may be directed
> at a dominance battle. So the METACOMMUNICATIVE
> PROCESS CAN BE DIRECTED TO AN INTERACTION. In fact
> a process of kinesic and lexical monitoring is
> ordinarily carried out at all phases of a communi-
> cational activity, and in this case the metabehavior

may serve to maintain the customary sequencing of the total program.[107]

From this discussion and the examples, one can discern readily that a communicational act goes far beyond a simple notion of cues and signals. There are many types of metacommunicational behavior, which Scheflen has arranged in five successively more complicated orders. These are:

1. Metabehavior 0 consists of the simple terminal and juncture behavior which is used between each of the units in a format of action. This behavior is suprasegmental in language but also kinesic (Birdwhistell 1970) and postural (Scheflen 1964).
2. Metabehavior 1 consists of simple vocal or kinesic cues, which indicate who is to act and when one is to begin.
3. Metabehavior 2 is procedural and judgmental. It consists of monitors or warnings of deviation (Scheflen 1972), instructions to hold enactment to the usual format, and judgments, criticism, and evaluations in accordance with the standards of a culture of institution. Lexically and consciously this class of metabehavior has been elaborated as a body of prescriptions for activity and etiquette, a set of values and rationales for the activities in progress and, in fact, the models of and theories about a particular kind of kind of experience.
4. Metabehavior 3 consists of a set of tactics which are employed wittingly or by custom to alter the performance of a format, change the relationships of participants, and manipulate the outcome. Common examples are the use of courtship behavior, dominance, or lexical persuasion.
5. Metabehavior 4 consists of procedures for inventing, modifying, or innovating formats

[107] Scheflen, "Models and Epistemologies," pp. 75-76.

> themselves. This complicated level of com-
> municative behavior corresponds to the one
> Miller, Galanter, and Pribram (1960) called
> "plans for making plans."[108]

For those who might protest that his scheme is too compli-
cated, Scheflen responds that "chances are it will prove
much too simple to define the multiple relations of human
communication."[109] His classification does serve to illus-
trate how far communicational research has progressed in a
relatively short period of time.

Another group of communicational models set forth by
Scheflen is the spatial, network, and territorial models.
He states that the principal shortcoming of these models
has been "a neglect of the spatial dimension of communica-
tional events." He does point out, however, that work upon
the proxemics of face-to-face interaction, the spatial
organization of interactional events, and territoriality is
progressing. He points to the work of the ethologists in
regard to territoriality as becoming increasingly useful for
the study of communication.[110]

The third, and perhaps most complex, systems approach
presented by Scheflen is the neuropsychological model, a
blend of the neurophysiological and psychological approaches.

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[108] Scheflen, "Models and Epistemologies," pp. 77-78.

[109] Scheflen, "Models and Epistemologies," p. 78.

[110] Scheflen, "Models and Epistemologies," pp. 80-81.

Formerly, the neurophysiologist was concerned with the separate cortical areas or brain centers; now the emphasis is upon the connections of neuronal systems. Psychologists too have changed their focus from being preoccupied with observing behavior in order to abstract individual traits or to infer intrapsychic forces to observing patterns of behavior in communicational contexts. From this basis, patterns of cognitive behavior are deduced. According to Scheflen, the old differences between neurophysiological and psychological approaches tend to disappear when structural and process models like these are used. K. H. Pribram labeled this combined approach "neuropsychological."[111]

Pribram, along with associates G. A. Miller and E. Galanter, used the neuropsychological approach in constructing a model of cognitive processes. In doing so, they brought together the principles of structural linguistics and computer science to define patterns of images and plans which, they believed, must correspond to the patterns of communicative behavior which one can observe a participant to perform. Such patterns, according to these researchers, were modified by the perception of signals in a communicational exchange.[112] Pribram has gone on to expand these theories, but the complexity of the findings go beyond the scope of

[111] Scheflen, "Models and Epistemologies," p. 81.

[112] Scheflen, "Models and Epistemologies," p. 81-83.

this study. However, this brief discussion illustrates well
the ever-changing and more complex nature of communication
research.

This review of the historical perspectives and various
approaches to the study of human communication reveals that
no single approach or discipline can cover all aspects of
the subject. Weitz prophesies that the day may not be too
far off when a unified approach will be used for all research
on the human communication system, both verbal and nonverbal.[113]
Certainly, this does seem to be the direction in which
researchers are moving. In fact, the research and findings
on boredom indicators in the classroom to be presented in
Chapter Five of this study will reflect the multichannel
approach to the study of human communication in a naturalis-
tic setting, the classroom with an actual class in session.
However, before moving on to that analysis of classroom
behavior, the relationship between linguistics and kinesics
needs to be explored more fully, and that will be the subject
of Chapter Three.

[113] Weitz, p. 267.

Chapter III

THE INTERRELATEDNESS BETWEEN LINGUISTICS

AND KINESICS

Before the relationship between linguistics and
kinesics can be understood completely, it will be
necessary to study the definition and province of each.
Since linguistics is the forerunner of and the model for
kinesic research, it will be discussed first.

The terms linguist and linguistics are troublesome,
and confusion still exists as to what a person engaged in
language study should be called and, to an even greater
extent, as to what he does. In an article entitled "The
Linguist and Language," Albert B. Cook III writes that
many people assume the linguist to be a polyglot, i.e.,
one who speaks several languages fluently. According to
Cook, another common, but erroneous, belief is that the
linguist is a language physician who diagnoses incorrect
and prescribes correct usage. Because of these mistaken
notions, a search was launched for a word that would
convey in a more precise manner the nature of the occupa-
tion. Cook points out that the term "linguistician" has
been suggested but rejected because some feel that it is

too "farcy" or that it is too much like "mortician."
Likewise, "linguistic scientist" has not been acceptable
for fear the layman would associate it too closely with
the laboratory and the test tube.[1] The search for the right
word continues and becomes more difficult as the province
of linguistics widens and the role of the linguist expands.

In recent studies Randall Harrison and Victor Yngve
have examined traditional linguistic concerns and concepts.
Their observations provide a good starting point for tracing
the progression of thought that now has led to the premise
that linguistics and kinesics are interrelated parts of the
communication process.

Classically, according to Harrison, the linguistic
scholar's concern was with recording and analyzing the
verbal code, describing it, comparing languages, tracing
their evolution over time. Thus "the focus was on the
central system, divorced from the individual speaker, shed
of idiosyncracies, extracted from the social context."[2]
Today's linguistic researcher has these same concerns,
plus many more, and the focus has been expanded and
redirected. These changes will be explored more fully
later in the discussion.

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[1] Albert B. Cook III, "The Linguist and Language," in
Language: Introductory Readings, ed. Virginia P. Clark, Paul
A. Eschholz, and Alfred F. Rosa, 2nd ed. (New York: St.
Martin's Press, 1977), p. 7.

[2] Harrison, p. 104.

In his studies, Yngve has looked at the conceptual structure of linguistics and has concluded that the view accepted today is a traditional one "carried down almost unchanged from the Greek thought of 300 to 150 B.C.," which was developed in that era by Stoic philosophers and Alexandrian literary scholars. He explains the concept this way:

> Linguistics is usually defined as the scientific study of language. Language is defined as the relation between sound and meaning. This relation is expressed in terms of grammar and lexicon, which lay out the rules of the language, and implicitly or explicitly specify what expressions belong in the language and what expressions fall outside it. In linguistics, grammar and lexicon play the role of a unifying theory that serves to relate the phenomena to one another and explain them.[3]

The "scientific study of language" to which Yngve refers embraces all aspects of language production--units, nature, structure, modifications of language, languages or a language, including phonetics, phonology, morphology, accentuation, syntax, semantics, general or philosophical grammar, and the relation between speech and writing.[4] With such a large assortment of concerns and the complexity of each, it was

[3] Victor H. Yngve, "Human Linguistics and Face-to-Face Interaction," in Organization of Behavior in Face-to-Face Interaction, ed. Adam Kendon, Richard M. Harris, and Mary Ritchie Key (The Hague: Mouton Publishers, 1975), p. 50.

[4] Mario Pei, Glossary of Linguistic Terminology (New York: Columbia University Press, 1966), pp. 149-50, 224.

necessary that a classification system be devised. The

Glossary of Linguistic Terminology lists the following

categories and their functions:

> Descriptive Linguistics--describes languages
> and dialects.
>
> Structural Linguistics--analyzes the structure
> of a language.
>
> Historical or Diachronic Linguistics--deals with
> chronological changes in language.
>
> Synchronic Linguistics--deals with one or more
> languages at the same point in time.
>
> Comparative Linguistics--may be synchronic,
> dealing with relationships at one point in time
> between different languages having a common origin;
> or diachronic, comparing different forms of one
> language at different points in time.
>
> Applied Linguistics--refers to the use by language
> teachers of the findings of linguists.
>
> Contrastive Linguistics (or contrastive analysis)--
> compares the natural language of the learner with
> the target language, to give special attention to
> areas of maximum contrast.
>
> Psycholinguistics--explores the relationships
> between language and the behavioral characteris-
> tics of those who use it.[5]

Even though this listing of linguistic concerns is an

impressive one, it would be wrong to assume that linguistics

always has dwelled in a house of respectability. Edward

Sapir, in presenting his views on language almost sixty

years ago, pointed an accusing finger at the "outside

public," who, he said, "is half inclined to dismiss linguistic

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[5] Pei, p. 150.

notions as the private pedantries of essentially idle minds."[6]

If this attitude still prevails, it attracts little notice,

or it may lie buried under the avalanche of global problems

that make evident the necessity to understand and improve all

aspects of human communication.

Sapir, of course, was not arguing for a "sterile and

purely technical attitude" toward the study of language.

Even in 1921, he could see a need for a broadening of the

linguistic perspective. He reasons,

> Quite apart from their intrinsic interest, linguis-
> tic forms and historical processes have the greatest
> possible diagnostic value for the understanding of
> some of the more difficult and elusive problems in
> the psychology of thought and in the strange,
> cumulative drift in the life of the human spirit
> that we call history or progress or evolution.
> This value depends chiefly on the unconscious and
> unrationalized nature of linguistic structure.[7]

The interesting thing about these ideas is that Sapir saw

language not as some isolated function of the vocal apparatus

of man whose spoken utterances could be translated in writing

through the use of a different set of symbols from those used

in speaking words, but as a part of the total life and history

of mankind. Moreover, he believed that the nature, structure,

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[6] Edward Sapir, Language: An Introduction to the Study
of Speech (New York: Harcourt, 1921), p. v.

[7] Sapir, pp. v-vi.

and use of language could be studied scientifically and analyzed, and that the findings' usefulness would not be confined to the linguistic scholars.

It was also Sapir who recognized that words were not the only channel for conveyance of meaning. Specifically, he cited as examples of "linguistic transfer" the Morse telegraph code and different gesture languages. However, he maintained that "the intelligibility of these vaguer symbolisms can hardly be due to anything but their automatic and silent translation into the terms of a fuller flow of speech."[9] The dots and dashes of the Morse Code and the gestures were not "langauges" as such; they served as temporary replacements for words. Nevertheless, with Sapir's recognition of a somewhat nebulous link between verbal and what was later to be called "nonverbal" language, he had at least found the door through which later students and scholars could enter. Birdwhistell pays him homage in this regard, saying that it is Sapir's students and other linguists strongly influenced by his work who have contributed most to the systemization of body motion research.[10] In particular, Birdwhistell cites the work of Sapir-influenced scholars George L. Trager and Henry Lee Smith, Jr. for providing an atmosphere and the special guidance needed in the formulation

[9] Sapir, pp. 20-21.

[10] Birdwhistell, Kinesics and Context, p. 182.

of kinesics as a science. He also applauds Sapir's student

John Broderius for his "constant insistence that kinesics

be firmly based in prekinesic research and [that it] not be

lost 'in the thin stratosphere of intuition.'"[11]

Birdwhistell's own interest in the study of body motion

began in 1946 during an anthropological field study of the

Kutenai Indians in western Canada. He became intrigued with

the fact that the Indians looked entirely different when

speaking English than they did when speaking Kutenai. He

observed that their smiles, head nods, and movements of the

eyebrows all changed. His observation continued to "haunt"

him even after he left the area.[12]

With his interest thus piqued, he began actual body

motion studies in the late 1940s. He initially theorized

"that the really basic human emotions, such as joy, fear,

or sexual attraction, must be expressed the same way in all

cultures and that therefore there must be some gestures or

expressions that are universal to mankind."[13] To prove his

theory, he examined American, German, French, Italian, and

Spanish gestural behavior, and focused on such "universals"

as the smile and the scowl. From this initial work he

concluded that "gestures not only do not stand alone as

[11] Birdwhistell, Kinesics and Context, p. 182.

[12] Davis, p. 26.

[13] Davis, p. 26.

behavorial isolates but they also do not have explicit and
invariable meanings."[14] Davis points out that the word
"meaning" is the "crux" of Birdwhistell's statement since,
anatomically speaking, all men smile, but the meaning of
smiling is different in different cultures. She cites as
examples the high smile area of the southern United States
and the low smile area of New England. She says that a
person who does a lot of smiling in the Great Lakes region
may be asked what is so funny, whereas in Georgia someone
who does not smile much may be asked if something is wrong.
This difference, according to Davis, does not mean that the
people who smile a lot are happier; rather it is that as
children we learn in which situations we should smile and
in which ones we should not, and that in different parts of
the country we learn differently.[15]

Having discarded his "universals" theory, Birdwhistell
next looked at the kinds of gestures that have a conscious,
understood meaning, such as the salute and the hitchhiker's
thumbing. He found that an army private experienced in
saluting can "dignify, ridicule, demean, seduce, or promote
the recipient of the salute" just by what he does with his
face or body stance, or by the speed and duration of the
arm movement, or simply by choosing to salute in a situation

[14] Birdwhistell, Kinesics and Context, p. 80.

[15] Davis, pp. 26-27.

in which a salute is not at all appropriate.[16]   According
to Davis, "It was Birdwhistell's realization that even
gestures such as these are only partial acts, which must
be accompanied by other gestures to have meaning, that led
to one of the real breakthroughs in the development of
kinesics."[17] Birdwhistell explained his discovery this way:

> This original study of gestures gave the first
> indication that kinesic structure is parallel
> to language structure. By the study of gestures
> in context, it became clear that the kinesic
> system has forms which are astonishingly like
> words in language. This discovery in turn led
> to the investigation of the components. At least
> as far as English, American, and German kinesic
> systems are concerned, it has become clear that
> there are body behaviors which function like
> significant sounds, that combine into simple or
> relatively complex units like words, which are
> combined into much longer stretches of structured
> behavior like sentences or even paragraphs.[18]

Firmly convinced that an analogy does exist between kinesics
and language, Birdwhistell began to develop his system for
the classification of body movement. He draws the following
parallels: (1) Whereas the spoken language is comprised
of rudimentary sounds called "phones," the smallest kinesic
unit is the kine, "a mere twitch, the slightest perceptible
movement."[19] (2) "Phonemes" constitute the next unit in

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[16] Birdwhistell, Kinesics and Context, pp. 79-80.

[17] Davis, p. 28.

[18] Birdwhistell, Kinesics and Context, p. 80.

[19] Davis, p. 29.

the spoken language, of which there are forty-six in English.
H. A. Gleason, Jr., in An Introduction to Descriptive
Linguistics, defines a phoneme "as a minimum feature of the
expression system of a spoken language by which one thing
that may be said is distinguished from any other thing
which might have been said."[20] Gleason points out that
although the human voice can produce an almost infinite
variety of sounds, there are only about one hundred that
are actually used in the formation of intelligible speech.[21]
Corresponding to the phonemes in the spoken language is a
group of larger and more significant body movements called
kinemes. Their meaning is derived from context. Americans
have only fifty or sixty kinemes for the whole body. Of
this number, thirty-three are for the face and head. Although
any number of movements are anatomically possible, meaning is
attached to only these few.[22] The others are filtered out.

The linguist labels interchangeable phones as "allophones
of the same phoneme." Harrison points out that in decoding
language, we lump similar sounds together and ignore the
discriminable differences. Instead, we focus on the

[20] H. A. Gleason, Jr., An Introduction to Descriptive
Linguistics, rev. ed. (New York: Holt, Rinehart and
Winston, 1955), p. 9.

[21] Gleason, pp. 252-54.

[22] Davis, p. 29.

important speech categories, the phonemes. He cites as an
example the fact that in some languages the "p" and "b" sounds
are allophones of a common phoneme, but in English they are
two different phonemes and are discriminated.[23] This same
principle has been applied by Birdwhistell to the analysis
of movement. As a person moves, thousands of movements can
be discriminated. These basic discriminations are called
"kines," but only some of them really make a difference be-
cause many of them are "allokines" of the same kineme. For
example, a high speed camera might reveal several hundred
discriminable positions in the closing of an eyelid. Bird-
whistell has found, however, that in normal viewing we only
discriminate eleven positions, and only six of these are
really important for communication. These six--open eyed,
droopy lidded, squinting, eyes squeezed tight, just open,
and closed--would be designated kinemes by Birdwhistell.[24]
(3) Occupying the next rung on the language hierarchical
ladder are the sequences of phonemes called "morphemes."
Like the phones, there are some "morphs" that are discrimi-
nately different from others, some that are interchangeable,
and some that are "allomorphs" within a single morpheme.
Accordingly, Birdwhistell selected the term "kinemorph" to
designate the unit of meaning formed by the combining of
kinemes. Harrison illustrates by way of example:

[23] Harrison, pp. 70-71.   [24] Harrison, p. 71.

> The closed eye, by itself, might not elicit any
> particular meaning. But combined with a furrowed
> brow and a downturned mouth, it would become part
> of a word-like configuration meaning: sadness.
> On the other hand, a closed eye combined with a
> yawning mouth might have a different meaning:
> fatigue.[25]

The analogy between language and movement extends even further. For the linguist, of course, the next move would be to examine the word in phrases, clauses, and sentences, finally considering the utterance in its total context of the discourse. Harrison points out that the "kinesic researcher similarly moves to total acts, to actions involving several acts, and finally to the action in its larger context."[26] Birdwhistell offers this somewhat scientific explanation of the process:

> . . . kinemorphs, . . . are further analyzable into
> kinemorphemic classes which behave like linguistic
> morphemes. These, analyzed, abstracted, and com-
> bined in the full body behavioral stream, prove to
> form complex kinemorphs which may be analogically
> related to words. Finally, these are combined by
> syntactic arrangements, still only partially under-
> stood, into extended linked behavioral organizations,
> the complex kinemorphis constructions, which have
> many of the properties of the spoken syntactic
> sentence.[27]

The parallels between linguistic and kinesic systems of analysis are presented in Table 2.

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[25] Harrison, p. 71.   [26] Harrison, p. 71.

[27] Birdwhistell, Kinesics and Context, p. 101.

TABLE 2

A COMPARISON OF THE LINGUISTIC AND KINESIC

SYSTEMS OF STRUCTURE

LINGUISTIC	KINESIC
Phonemes--sounds	Kine--isolable element of body motion
Morphemes--syllables	Kineme--an assemblage of movements in a given body area
Morphs--words	Kinemorph--kines combined with other kines to make isolable units
--sentences	Kinemorphene
--paragraphs	Complex kinemorphic con-struction--when kines from two or more areas form a complex, which, under contrast or analysis behaves exactly like a kinemorph
Allomorphs	Allokine
Paralanguage	Parakinesis

The analogy between the structure of the spoken language
and the structure of body movement painstakingly set forth
by Birdwhistell opened the door for scientific kinesic
research. In order to ensure the accuracy and objectivity

of the research and findings that would follow, Birdwhistell
set forth the following seven basic assumptions that must
underlie kinesic research:

> 1. Like other events in nature, no body movement
> or expression is without meaning in the context
> in which it appears.
>
> 2. Like other aspects of human behavior, body
> posture, movement, and facial expression are
> patterned and, thus, subject to systematic analysis.
>
> 3. While the possible limitations imposed by
> particular biological substrata are recognized,
> until otherwise demonstrated, the systematic body
> motion of the members of a community is considered
> a function of the social system to which the group
> belongs.
>
> 4. Visible body activity, like audible acoustic
> activity, systematically influences the behavior
> of other members of any particular group.
>
> 5. Until otherwise demonstrated such behavior will
> be considered to have an investigable communica-
> tional function.
>
> 6. The meanings derived therefrom are functions
> both of the behavior and of the operations by which
> it is investigated.
>
> 7. The particular biological system and the special
> life experience of any individual will contribute
> idiosyncratic elements to his kinesic system, but
> the individual or symptomatic quality of these ele-
> ments can only be assessed following the analysis
> of the larger system of which his is a part.[28]

In turning to the methodology of kinesic research, Bird-
whistell began his search for an annotational system that
would be accurate, not too difficult to learn or to employ,

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[28] Birdwhistell, Kinesics and Context, p. 181.

and that would not be too limited in scope for use in broad

kinesic research. He reviewed the systems of Craighead

(1942), Lifer (1940), and Pollenz (1949), and found them

useful for recording dance patterns but too limited in scope

for recording complex human movement patterns. He liked

the recording system provided by the Laban school for in-

dustrial studies, but in essence it too was inadequate.[29]

To solve the problem, he invented his own "ingenious short-

hand system," which Davis describes as follows:

> For every kine, Birdwhistell conceived a shorthand
> symbol. The direction of movement of each kine is
> recorded by still another set of symbols. The
> notations are simple and often graphic: for example,
> a cocked head is indicated by a capital H (for head)
> with a line drawn diagonally through it. A
> "toothy" smile is a crescent with teeth blocked in,
> and for hunched shoulders the symbol is a capital
> T with the T-bar bent gently upward at each end,
> like the roof of a pagoda.[30]

Birdwhistell's recording system, with some adaptations, is

still used by other scientists. It is particularly func-

tional for the research technique called microanalysis,

which Davis describes as an "incredibly painstaking, time-

consuming procedure"[31] She comments further on the technique:

[29] Birdwhistell, Kinesics and Context, p. 181.

[30] Davis, pp. 29-30.

[31] Davis, p. 30.

> . . . to do microanalysis the researcher must
> record everything that goes on--every eyebrow
> lift, every hand motion and body shift--in twenty-
> four frames for each second of film. He makes
> this record, using the notation system, on huge
> sheets of graph paper, and the result looks a bit
> like a conductor's orchestral score. Birdwhistell
> told me that it takes him an hour to analyze one
> second of film, and commented, "I noticed once
> that in one afternoon I looked at two and a half
> seconds of film one thousand and eight times."[32]

After this paperwork is finished, Birdwhistell then checks
it over looking for patterns of regularities. According to
Davis, the search is not difficult, for in twenty minutes of
film, the same sequences are repeated literally hundreds
of times. Body movement is repetitious.[33]

To those who would demand more of Birdwhistell's meth-
odology than he intends for its purpose, he defines by function
the various roles of human interaction researchers as follows:

> Having determined the systematic nature of human
> interaction and having recognized that membership
> is attained in a social system only after patterned
> experience in this system, it is the task of the
> behavioral scientist to ascertain what it is that
> is learned which provides any particular system
> with its particular dynamic. It is not my task,
> but that of the psychologist, to determine how the
> organism incorporates the experiences which make
> him a human being. Neither is it my task to map
> the internal relationships of the physiological
> systems out of which emerge the perceptible shifts
> in the various parts of the body. As an anthropo-
> logical kinesicist I am concerned with the learned
> and visually perceptible shifts in the body which

[32] Davis, p. 30.

[33] Davis, p. 30.

> contribute to the peculiar communication systems of particular societies. Kinesics is concerned with abstracting from the continuous muscular shifts which are characteristic of living physiological systems those groupings of movements which are of significance to the communicational process and thus to the interactional systems of particular social groups.[34]

Birdwhistell, of course, is not the only researcher/ scholar to see the interrelatedness between linguistics and kinesics. For example, Edward T. Hall, an anthropologist, believes that all of culture, which he defines as communication, can be analyzed into "primary message systems." Communication is seen in man's use of time and space, his work and play activities, in learning, defense, and sexuality.[35] Each of these areas of life contains messages that are structured very much like language. Instead of the kines, kinemes, and kinemorphs used by Birdwhistell, Hall identifies what he calls isolates, sets, and patterns, concepts that are comparable to phonemes, morphemes, and grammar or syntax in spoken language.[36] Using these linguistically based concepts, Hall explores the language of behavior, which he labels "the silent language."[37]

[34] Birdwhistell, Kinesics and Context, p. 192.

[35] Edward T. Hall, The Silent Language (Greenwich, Conn.: Fawcett, 1959), p. 10.

[36] Hall, p. 96.

[37] Hall, p. 10.

Adam Kendon, a social psychologist, also has conducted many studies concerning the relationship between language and body movement. From his work, he has drawn the following five hypotheses, which are summarized by Margaret Bullowa in a recent publication:

1. There exist related hierarchically ordered sets of units for speech and body motion.

2. "Each speech unit is distinguished by a pattern of movement and of body-part involvement in movement."

3. "Prior to each speech unit there is a change in position of one or more body parts" ("speech-preparatory" movement).

4. Time between speech-preparatory movement and onset of speech is related to the size of the speech unit: earlier and more extensive for larger units.

5. . . . when the form of a movement matches the lexical content of speech, the movement begins before the lexical item it marks but ends when the lexical item ends. He [Kendon] comments on this last point:

It seems that speech-accompanying movement is produced along with the speech, as if the speech production process is manifested in two forms of activity simultaneously: in the vocal organs and also in bodily movement, particularly in movements of the hands and arms (1972:205).[38]

Although the interrelatedness between language and body movement has been established and demonstrated to be useful

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[38] Margaret Bullowa, "When Infant and Adult Communicate How Do They Synchronize Their Behaviors?" in Organization of Behavior in Face-to-Face Interaction, ed. Adam Kendon, Richard M. Harris, and Mary Ritchie Key (The Hague: Mouton Publishers, 1975), p. 195.

in human communication research, it should be pointed out

that the analogy is not flawless. Harrison offers this

assessment of its value:

> . . . the linguistic tradition offers a potentially
> powerful model for examining nonverbal codes.
> There are, however, important differences between
> many nonverbal codes and man's complex, multi-
> leveled spoken language. Increasingly, it appears
> that the kinesic approach is going to be most
> useful in areas closely related to language. Some
> movements, for example, seem to be interchangeable
> with vocal paralinguistic events. Instead of a
> pause or a stress, the speaker may substitute a
> minor body movement. And, certain movements of
> the head, eye, and hand, appear at predictable
> points in linguistic discourse. For analyzing
> these events a grasp of the linguistic model may
> be especially important.[39]

Michael Argyle has made a thorough analysis of the

similarities between verbal and nonverbal communication,

which I summarize:

1. Both of the communication forms consist of social

    signals which have much the same meanings for

    senders and receivers, both are governed by rules,

    "and in both cases signals that break the rules of

    sequences or fall outside the cultural repertoire

    of signals are meaningless."

2. Speech is structured hierarchically into sounds,

    words, and sentences. Verbal and nonverbal signals

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[39] Harrison, p. 74.

occur simultaneously in conversation. A corres-
pondence exists between the two in that "the
smaller verbal units are associated with smaller
nonverbal units (words-hand movements) and the
same is true of larger units (long utterances--
postural positions)."

3. Definite similarities exist between gesture languages
   and verbal languages. For example, nouns that stand
   for objects or persons can be communicated by
   pointing or by illustrative gestures, whereas verbs
   that stand for actions can be communicated by the
   actions themselves. "Adverbs are represented by
   the way these actions are performed, and prepositions
   (in, under, etc.) by gestures." Sentences are
   represented by putting together in sequence these
   parts of speech.

4. Just as languages have grammatical rules governing
   the sequential arrangement of words, it has been
   shown that some nonverbal systems have comparable
   rules--"for example, the sequence of types of dish
   in a menu, the possible combinations of different
   articles of clothing." Greetings and other rituals
   also have rules of sequence.

5. Both in the spoken and nonverbal languages, the
   same signal can have more than one meaning, for
   example, a smile or a raised finger. If the meaning

of an ambiguous sentence is to be made clear,

the deep structure needs to be specified; "to

make the meaning of an ambiguous nonverbal signal

clear the sequence of events and the structure of

the situation need to be shown." For example, if

a person raises his finger, the meaning of the

signal depends on whether he is an umpire at a

baseball game, a bidder at an auction sale, or

perhaps a student in the classroom, and on the

place of this act in the sequence.[40]

Argyle looks at other aspects of "linguicity" in regard
to nonverbal communication and poses these questions and
answers in response to Hockett's criteria for linguistic
properties:

> Does NVC [nonverbal communication] have arbitrary
> meaning? Sign languages do, but most kinds of
> NVC have iconic or intrinsic meanings. Do NV
> signals have external reference, to objects or
> events outside the communicator? Illustrative
> gestures do, but most NV signals represent states
> or intentions of the communicator. Are there
> discrete and standard units of communication?
> This is true of sign languages: other signals
> usually vary along continuous dimensions--though
> decoders may use only a small number of categories,
> as with facial expressions. Language is a
> "digital" system of communication, most NVC is
> analogical, especially when communicating emotions
> and interpersonal attitudes (Watzlawick et al.
> 1967). Is there intention to communicate? In

[40] Argyle, pp. 374-82.

the case of illustrative gestures there is;
often there is no such intention, or the
signals, for instance those accompanying speech,
play an unacknowledged part in larger units of
communication.[41]

One of the interesting things about the study of human communication is the dynamic nature of both the communication process and the attempts to unravel the code. Most researchers now are turning to a more holistic approach toward communication with much cross-disciplinary effort. The early experimental work done by such pioneers as Birdwhistell and Hall has been an important milestone in demonstrating that all the verbal pieces can and must fit together.[42]

[41] Argyle, pp. 382-83.

[42] Weitz, p. 130.

Chapter IV

KINESIC CUES AND THEIR CLASSIFICATION

Just as a language cannot be analyzed and understood
completely by study only of its phonemes, morphemes, and
words, so it is with the kinesic aspects of communicating
when only kines, kinemes, or kinemorphs are examined. These
smaller units can provide useful information, but it is
through looking at the larger units--sentences, paragraphs,
and complex kinemorphic constructions--that we discover the
concepts that give meaning to the whole. Birdwhistell's
microanalytic technique used in the study of isolated body
movement has provided invaluable insight into the nonverbal
domain, but it is too restrictive. Even Davis, who is a
staunch ally and admirer of Birdwhistell, asserts that
"[t]he meaning of the message is always embedded in the
context and never in any isolated body movement."[1] It is
only through examining clusters of kinesic cues in a given
context that the meaning of these kinesic actions can be
determined. The progression of research into this larger

[1] Davis, p. 30.

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kinesic field made imperative a means for classifying non-
verbal behavioral acts. The first task was to determine
just what elements of communication would constitute the
area of study. Separating verbal and nonverbal elements
proved difficult, as Knapp explains in his discussion of
the issue:

> The basic issue seems to be whether the events
> traditionally studied under the heading nonverbal
> are literally nonverbal. Ray Birdwhistell . . .
> is reported to have said that studying nonverbal
> communication is like studying noncardiac
> physiology. His point is well taken. It is not
> easy to dissect human interaction and make one
> diagnosis which concerns only verbal behavior
> and another which concerns only nonverbal behavior.
> The verbal dimension is so intimately woven and so
> subtly represented in so much of what we have
> previously labeled nonverbal that the term does not
> always adequately describe the behavior under
> study. Some of the most noteworthy scholars
> associated with nonverbal study refuse to segre-
> gate words from gestures and hence work under the
> broader terms communication or face to face inter-
> action.[2]

The preceding chapter of this study has developed the thesis
that linguistics and kinesics are interrelated, and this
seems to be the conclusion that Knapp has reached. Despite
this interrelatedness, however, there can be a separation of
verbal and nonverbal elements if parameters are drawn and
if an allowance is made for "points of overlap--behaviors
which fit some aspects of one category and some aspects of
another."[3] Many scholars have established a domain of

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[2] Knapp, pp. 2-3.   [3] Knapp, p. 4.

nonverbal communication and have succeeded in doing orderly and scientific research that is recognized as valid. A brief look at some of these classification systems will indicate the diversity of the nonverbal area of study.

Jurgen Ruesch and Weldon Kees were the first to use the term "nonverbal communication" in a book title. They listed three primary elements: sign language, action language, and object language. In sign language gestures are used intentionally to replace words. Examples would be beckoning someone to come by moving the right index finger back and forth in the direction of the summoner, applauding to indicate approval, and the using of hand signals by the deaf. Action language is constituted of movements not done with the expressed purpose of communicating, such as walking or eating. A young man might be walking very rapidly--not because he wishes to communicate but because he is in a hurry. An onlooker, however, might conclude that he is late for a meeting or that he is trying to put as much distance as possible between him and the person walking behind. Object language consists of both the intentional and unintentional display of material things, such as tools, art objects, buildings, lettering, clothing, and even the human body.[4] Object language is useful for distinguishing

[4] Jurgen Ruesch and Weldon Kees, Nonverbal Communication: Notes on the Visual Perception of Human Relations (Berkeley: Univ. of California Press, 1956), p. 189.

persons of higher status from those of lower status. For
instance, a laborer, in all likelihood, would be dressed
in overalls and have with him such tools as a hammer, a
screwdriver, or a shovel. On the other hand, a business
executive probably would be dressed in a business suit and
his tools would consist of such "objects" as a briefcase,
desk and chair, and other suitable office furnishings.
Likewise, the human body as an "object" can convey much
meaning just by its position. Slumping shoulders and a
drawn face can reveal despair, fatigue, or sadness. Shoulders
thrown back and an upturned face usually indicate happiness,
confidence, or vitality. Knapp says that the classification
system devised by Ruesch and Kees "was highly influential
in providing a basis for most of the early work done in the
field of nonverbal communication."[5]

In 1969, thirteen years after Ruesch and Kees devised
their plan, Starkey Duncan Jr. presented a more detailed
schema of classification. His system, which reflected the
burgeoning purview of nonverbal communication, encompassed
the following categories:

       I.   Body movement or kinesic behavior
           A.   Gestures
           B.   Facial expressions
           C.   Eye movements
           D.   Posture

[5] Knapp, p. 12.

        II.   Paralanguage
              A. Voice qualities
              B. Speech nonfluencies, such as "uh" or "er"
              C. Laughing
              D. Yawning
              E. Grunting

        III. Proxemics
              A. Use of social space
              B. Use of personal space

        IV.   Olfaction
              A. Human odors, such as perspiration or breath
              B. Environmental odors, such as those associated
                  with a hospital or a school room

        V.   Haptics (touching behavior)

        VI.   Artifacts
              A. Dress
              B. Cosmetics[6]

In a comprehensive study entitled Nonverbal Communication in Human Interaction (1975), Mark Knapp expanded and refined a classification system that had been developed by Paul Ekman and Wallace Friesen in 1969.[7] The revised criteria and terminology are employed widely in current nonverbal behavioral research.[8] Knapp sets forth the following categories:

        I.   Body motion or kinesic behavior
              A. Emblems
              B. Illustrators
              C. Affect displays
              D. Regulators
              E. Adaptors

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[6] Starkey Duncan, Jr., "Nonverbal Communication," Psychological Bulletin, 72 (1969), 118-37.

[7] Paul Ekman and Wallace V. Friesen, "The Repertoire of Nonverbal Behavior," 49-98.

[8] See, for example, von Raffler-Engel and Bates, Aspects of Nonverbal Communication: A Handbook (1977) and Weitz, Nonverbal Communication: Readings with Commentary (1979).

    II.   Physical characteristics

   III.   Haptics (touching behavior)

    IV.   Paralanguage
        A.   Voice qualities
        B.   Vocalizations

     V.   Proxemics (use of social and personal space)

   VI.   Artifacts

  VII.   Environmental factors[9]

Category I, body motion or kinesic behavior, will be dis-
cussed in detail inasmuch as it pertains more directly to
this study. The other categories will be discussed to a
lesser degree.

Under the category of body motion or kinesic behavior,
Knapp includes the following: gestures, movements of the
body, limbs, hands, head, feet and legs, facial expressions
(smiles), eye behavior (blinking, direction, and length of
gaze, and pupil dilation), and posture. He cites as examples
of kinesic behavior the furrowing of the brow, the slumping
of a shoulder, and the tilting of a head. Obviously, not all
kinesic cues have the same purpose; for example, as Knapp
points out:

> Some are intended to communicate; some expressive
> only. Some provide information about emotions;
> others carry information about personality traits
> or attitudes.[10]

[9] Knapp, pp. 12-20.

[10] Knapp, p. 12.

In order to make this large category more manageable, Knapp turned to the classification system for cataloguing kinesic behavior devised by Ekman and Friesen. The first subcategory is emblems.

Emblems are defined as "nonverbal acts which have a direct verbal translation or dictionary definition, usually consisting of a word or two or a phrase."[11] Harrison explains further:

> They can exist alone, without any direct relation-ship to verbal signs. However, they may also be used to reinforce, supplement, or countermand information in the verbal band. For example, one might reinforce the verbal message "Great!" by making the A-okay sign. On the other hand, one could countermand the same positive word by adding an obscene gesture, such as "the finger." Emblems appear to be learned very much the way language vocabulary is learned. And they are usually per-formed with awareness and with an intent to communicate a specifiable message.[12]

Davis points out that each culture has its own repertoire of emblems. Some of the emblems may be considered cross-cultural or even "universal" in that for several cultures the same body movement carries the same message. Paul Ekman, in work done in Japan, Argentina, and New Guinea, has thus far found ten to twenty emblems that are possibly common to all cultures. One example is the emblem for sleep, indicated

[11] Knapp, p. 13.

[12] Harrison, p. 100.

by inclined head with one cheek cradled on a hand. Another

possibly universal emblem is the one for being full, which

is done by putting a hand on the abdomen and either patting

or rubbing it.[13] Not to be overlooked is the fact that

different cultures may use the same emblem but give it quite

different meanings. Flora Davis gives one common example:

> Sticking out the tongue is a child's rude gesture
> in this country, but in modern south China a quick
> flick of the tongue signifies embarrassment; in
> Tibet it's a sign of polite deference; and the
> Marquesans stick out their tongues to say no.[14]

H. G. Johnson, Paul Ekman, and Wallace Friesen are

attempting to identify a complete list of American emblems.

The study is not finished, but thus far they have verified

approximately seventy emblems pertaining to (1) interpersonal

directions (commands), such as "sit down beside me," "I warn

you," and "time to go"; (2) own physical state, such as

"I've got a headache," "tastes good," and "I am smart"; (3)

insults, such as "the hell with you," "he's crazy," and

"shame on you"; (4) replies, such as "I disagree," "I promise,"

and "I doubt it"; (5) own affect, such as "I'm angry," "I'm

surprised," and "whoopee"; (6) greetings and departures, such

as "hello" and "good-by"; (7) physical appearance of person,

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[13] Davis, p. 88.

[14] Davis, p. 89.

such as "woman" and "nice figure"; and (8) unclassified

emblems, such as "you," "me," "hitchhiking," and "suicide."[15]

Illustrators function differently than do emblems; they

serve to illustrate what is being said verbally rather than

to substitute for or to countermand the verbal message.[16]

They are used to accentuate, clarify, specify, amplify,

punctuate, or underscore. According to Harrison, six types

of illustrators have been identified: (1) pointers: pointing

to an object or person; (2) pictographs: drawing a picture

or shape in the air; (3) ideographs: tracing the flow of

a thought or idea; (4) spatials: indicating size or relation-

ship; (5) kinetographs: demonstrating or reenacting some

bodily action; and (6) batons: providing emphasis, accent,

or punctuation. They can be performed intentionally to help

the receiver understand better, or they may be done with little

awareness. Harrison concludes by saying the sender may not

realize the extent to which he is "talking with his hands."[17]

According to Knapp, illustrators are learned by watching

others, and the frequency of illustrators employed can be

altered by many factors. He cites these examples:

> We would expect to find more illustrators in face
> to face communication than when communicating over
> an intercom; we would expect people who are excited

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[15] H. G. Johnson, Paul Ekman, and Wallace V. Friesen,
"Communicative Body Movements: American Emblems," _Semiotica_,
15 (1975), 335-53.

[16] Knapp, p. 15.   [17] Harrison, p. 100.

and enthusiastic to display more illustrators
than those who are not; and we would expect more
illustrators during "difficult" communication
situations--for example, not being able to find
the right words to express a thought or being
confronted by a receiver who either isn't paying
attention or isn't comprehending what you're
trying to say.[18]

The third sub-category under kinesic behavior is affect
displays. These are primarily facial configurations that
indicate emotional states.[19] Paul Ekman and Wallace Friesen
have found six emotions which serve as the foundation of most
expressions. These are surprise, fear, anger, disgust,
happiness, and sadness. From these six primary expressions,
many emotions can be derived which are either blends of these
primary expressions or those that differ only in intensity.[20]
Ekman and Friesen caution that in order to understand correctly
the facial expressions of emotion the decoder must look at the
right facial signal. They describe three types of signals:
(1) static, which includes skin color, the shape of the face,
bone structure, and the size, shape, and location of facial
features (brows, eyes, nose, and mouth); (2) slow, which
include changes in the facial appearance which occur gradually
with time, such as permanent wrinkles, changes in muscle

[18] Knapp, pp. 15-16.

[19] Harrison, p. 101.

[20] Paul Ekman and Wallace V. Friesen, Unmasking the
Face: A Guide to Recognizing Emotions from Facial Clues
(Englewood Cliffs, N. J.: Prentice-Hall, 1975), p. 22.

tone, and skin discoloration; and (3) rapid, which are produced by the movements of the facial muscles, "resulting in temporary changes in facial appearance, shifts in the location and shape of the facial features, and temporary wrinkles." These rapid changes flash on the face for just seconds or even just fractions of a second. According to Ekman and Friesen, it is these rapid facial signals which give information about emotions.[21]

Although Knapp acknowledges the face to be the primary source of affect, he also points out that the body too can be "read for global judgments of affect--for example, a drooping, sad body." In addition, he makes the interesting observation that once an affect display has occurred, there is usually a high degree of awareness; however, it can occur without any awareness. Unlike illustrators, affect displays often are not intended to communicate even though they can be intentional.[22] Moreover, as Harrison indicates, an affect display may be simulated, i.e., a person may "put on" a happy face when he is not pleased or "show" a grief-saddened face when he really is pleased. This, Harrison says, may be done in an attempt to fool someone or with the awareness that it is an act, "a symbolic performance."[23]

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[21] Ekman, and Friesen, Unmasking the Face, pp. 10-11.

[22] Knapp, p. 16.

[23] Harrison, p. 101.

Whether affect displays are expressed in the face or by the body, intentionally or unintentionally, to conceal or reveal emotions, they can "repeat, augment, contradict, or be unrelated to, verbal affective statements."[24]

Regulators, the next sub-category of kinesic behavior, are nonverbal acts that control interaction in a communication system.[25] In other words, they maintain and regulate the back and forth nature of speaking and listening between two or more people. They let the speaker know whether he should continue, repeat, elaborate, hurry up, become less boring, or give someone else a chance to talk.[26] Examples of regulators used for these purposes are head nods, eye contact, gestures indicating one wishes to speak, or gestures requesting the other person to respond.[27] Edward T. Hall and Mildred Reed Hall provide this description of regulators in action during a conversation:

> If you observe a person conversing, you'll notice that he indicates he's listening by nodding his head. He also makes little "hmm" noises. If he agrees with what's being said, he may give a vigorous nod. To show pleasure or affirmation, he smiles; if he has some reservations, he looks skeptical by raising an eyebrow or pulling down the corners of his mouth. If a participant wants to terminate the conversation, he may start shifting his body position, stretching his legs,

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[24] Knapp, p. 16.   [25] Harrison, p. 101.

[26] Knapp, p. 16.   [27] Harrison, p. 101.

> crossing or uncrossing them, bobbing his foot
> or diverting his gaze from the speaker. The
> more he fidgets, the more the speaker becomes
> aware that he has lost his audience. As a last
> measure, the listener may look at his watch to
> indicate the imminent end of the conversation.[28]

Regulators are employed also with behavior associated with
greetings and good-byes to the extent that they indicate
the beginning or ending of an interaction.[29] In whatever
way they are used, regulators are performed efficiently and
with little awareness of their presence or effects by all
members within a culture. Despite this lack of awareness,
they "provide a flow of traffic signals to ensure a smooth-
running communication system."[30]

The final sub-category under body movement and kinesic
behavior is adaptors, which Knapp concedes to be "the most
difficult to define and involve the most speculation."[31]
He goes on to say that they are called adaptors because they
are believed to develop in childhood as adaptive efforts to
satisfy needs, perform actions, manage emotions, or develop
social contacts.[32] Harrison cites as specific examples of

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[28] Edward T. Hall and Mildred Reed Hall, "The Sounds of
Silence," in Language: Introductory Readings, ed. Virginia
P. Clark, Paul A. Eschholz, and Alfred F. Rosa, 2nd ed. (New
York: St. Martin's Press, 1977), p. 454.

[29] Knapp, p. 16.   [30] Harrison, p. 101.

[31] Knapp, p. 17.   [32] Knapp, p. 17.

self needs such actions as eating, cleansing oneself,
scratching an itch, or rubbing tired eyes. He goes on to
say that over a period of time these adaptors become part
of the individual's habit repertoire and that when they are
produced in adult life they may be in an abbreviated form
that is quite divorced from their original need-fulfilling
context. They are likely to emerge, and quite suddenly,
when a person is feeling tense, tired, or particularly
relaxed and satisfied. Although the producer of the adaptor
may have no intent to communicate or even be aware of the
production, the observer may learn from it a great deal about
the performer's inner state.[33]

Three types of adaptors have been identified: self-,
object-, and alter-directed. Knapp elaborates on each type
as follows:

> Self-adaptors . . . refer to manipulations of
> one's own body--for example, holding, rubbing,
> squeezing, scratching, pinching, or picking one-
> self. Often these self-adaptors will increase as
> a person's anxiety level increases. . . . Ekman
> and his colleagues have found the "eye cover act"
> to be associated with shame and guilt, and the
> "scratch-pick act" to be associated with hostility--
> aggression toward oneself or toward another dis-
> placed onto oneself.
> Alter-adaptors are learned in conjunction with
> our early experiences with interpersonal relations--
> giving and taking from another, attacking or pro-
> tecting, establishing closeness or withdrawing,
> . . . Leg movements may be adaptors, showing
> residues of kicking aggression, sexual invitation,

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[33] Harrison, p. 101.

> or flight. Ekman believes that many of the rest-
> less movements of the hands and feet which have
> typically been considered indicators of anxiety
> may be residues of adaptors necessary for flight
> from the interaction. . . .
>   Object adaptors involve the manipulation of
> objects and may be derived from the performance
> of some instrumental task--for example, smoking,
> writing with a pencil, and so on. Although we
> are typically unaware of performing these adaptor
> behaviors, we are probably most aware of the
> object-adaptors. They are often learned later in
> life, and there seem to be fewer social taboos
> associated with them.[34]

Physical characteristics comprise the second major

category of nonverbal behavior. Whereas body motion or

kinesic behavior is concerned with movement and motion,

physical characteristics remain relatively unchanged. Knapp

defines them as "influential nonverbal cues which are not

movement-bound." Included in this category are such things

as physique or body shape, general attractiveness, body or

breath odors, height, weight, hair, and skin color or

tone.[35] Although this aspect of nonverbal communication

goes beyond the purview of this study, its importance in

the classroom should not be overlooked. In the book entitled

Beyond Words: Nonverbal Communication in the Classroom, the

author James J. Thompson describes a study done by Dr. Elaine

Walster, a sociologist at the University of Wisconsin, in

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[34] Knapp, pp. 17-18.

[35] Knapp, p. 18.

which she analyzed the attitudes of elementary school teachers toward attractive and unattractive children. Her findings were that teachers believe handsome and beautiful children to be more intelligent, more sociable, and more talented, and that they will usually perform better than unattractive children. Thompson cautions that there is not a "shred of evidence" to support these false assumptions but that the danger really is that teachers' expectations strongly influence student behavior.[36] A teacher at any level of education needs to be aware that subconscious biases, such as those just mentioned, often affect conscious behavior.

In Knapp's classification system for nonverbal behavior, the third category is labeled haptics, or "touching behavior." Knapp points out that some communication researchers include touch behavior as a part of kinesic study, whereas, for others, actual physical contact constitutes a separate class of events. A partial list of haptic sub-categories would include stroking, hitting, greetings and farewells, holding, and guiding another's movements.[37] The recognition of the importance of touch in human communication is a fairly recent development. For example, Ashley Montagu, author of Touching: The Human Significance of the Skin, states that

[36] James J. Thompson, Beyond Words: Nonverbal Communication in the Classroom (New York: Citation Press, 1973), p. 110.

[37] Knapp, p. 18.

when he "first started thinking about this subject in 1944
there was very little experimental evidence available
bearing upon these matters," but that today a considerable
amount of evidence has been gathered by "a large variety of
investigators."[38] He is convinced that communication through
touch is an important aspect in human growth and development.
He says:

> When affection and involvement are conveyed
> through touch, it is those meanings as well as
> the security-giving satisfactions, with which
> touch will become associated. Inadequate tactile
> experience will result in a lack of such associa-
> tion and a consequent inability to relate to
> others in many fundamental human ways.[39]

Although Montagu is concerned with the positive reactions
derived through touch, negative reactions are not uncommon.
According to Knapp, the type of response is dependent upon
the people and the circumstances. He elaborates further:

> We know that sometimes people get "uptight,"
> anxious, and/or uncomfortable when touched; we
> know that touching which is perceived as inappro-
> priate for the relationship can be met with
> aggressive reactions--that is, "touching" back,
> in the form of slapping or hitting. Everyday
> observation would lead us to assume that there
> are some people who evaluate almost all touching
> negatively.[40]

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[38] Ashley Montagu, Touching: The Human Significance of
the Skin (New York: Harper & Row, 1971), p. v.

[39] Montagu, p. 335.

[40] Knapp, p. 244.

The fourth category of nonverbal communication, according to Knapp's taxonomy, is paralanguage, or "the language alongside of language."[41] Knapp explains that it deals with how something is said and not what is said, i.e., "the range of nonverbal vocal cues surrounding common speech behavior."[42] The concept is not an easy one to explain, and in attempting to do so, Harrison offers this example:

> Let's say you had someone record a simple phrase or sentence, such as: "That is very nice." If you then let people listen to this record, they would probably agree that this is an English sentence, that it has a particular meaning, that the speaker intended to communicate a certain message. In addition, however, the listeners would be able to tell you other things about your speaker. They could probably tell whether the speaker was male or female. They could detect whether he was British or American. They might be able to tell you whether he was young or old, nervous or calm. And, they might say other things about him. He's sexy. Or, he's tired. He's happy. Or, he's angry. Whatever it is that allows people to make such inferences: that's paralanguage.[43]

Although the term "paralanguage" was first used in publication in 1954 by William E. Welmers, it was an article in 1958 by George L. Trager that is given credit for introducing the term to linguistics.[44] Shirley Weitz says that it was Trager who defined the limits of the field and

[41] Harrison, p. 104.   [42] Knapp, p. 18.

[43] Harrison, p. 104.

[44] Key, _Paralanguage and Kinesics_, p. 10.

provided the basis for further research.[45] Perhaps Trager's

most important contribution has been his identification and

organization of the components of paralanguage. He divided

the field into two major areas: voice qualities--which

include such things as pitch range, pitch control, rhythm

control, tempo, articulation control, resonance, glottis

control, and vocal lip control--and vocalizations. He

further divided vocalizations into the following three sub-

categories:

1. Vocal characterizers--such as laughing, crying,
   sighing, yawning, belching, swallowing, heavily
   marked inhaling or exhaling, coughing, clearing
   of the throat, hiccupping, moaning, groaning,
   whining, yelling, whispering, sneezing, snoring,
   and stretching.
2. Vocal qualifiers--such as intensity (overloud
   to oversoft), pitch height (overhigh to overlow),
   and extent (extreme drawl to extreme clipping).
3. Vocal segregates--such as "uh-huh," "um," "uh,"
   and "ah." Silent pauses (beyond junctures),
   intruding sounds, and speech errors (starting
   a sentence twice) usually are included in this
   sub-category.[46]

In summarizing his discussion of paralanguage, Knapp

reaffirms his belief that vocal cues play a major role in

determining responses in human communication. Then, in what

appears to be an allusion to his definition of paralanguage,

he offers this admonition:

[45] Weitz, p. 94.

[46] George L. Trager, "Paralanguage: A First Approxima-
tion," Studies in Linguistics, 13 (1958), 1-12.

> You should be quick to challenge the cliche that
> vocal cues only concern how something is said--
> frequently they are what is said. What is said
> might be an attitude ("I like you" or "I'm
> superior to you"), it might be an emotion, it
> might be the coordination and management of the
> conversation, or it might be the presentation of
> some aspect of your personality, background, or
> physical features. Vocal cues will, depending
> on the situation and the communicators, carry a
> great deal of information in some classes and
> perhaps little in others.[47]

For quite some time researchers were uncertain as to where paralanguage belonged. Now that it is generally accepted to be a part of the nonverbal domain, no doubt, its role in human communication will be explored fully.

Proxemics, the study of the use and perception of social and personal space, constitutes Knapp's fifth major category of nonverbal behavior.[48] Edward T. Hall is considered to be the pioneer researcher in this area. One of Hall's findings that has attracted much attention from both scholars and the public is that dealing with "the invisible bubble of space" that everyone has around him. This "bubble" contracts and expands depending on such factors as the person's emotional state, the activity he is performing at the time, and his cultural background.[49]

[47] Knapp, p. 361.

[48] Knapp, p. 19.

[49] Hall and Hall, p. 457.

Hall also points out that people do not like any intrusion into their space bubble. If someone stands too close to another person, that person's first instinct is to back up, lean away and pull himself in, and tense his muscles. Then, if the intruder doesn't "get the hint," a person will try to protect himself by placing a briefcase, umbrella, or raincoat in such a position that the interloper cannot come any closer. Women, Hall says, often "plant" their purses in such a way that no one can get very close to them. Hall suggests that everyone "tries to adjust the space around him in a way that's comfortable for him; most often, he does this unconsciously."[50]

Most white, middle-class Americans use four main distances in their business and social relations, according to Hall. He labels and describes them as follows:

> Intimate--varies from direct physical contact with another person to a distance of six to eighteen inches. This zone is used for our most private activities--caressing another person or making love.

> Personal--varies from eighteen inches to four feet. The near phase is the distance that wives usually stand from their husbands in public. The far phase--two and a half to four feet--is the distance used "to keep someone at arm's length" and is the most common spacing used by people in conversation.

> Social-consultative--varies from nine to twelve feet. This is the distance employed during business transactions or exchanges with a clerk or

[50] Hall and Hall, p. 457.

repairman. People who work together tend to use
close social distance--four to seven feet. This
is also the distance for conversations at social
gatherings. In an executive office, the desk
serves to keep people at this distance.

Public--twelve feet and beyond. This zone is
used by teachers in classrooms or speakers at
public gatherings. At its fartherest phase--
twenty-five feet and beyond--it is used for impor-
tant public figures.[51]

The way in which a teacher deals with personal and social
space in the classroom can determine the success of his
interpersonal relationships with students. Thompson, in his
study of nonverbal communication in the classroom, advises
teachers to be careful about invading the "intimate space"
of a student. He writes:

Teachers who invade students' intimate space at
will are intruders. They are not welcome. Further-
more, the message that the student receives from
this intrusion is insidious. It says, "You are
not a person; you are a non-person. Therefore, you
are not entitled to intimate space. As your teacher
I may enter and depart at leisure. You have no
feelings in this matter because non-persons do not
have feelings."[52]

He goes on to say that it doesn't matter how often or how
fervently a teacher may verbally acknowledge students to be
unique individuals because the teacher's nonverbal behavior
already has "eloquently communicated" his real feelings.[53]

[51] Hall and Hall, pp. 458-59.

[52] Thompson, p. 15.   [53] Thompson, p. 15.

Another interesting point made by Thompson is that the
female teacher can expect her male students to handle space
differently from female students. Males, he says, generally
want the teacher to stay well outside of their intimate and
personal space.[54]

Another facet of classroom proxemics concerns the
arrangement of desks within the room. Michael Argyle in a
discussion of spatial behavior lists six desk arrangements
and the different patterns of interaction that will ensue:

> 1. Traditional rows of desks, for teacher-
>   centered sessions with little discussion, or
>   for taking exams
> 2. Groups of four desks facing each other, or a
>   library table
> 3. A number of pupils in a row behind the teacher's
>   desk, the others facing in a semi-circle, for
>   reading a play
> 4. A hollow square, for committee work
> 5. Rows of desks, facing on two sides of the room,
>   teacher in middle with slides, tape-recorder,
>   etc., e.g. for a language lesson
> 6. A semi-circle of desks, for discussion (Richard-
>   son, 1967).[55]

The field of proxemics is still a relatively new study,
but it has the potential to shed much light on the understand-
ing of human communication.

The sixth major division of nonverbal behavioral acts
set forth by Knapp is artifacts, the tools and props of man.[56]

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[54] Thompson, p. 18.

[55] Argyle, pp. 311-12.

[56] Harrison, p. 146.

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Included are personal items, such as perfume, clothes,
lipstick, eyeglasses, false eyelashes, and wigs;[57] shared
objects, such as a desk which plays a role in structuring
the interaction between a visitor to an office and the
executive; and public artifacts, such as buildings and
monuments.[58] Artifacts serve as "nonverbal stimuli" and,
in fact, can be the primary determiners of interpersonal
responses. Knapp cites the following examples:

> Physical attractiveness may be influential in
> determining whether you are sought out, it may
> have a bearing on whether you are able to persuade
> or manipulate others, it is often an important
> factor in the selection of dates and marriage
> partners, it may determine whether a defendant
> is deemed guilty or innocent, it may even have an
> effect on whether the prisoner is able to decrease
> the antisocial behavior responsible for his or her
> imprisonment, it may be a major factor contributing
> to how others judge your personality, your sexuality,
> your popularity, your success, and often your
> happiness.[59]

The exact role of appearance and dress in the total realm of
nonverbal communication is still unknown, but the findings
thus far reveal the effect of personal artifacts to be con-
siderable.

Knapp designates his final category of nonverbal behavioral
acts as environmental factors. He explains that this division

[57] Knapp, p. 19.

[58] Harrison, pp. 148-49.

[59] Knapp, p. 186.

concerns "those elements which impinge on the human relation-
ship, but which are not directly a part of it." He includes

such things as the furniture, architectural style, interior

decorating, lighting conditions, smells, colors, temperature,

and additional noises or music, within which the interaction

occurs. His conclusion is that "variations in arrangements,

materials, shapes, or surfaces of objects in the interacting

environment can be extremely influential on the outcome of

an interpersonal relationship."[60] As far as could be deter-

mined, Knapp is the only nonverbal researcher to make this a

distinct category in classifying nonverbal communication, but

he gives it much attention, particularly in regard to the

classroom environment. He laments:

> Most students and teachers can provide a long list
> of "problems" encountered in environments designed
> for learning. Such complaints center around poor
> lighting, acoustics, temperature which is too hot
> or too cold, outside construction noises, banging
> radiators, electrical outlets which do not work,
> seats which do not move, gloomy, dull, or distract-
> ing color schemes, unpleasant odors, and so on.
> Why do they complain? Because they recognize that
> such problems impede the purpose for gathering in
> these rectangular rooms--which is to increase one's
> knowledge through effective student-teacher com-
> munication.[61]

He concludes by saying that the whole question of the influence

of the classroom environment on student and teacher behavior

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[60] Knapp, p. 20.

[61] Knapp, pp. 83-84.

remains relatively unexplored.[62] A few studies, however, have been made and confirm Knapp's opinion that much more needs to be done. The work by Robert Sommer, R. S. Adams, B. Biddle, and Mele Koneya on student participation in various classroom environments would seem to indicate that serious efforts are underway to discover more information about this aspect of nonverbal communication.

In this overview of nonverbal communication, the broadness of its purview becomes evident. More importantly, it reveals how little is known about this vast subject, and it makes us aware of the conscious and unconscious impact that nonverbal behavior has on communicators.

[62] Knapp, p. 84.

Chapter V

CLASSROOM BOREDOM

In college teaching, few epithets are more damning
than the one which labels a teacher or a class as boring.
Boredom is a critical roadblock to learning which anyone
who wants to become an effective teacher must overcome,
whether the teaching situation is a first-aid class in
the Boy Scouts or a graduate level seminar at the univer-
sity.

Lord Byron obviously had a frame of reference broader
than education when he wrote in Don Juan:

> Society is now one polish'd horde,
> Form'd of two mighty tribes, the Bores and Bored.
> (XIII,95)

Yet there are undoubtedly both students and faculty who have
been tempted to reach a similar conclusion because of their
despair over such things as a class that is interminably
uninspiring, material that is difficult to bring alive, or
students whose boredom perhaps is not quickly discerned
and dealt with by the instructor. Although boredom is not
discussed directly, it is one of the very problems for
which a work like Gilbert Highet's The Art of Teaching

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provides preventive medicine.[1] Likewise, the effects of
boredom are shown graphically, for example, in the opening
scenes of Aldous Huxley's Antic Hay.[2]

This chapter is concerned with a study of boredom as
a phenomenon of human communication, both verbal and non-
verbal. Complicating that consideration, however, is the
fact that some of the more obvious signs of boredom may
indicate as well other causes of inattention, such as
physical pain, emotional distress, distraction by a nearby
sound or movement, or fatigue. These interrelated problems
may well be the reason that studies of educational problems
do not concentrate on boredom as an isolated condition
having peculiar symptoms, preferring, instead, to address
the question from another direction and deal with such
problems as student motivation.

One finds indications of what might be called the
silent language of boredom in everyday experience as well
as in allusions to it in technical works and in literature,
and occasionally more specific references to nonverbal

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[1] Gilbert Highet, The Art of Teaching (New York:
Alfred A. Knopf, 1968). Indeed, Highet makes it clear
that disinterest on the part of students may well be
caused by a fundamental antipathy to the subject by the
teacher. See pp. 19-27.

[2] Aldous Huxley, Antic Hay (New York: George H. Doran
Company, 1923), pp. 7-15.

signs of boredom in some of the recent "body language"
books.[3]

One of the few published studies which deals with
boredom as a separate emotional state is The Language of
Emotion, by Joel R. Davitz, who collected data from fifty
subjects, obtaining common descriptive statements used for
fifty subjects, obtaining common descriptive statements
used for fifty emotional terms. Davitz's recorded
reactions for "boredom" included such statements as these:

>"I feel tired, sleepy, I'm physically
>less responsive."
>
>"My feelings seem dulled, I'm not too alert,
>there seems to be a lack of feeling inside."
>
>"I try to escape into dreams and fantasies."
>
>"There is a yearning, a desire for change. I
>want things to hurry up and begin to change."
>
>"My mind wanders; there is a very strong
>sense that time seems to slow down, to drag."
>
>"I'm easily irritated, ready to snap, the
>feeling seems to be all over, nowhere special,
>just not localized; it seems to come over me
>gradually, without my being aware of when it
>starts; it's a very bland sort of feeling."[4]

Altogether, these published reports not only under-
score the fact that boredom is a significant part of human

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[3] One such reference may be found, for example, in
Julius Fast, The Body Language of Sex, Power, and Aggression
(New York: Jove Publications, 1978), pp. 134-35.

[4]Joel R. Davitz, The Language of Emotion (New York:
Academic Press, 1969), pp. 11-12.

experience, but they suggest as well that teachers would
have a valuable diagnostic tool if they recognized even
some of the silent signals which specifically indicate
boredom or ennui, the quality which the Oxford English
Dictionary defines as "[t]he feeling of mental weariness
and dissatisfaction produced by want of occupation, or
by lack of interest in present surroundings or employ-
ments."[5]

To attempt to relate the problem of boredom more
directly to college teaching in the course of this study,
some additional data have been collected from unpublished
sources: one such source is a study of actual classroom
sessions by Professor Walburga von Raffler-Engel at
Vanderbilt University; other sources are Engel's corollary
research and surveys conducted by this writer of both
students and faculty at Motlow State Community College,
Middle Tennessee State University, and the University of
Tennessee Space Institute.

Analysis of Video Tapes

An opportunity to examine possible nonverbal signs
of boredom under natural circumstances came in the examina-
tion of video tapes made of a class in linguistics taught
by Professor Walburga von Raffler-Engel during a semester

[5] Oxford English Dictionary, (1933; rpt. Oxford:
Clarendon, 1961), III, 194.

at Vanderbilt University.[6] Types of behavior which were particularly noteworthy in this analysis were posture, notetaking, preening, the length of a pause between the instructor's question and a student's response, and the pattern of response.

The videotaped class consisted of twelve undergraduates: seven men and five women. All subjects were white and came mainly from the middle and upper socio-economic classes. Although upon registering for the course they were unaware that the class was to be taped, none objected to taping when informed at the first class meeting. Engel is of the opinion that the effects of the taping upon the results were negligible. The course was structured informally so that students could interrupt the lecture when they needed to ask a question or make a comment.[7]

The method used to analyze the video tapes was to view at least twice each edited taped class session,

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[6] Professor Engel granted permission to use the tapes in this study. The taping project was funded through a research grant from the Kenan-Venture Fund which enabled her to investigate the correlation of verbal, paralinguistic, and kinesic features in the context of student-student and student-teacher interaction. Despite some technical problems with the tapes, they were of considerable value to this study, and I am grateful to her for making the tapes available for my use.

[7] Walburga von Raffler-Engel et al., "Verbal and Nonverbal Student Interaction in the College Classroom as a Function of Group Cohesion," unpub. ms., n.d., p. 1.

keeping a record of the behavior of the professor and each student. The first task was to establish boredom indicators, particularly of a kinesic nature.

One kinesic indicator often considered the most easily recognizable and valid sign of boredom within the classroom is a student's posture. In a study entitled "The Impact of Non-Verbal Behavior on Foreign Language Teaching," Leo Ward and Engel conclude:

> When they [students] were bored and disinterested, their posture appeared to be slouched and their heads were resting on their hands. In many such instances, the students had also crossed their legs.[8]

This description is essentially the same as that used by Engel in commenting on the posture of bored students in the videotaped class.[9] Further supporting these visual

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[8] Leo Ward and Walburga von Raffler-Engel, "The Impact of Non-Verbal Behavior on Foreign Language Teaching," in Aspects of Nonverbal Communication: A Handbook, ed. Walburga von Raffler-Engel and Bates Hoffer (San Antonio: Trinity Univ., 1977), p. 341.

[9] From Walburga von Raffler-Engel et al., "Verbal and Non-Verbal Student Interaction in the College Classroom as a Function of Group Cohesion," unpub. ms., n.d., p. 8:

> . . . under the influence of boredom male students tended to slouch their torso and their head backwards and push their legs forward until their feet would rest on the heels. Bored females kept their legs crossed while slouching their torso in a crumpled forward position with the head bent downwards.

observations are written responses made for this study by a class of eighteen students enrolled in a basic speech course who were asked to describe their behavior in class when bored. Having completed that task, they were then asked to do the same for interest. In describing their behavior when bored, sixteen of the eighteen students (89%) mentioned posture.[10] Typical of their comments are these:

> "Legs spread apart, leaning forward with right elbow on desk and chin in hand; left arm across front of body lying on desk, usually with eyes closed."

> "Slouch and rest my head on my hands."

> "First, I start to slump down in my seat."

> "Sitting on backside, almost lying down."

In describing their behavior when interested, not surprisingly, eleven respondents specifically made reference to posture with such observations as these:

> "I sit straight up in my chair, almost on the edge of my seat."

> "Posture is straight and alert with no distractions."

> "I sometimes sit straighter in my chair, but not always."

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[10] Written responses from students enrolled in Communications 102, Fundamentals of Speech II, Winter Quarter, 1980, Motlow State Community College. The class was taught by this writer. Excerpts that follow are taken from this source.

This last comment supports my observation concerning posture made in viewing the tapes of the Engel class. In it, most students sat in what would be considered a slouched position throughout each session. This relaxed posture in itself was not so much an indicator of boredom as was the direction of the body movements when a student shifted around in his chair. Even a student who, through other verbal and non-verbal channels, projected interest but sat slumped or slouched in his chair would move his torso, limbs, and head in the direction of the verbal interaction in progress. One of the male students, for example, would frequently slump in his chair, drape a leg over an unoccupied chair, and sit with his hand propping up his face. Yet, he was one of the chief contributors to class discussions, and the professor singled him out for excellence on the mid-semester examination. Another male student, whom the instructor described as "just never with it," would shift around in his chair in such a way that he was positioned away from the interaction.

In fact, this student--identified by Engel as M6-- caught my attention almost from the time I began viewing the tapes. He appeared to be ignored by the professor and the students alike. His nonverbal behavior may have communicated, perhaps unintentionally, the message, "Leave me alone," and so they did. To this observer, however, he was such a "presence" that I have three or four times as

many notes about his behavior as that of any other student in the class. He stood out, but in a negative way, and his behavior provided more kinesic boredom cues than that of the rest of the class combined. Here is a profile of his classroom action.

First, M6 attended class regularly. In viewing the tapes, I observed his being absent only once. He arrived on time and went directly to his assigned chair. He always brought a notebook to class but took very few notes, usually beginning to write after he noticed other students taking notes. Compared with other students, he positioned his notebook differently. Whereas they kept their note-books open and flat on their laps in a writing-readiness position, M6 nearly always held his notebook closed and in a vertical position.

The tapes show that he made no verbal responses. When others were interacting, he would look off to one side or over their heads. Occasionally, he would whisper to a male student sitting next to him, but his classmate dis-couraged such conversation by focusing attention on the class. Other than for these few incidents of whispering, M6 was not disruptive in any way.

Frequently, he would yawn, rub his eyes, and stretch, sometimes becoming aware of these actions and then trying to abort the stretch or stifle the yawn. Another

characteristic of his was to sit as far back as possible
in his chair so that he was almost hidden from view. In
this position, he would hold his notebook in a vertical
position against his chest so that it almost formed a
shield.

Although other students might occasionally make
preening gestures of which they were unaware, M6 would
preen two or three times during a class session. He would
push his hair back, tuck in his shirt, or remove lint--
real or imaginary--from his clothing. He was the only
student observed preening during an examination.

Unlike other students who sometimes looked at their
watches as the end of class approached, M6 would look at
his perhaps as often as three times during just the edited
portion of a day's class session. In addition, he was
usually the first in the class to begin making preparations
for leaving, such as putting pens away, stacking books, and
then holding them in front of his chest. As soon as the
class was dismissed, he would rise quickly from his chair
and leave the room.

M6 was the only one who had failed the course. In
fact, Engel was puzzled somewhat as to why he had stayed in
the class for the entire semester when it must have been
obvious for some time that he was failing. His verbal and
kinesic behavior had from the beginning of the class

indicated that he was either disinterested or unable to grasp the content. The question left unanswered is whether he was bored because he did not understand the material or whether he had registered for the course for reasons other than academic ones, such as taking the course because a friend would be in the class or perhaps thinking that the course requirements would not be very demanding. He thus found the content uninteresting or meaningless.

The behavior of M6 provided such a marked contrast to that of the other students, all of whom successfully completed the course, that at least three of the five areas cited earlier as noteworthy in this class warrant further investigation in classroom interactional settings.

The first, and perhaps the most obvious area, is that concerning posture. Although Engel asserts that slouching posture is a boredom indicator, my observation from viewing the tapes is that a student's moving around in his chair or slouching may or may not indicate boredom. For example, the students sat in uncomfortable metal folding chairs without desk arms, which necessitated their having to take notes with notebooks in their laps. Consequently, regardless of how stimulating the class sessions may have been, after a short period of time the students would begin to slide down into or to slouch in their chairs. However, M6 was the only one who failed to move in the direction of

the verbal interaction or to keep his attention focused
upon it, as evidenced by his looking around the room or
preening. Thus, to assign certain postural positions or
body movements as valid criteria for determining boredom
does not extend the analysis sufficiently.

A second area for additional research concerns the
notetaking behavior of students, which Engel does not
discuss. As mentioned previously, M6 held his book closed
in a vertical position and took fewer notes. For the most
part, his fellow students kept notebooks open and in a
writing-readiness position. However, I did notice that
students would "busy" themselves with notetaking if they
did not want to participate in the discussion. If the
professor asked a question, instead of responding, they
would hunch their heads and shoulders over their notebooks
and appear to be engrossed deeply in their writing. At
other times, if the class were at what I would label a
"sluggish" period in the interaction, students would look
back over notes previously taken. When the atmosphere
within the classroom was lively, students would jot down
their notes quickly and immediately raise their heads to
participate again in the interaction. Additional investi-
gation might reveal notetaking behavior to be a fairly
simple and readily discernible kinesic indicator of both
boredom and interest.

The third area that needs further investigation is preening. Excessive preening, as exhibited by M6, could indicate that a student is not involving himself mentally in the class activity. His preening during the examination and his failing grade further attest to a lack of concentration that can be detrimental to a student's academic success. Here, again, is a kinesic cue, if valid, that could assist an instructor in recognizing potential roadblocks to classroom achievement.

In addition to posture, notetaking, and preening--particularly demonstrated in the behavior of M6--the tapes yielded other boredom indicators. One that is no doubt self-evident is the length of a pause between the instructor's asking a question and a student's responding. In the taped class session, the longer the pause between question and response, the less interested seemed the class. Since the professor did not call on individual students by name, anyone could respond. All except M6 participated in the discussions, males at a greater frequency than females, and certain students much more than others. Sometimes the pause may have resulted from the students not being confident of their interpretation of the question. Or, perhaps the knowledge that the response was being video-taped may have served as an inhibitor.

Closely associated with the consideration of time between professor question and student answers is the

pattern of student responses: whether a professor's
question, for example, is followed by a single answer, which
in turn is followed by another question-answer set; or
whether a question might result in a brief discussion on
one point involving the instructor and several students.
Also involved in response patterns are unusual nonverbal
reactions on the part of students.

One incident which suggests this as an area for further
study which could yield interesting results is the
appearance of a guest lecturer before the Engel class.
Students showed an extraordinary amount of alertness and a
dramatically different pattern of response to this lecture
on cryptography and applauded enthusiastically at the
lecture's conclusion, a type of nonverbal behavior somewhat
unusual in itself in a classroom.

These findings based upon my analysis of the video
tapes in regard to kinesic indicators of boredom may have
posed more questions than they may have answered. However,
further research may well establish posture-related
activities, notetaking, preening, pausing, and patterns
of student response as valid boredom indicators. When this
task has been accomplished, an instructor could learn easily
to identify them and take preventive steps to ensure that
his or her classroom environment stimulates rather than
inhibits learning.

Analysis of Surveys

Engel herself distinguishes two types of boredom within the classroom setting, the first occurring when students are bored with the material, and the second shown when students find the subject matter unrelated to their personal or career needs.[11] A third type stems from the instructor's boredom with the subject matter he is teaching, his methods for presenting the material, his negative attitude toward students, a personality that is dull or offensive, or a combination of these factors. These types show up strongly in comments made by a class of sophomore literature students at Middle Tennessee State University who were asked to describe their most boring class.[12] One student wrote:

> In this course [economics], the instructor used many special terms and talked above the class's level. The material used in the course was very uninteresting to start with. The lack of under-standing caused many students to simply drop the class. The instructor was very impersonal. He came into the classroom and immediately started into the lesson. He seemed almost inhuman. The instructor seemed to have no interest whatsoever in whether a student passed or failed. He seemed interested only in getting on with his job.

[11] Telephone interview with Walburga von Raffler-Engel, Professor of Linguistics, Vanderbilt University, 28 December 1979.

[12] Written responses from students enrolled in English 211, The Experience of Literature, Fall Semester, 1978, Middle Tennessee State University. The class was taught by this writer. Excerpts that follow are taken from this source.

Another student indicates the problem encountered when the
need for learning the subject matter is not apparent,
saying:

> My most boring class was biology. It was also
> the class I worked hardest in. . . . I read
> every chapter and did all the work. It just
> didn't hold my attention. I could read a chapter
> twice [and] then get people to quiz me on it.
> Yet the next morning when I went to class to
> take the test I would not make more than a (32)
> [sic] except on the test about the reproductive
> system. That I made a 70 on.

Evidently, the student was interested enough in the repro-
ductive system at least to make a passing grade on the
examination. Her comments illustrate how boredom indeed
may be a silent inhibitor to learning, even when the
student is trying hard to master the material.

Of the twenty students who described their most boring
class, seventeen of them (85%) mentioned the teaching style
or personality of the instructor as a factor. Eight singled
out the voice, usually describing it as "monotone." Typical
of these comments are the following:

> Last semester, I had the misfortune of taking a
> physical science course under a very boring,
> retired Air Force sergeant who still wore a crew-
> cut. He did not lecture but barked instructions.
> He insisted on complete silence in a room filled
> with ninety to one hundred students, and his
> voice could have put a "Speed freak" to sleep.
>
> The instructor was a young man. . . . He had a
> deep, monotonous voice that would put anyone to
> sleep. His idea of a good class was to show

> statistical charts with the overhead projector.
> Naturally, this put everybody that was awake to
> sleep. The instructor did lecture on the material
> in the book, but one would do better by reading
> the book and staying at home.

> I like the teacher as a person, but his class
> never stimulates me. I think the major problem
> in there is that the teacher never calls on any-
> one to solve questions [sic]. He asks questions,
> but the students just sit there until he answers
> them himself.

> . . . . It is undoubtedly the most boring class
> I have ever taken as a college student. . . . He
> was in desperate need of schooling in the princi-
> ples set forth in Speech 220.

Perhaps, the student's comments that best depict the impor-

tance of good verbal and nonverbal communication skills on

the part of the professor are these:

> . . . The teacher would drone on in a monotone
> for fifty minutes, three days a week. He showed,
> through his every action, that he was disinterested
> in the class and was teaching it only because he had
> to. Now basic chemistry is not the most interest-
> ing subject of all times, but it would have been
> at least tolerable if the teacher had looked alive
> once in a while. . . . As far as I can recall,
> there was only one day that he looked and acted
> awake, the day he was evaluated by a visiting
> teacher.

In studying these responses, this investigator found

only one instance in which a student questioned the instruc-

tor's knowledge of the subject matter as a factor in

classroom boredom. They indicated that, by and large,

their "most boring" class had been a waste of time, for they

had learned very little from it. It is not the purpose of

this study to argue the validity or even the fairness of the students' observations. They do show, however, that boredom has a negative effect on learning and that students feel that the instructor is responsible to a large degree for determining whether the classroom atmosphere will stimulate learning or foster boredom. The answer may lie in the amount and kind of verbal and nonverbal interaction between teacher and those being taught.

Analysis of Student and Faculty Survey

The videotaping was done two years prior to my analysis of the tapes. In order to provide more recent data as to how students and faculty perceive various types of boredom indicators, a survey was made of students enrolled in freshman and sophomore English classes at Motlow State Community College and at Middle Tennessee State University. Faculty members at these two institutions and at the University of Tennessee Space Institute, also, were surveyed. In all, 108 persons responded: fifty-eight students and fifty faculty members, all of whom completed a questionnaire which listed twenty-three types of behavior about which they were asked to rate as strong, moderate, weak, or no indicators of boredom. Space was provided

for respondents to list any additional categories they
thought significant.[13]

Since the twenty-three types of behavior included both
kinesic and nonkinesic examples, thirteen types of non-
verbal behavior were chosen for analysis. The results were
not only revealing in themselves but correlated surprisingly
well with observations made from the videotaped classes
discussed above.

These thirteen kinesic types are (1) yawning, nodding,
dozing; (2) excessive glances at clock or watch; (3) posture
(upright versus slouched); (4) facial expressions (amuse-
ment, perplexity, indifference); (5) eye contact with
speaker; (6) head nods (agreement or disagreement); (7)
restlessness (fidgeting, feet shuffling, pen clicking,
finger tapping, rearranging papers and books); (8) preening
(arranging hair, adjusting clothes); (9) preparation for
leaving before class is dismissed; (10) selection of
seating location (back or sides versus front or center);
(11) slow or no response to instructor's questions; (12)
lack of notetaking; and (13) excessive attention to notes.

Based upon the responses to the questionnaire, the
following generalizations can be made:

[13] The text of the questionnaire and tabulations for
each group surveyed are reproduced in the appendix. The
data presented in Tables 3, 4, 5, and 6 are taken from
these tabulations.

1. Both students and faculty members perceive that kinesic signals of boredom exist and can be discerned in a college classroom (See Table 3).

2. Among these, indicators which are perceived as either strong or moderate signals of classroom boredom by 80% or more of those surveyed are (1) excessive glances at clock or watch (85%); (2) yawning, nodding, dozing (84%); and (3) restlessness (83%) (See Tables 3, 4, and 5).

3. These kinesic boredom cues that scored high percentages on the survey are those one might expect to be associated with boredom in any given situation. For example, whether in a classroom or not, glances at a watch or clock are interpreted to mean that the person is not involved totally in the interaction; fidgeting reveals that a change in body position is desired; and yawning, nodding, and dozing are identified so closely with boredom that in many situations a person will try to conceal or to avoid these actions.

4. Both students and faculty show strong agreement on the selection of behavior types as strong or moderate indicators except for two of the thirteen categories, excessive attention to notes and selection of seating location (See Table 6). This assumption has been verified by a test for statistical correlation, which shows a correlation coefficient of 0.79, a strong indicator of overall agreement.

TABLE 3

NONVERBAL BEHAVIOR
CONSIDERED STRONG AND MODERATE INDICATORS OF BOREDOM
BY STUDENTS AND FACULTY
(TOTAL RESPONSES: 108)

Behavior Type	Strong Indicator		Moderate Indicator		Combined Strong and Moderate	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Excessive glances at						
clock or watch	56	52	36	33	92	85
Yawning, nodding, dozing	53	49	38	35	91	84
Restlessness	45	43	43	40	88	83
Facial expressions	35	32	35	32	70	64
Preparation for leaving	28	26	45	42	73	68
Lack of notes	23	21	36	33	59	54
Eye contact	22	20	35	32	57	52
Head nods	19	18	27	25	46	43
Preening	19	18	34	32	53	50
Excessive attention						
to notes	16	15	24	22	40	37

TABLE 3 (Continued)

Behavior Type	Strong Indicator		Moderate Indicator		Combined Strong and Moderate	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Slow or no response to instructor's questions	14	13	37	34	51	47
Posture	12	11	32	30	44	41
Selection of seating location	10	9	17	16	27	25

TABLE 4

NONVERBAL BEHAVIOR
CONSIDERED STRONG AND MODERATE INDICATORS OF BOREDOM
BY FACULTY
(TOTAL RESPONSES: 50)

Behavior Type	Strong Indicator		Moderate Indicator		Combined Strong and Moderate	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Excessive glances at						
clock or watch	21	42	19	38	40	80
Yawning, nodding,						
dozing	25	50	16	32	41	82
Restlessness	19	38	22	44	41	82
Facial expressions	18	36	17	34	35	70
Preparation for leaving	9	18	25	50	34	68
Lack of notes	7	14	15	30	22	44
Eye contact	12	24	17	34	29	58
Head nods	10	20	16	32	26	52
Preening	10	20	16	32	26	52

TABLE 4 (Continued)

Behavior Type	Strong Indicator		Moderate Indicator		Combined Strong and Moderate	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Excessive attention to notes	0	0	9	18	9	18
Slow or no response to instructor's questions	3	6	20	40	23	46
Posture	5	10	15	30	20	40
Selection of seating location	1	2	7	14	8	16

TABLE 5

NONVERBAL BEHAVIOR
CONSIDERED STRONG AND MODERATE INDICATORS OF BOREDOM
BY STUDENTS
(TOTAL RESPONSES: 58)

Behavior Type	Strong Indicator		Moderate Indicator		Combined Strong and Moderate	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Excessive glances at						
clock or watch	35	60	17	29	52	89
Yawning, nodding,						
dozing	28	48	22	38	50	86
Restlessness	26	45	21	36	47	81
Facial expressions	17	29	18	31	35	60
Preparation for leaving	19	33	20	35	39	68
Lack of notes	17	29	21	36	38	65
Eye contact	10	17	18	31	28	48
Head nods	9	16	14	24	23	40
Preening	9	16	18	31	27	47

TABLE 5 (Continued)

Behavior Type	Strong Indicator		Moderate Indicator		Combined Strong and Moderate	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Excessive attention to notes	16	28	15	26	31	54
Slow or no response to instructor's questions	11	19	17	29	28	48
Posture	7	12	17	29	24	41
Selection of seating location	9	16	10	17	19	33

TABLE 6

COMPARISON OF NONVERBAL BEHAVIOR
CONSIDERED STRONG OR MODERATE INDICATORS
OF BOREDOM
BY STUDENTS AND FACULTY

Behavior Type	Percentage of Students (58 responses)	Percentage of Faculty (50 responses)
Excessive glances at clock or watch	89	80
Yawning, nodding, dozing	86	82
Restlessness	81	82
Facial expressions	60	70
Preparation for leaving	68	68
Lack of notes	51	44
Eye contact	48	58
Head nods	40	48
Preening	47	52
Excessive attention to notes	54	18
Slow or no response to instructor's questions	48	46
Posture	41	40
Selection of seating location	33	16

(Correlation = 0.79)

Correlation of Survey Results With Findings From Videotapes

In the comparison of the survey results with findings from the videotapes, the following areas of agreement can be discerned:

1. The results of this survey as to the perception of boredom indicators agree in large part with the behavior of M6 in the Engel classroom tapes. In fact, M6 exhibited eight of the thirteen kinesic indicators drawn from the question- naire for analysis: Yawning, restlessness, excessive glances at watch, preening, no response to instructor's questions, and lack of notetaking.

2. Notetaking behavior as observed from the tapes seemed to be influenced by the student's interest in the verbal interaction. The survey responses show that both faculty and students perceive a lack of notetaking to be a signal (faculty, 44%, and students, 51%). However, in regard to excessive attention to notes, there is a dis- crepancy with 54% of the students viewing this as a strong or moderate indicator, whereas only 18% of the faculty per- ceive it as such. Thus, excessive attention to notes may be a boredom indicator frequently misinterpreted as interest by faculty.

4. Excessive preening behavior by the student who failed the linguistics course and an absence of such actions by the eleven who passed it pointed toward

excessive preening as a realiable boredom signal. This
possibility is strengthened by responses from the survey
which reveal that 47% of the students and 57% of the
faculty classify preening as a strong or moderate
indicator.

5. A slumped or slouched posture is cited by Engel
in her written analysis of the videotapes as a boredom
cue. My observation from viewing the tapes was that
posture by itself might or might not be an indicator,
that body position alone did not provide enough informa-
tion to make such a determination. In the survey, posture
is classified as a strong or moderate indicator by 41% of
the students and 40% of the faculty. Although these
percentages are moderately high, they are considerably
less than those scored by restlessness (students, 81%,
and faculty, 82%).

6. The analysis of the videotapes suggested that the
length of pause between an instructor's question and the
student's response could be a boredom indicator. Results
from the survey show that 48% of the students and 46% of
the faculty perceive this to be a strong or moderate
indicator of boredom.

Conclusion

These findings based upon the analysis of the video-
tapes and the surveys in regard to kinesic indicators

of boredom may have posed more questions than they may

have answered. However, further research may well estab-

lish body movement activities, notetaking behavior,

preening, length of pauses between questions and answers,

and patterns of student response as valid boredom indica-

tors within the classroom. When this task has been

accomplished, an instructor can learn easily to identify

them and take preventive steps to ensure that his or her

classroom environment stimulates rather than inhibits

learning.

Chapter VI

SUMMARY AND CONCLUSIONS

The purpose of this research has been to demonstrate
the interrelationship between linguistics and kinesics and
to show that verbal and kinesic boredom indicators within
the college classroom setting can be identified, analyzed,
and utilized as a means for improving teaching effective-
ness.

A review of published work in linguistics and kinesics
done as a part of this study shows how scholars of language
have come to understand the close interrelatedness of
linguistic and kinesic signalling. Furthermore, the new
research undertaken in this study has emphasized this
interrelationship and has shown as well that identifica-
tion, analysis, and utilization of boredom indicators are
not only possible but can be valuable tools for more
effective teaching.

Kinesics and Linguistics: Closely Bound

The interrelatedness between linguistics and kinesics
that has been established by Raymond L. Birdwhistell,

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Edward T. Hall, Adam Kendon, and Michael Argyle is

documented further by some specific findings in this study.

For example, students in describing their most boring class

mentioned both verbal and nonverbal behavior as factors

contributing to boredom: "In this course, the instructor

used many special terms and talked above the class's

level. . . . The instructor was very impersonal. . . .

He seemed almost inhuman." Another complained: "The

teacher would drone on in a monotone for fifty minutes,

three days a week. He showed, through his every action,

that he was disinterested in the class and was teaching

it only because he had to. . . . It would have been at

least tolerable if the teacher had looked alive once in a

while." In both of these instances, the students link what

was said--linguistic--with the instructor's kinesics

signals toward the class in such a way that the two become

interdependent. These two examples are representative and

indicate that the instructor who is unconcerned about his

nonverbal behavior in the classroom is overlooking a vital

ingredient in teaching effectiveness.

Another classroom situation in which the interrelated-

ness between linguistics and kinesics is apparent occurs

during class discussions. In all likelihood, the student

who does not participate either verbally or mentally in

the interaction will manifest kinesic indicators of boredom,

such as looking around the room, preening, or glancing

frequently at a clock or watch. On the other hand, the interested student will follow the interaction with his eyes, take notes when appropriate, and participate verbally. Many students in describing their behavior when interested in a class mentioned that they would straighten their posture and sit upright in their chairs.

Classroom Analysis of Boredom Indicators

The identification and analysis of boredom indicators were made possible through the study of videotapes of a linguistics class at Vanderbilt University and through surveys of both students and faculty at three institutions.

The videotapes provided a means for observing students in actual classroom situations, a helpful technique even though the tapes had some limitations. For example, facial expressions could not be studied because the camera was positioned at a considerable distance from the students, and the overall quality of the tapes was mediocre. However, the tapes did cover the class for an entire semester, and the class was structured in an informal way to allow for maximum student interaction with the instructor. In addition, the class contained only twelve students, which made it possible to observe individual student behaviors in greater detail than could have been done with a larger class.

Surveys of Faculty and Students

The findings made from the analysis of the videotapes
were supported by surveys of both students and faculty
at Motlow State Community College, Middle Tennessee State
University, and the University of Tennessee Space Institute.
These surveys provided a means for studying boredom cues
through the eyes of those most concerned--students and
faculty. The surveys also provided a larger sampling than
the videotapes contained and were statistically correlated.

Even better direct observation could yield possibly
more informative data about boredom. Such sources as
better quality videotapes, additional videotaped class
sessions at different types of institutions with instruc-
tors employing a variety of teaching methods, classrooms
equipped with one-way windows, or classrooms with an
observer present in the class could be utilized to obtain
more information. More attention needs to be focused upon
the verbal and nonverbal behavior of the instructor as a
factor in classroom boredom, and videotapes made expressly
for this purpose would provide a basis for such study.

Although boredom in the college classroom as such has
not been investigated heretofore, the interest shown in
conversations with the faculty and students who participated
in the questionnaire survey at Motlow State Community
College and the faculty respondents at the University of
Tennessee Space Institute does indicate much concern in

knowing how to cope with boredom and its negative effects within the classroom.

In the survey, twenty-three types of behavior were listed which the respondents were asked to rate as strong, moderate, weak, or no indicators of boredom. Of these twenty-three types, which included both kinesic and non-kinesic, thirteen types of nonverbal behavior were chosen for analysis. The highest scoring boredom cues were (1) excessive glances at clock or watch (85%); (2) yawning, nodding, dozing (84%); and restlessness (83%). These are boredom indicators usually recognized as such in almost any situation; therefore, their high percentages are not surprising. Those cues receiving percentages in the middle range were (1) facial expressions (64%); (2) preparation for leaving before class is dismissed (68%); (3) lack of notes (54%); (4) eye contact (52%); and (5) preening (50%). Slow or no response to instructor's questions received a rating of 47%, whereas posture rated 41%. The percentage for posture was lower than expected since the students who described their classroom behavior when bored mentioned posture more frequently than any other characteristic. Students and faculty disagreed as to whether excessive attention to notes is a boredom cue, with the students rating it much higher (54%) than did the faculty (18%). Selection of seating location scored the lowest (25%) of the thirteen indicators.

Areas for Future Research

The analysis of the videotapes and the surveys suggested
the following behavioral areas for additional study:

1. Posture-related activities need to be examined
further to determine if certain postures or body movements
as such are valid criteria. The tape analysis suggests that
posture alone is probably not a valid criterion when viewed
in isolation. Most students, whether bored or interested,
tended to slouch in chairs and move around some, but
interested students usually kept their attention focused
on the interaction, whereas the bored students did not.

2. The note-taking behavior of students in two areas
needs additional research. The first area would center
around students who take fewer notes than others, and the
second would be concerned with students who give excessive
attention to notes, such as hunching over and writing in
a manner that discourages interrupting or reading back
over notes previously taken.

3. Excessive preening possibly can be established as
an easily recognizable boredom cue that indicates a
student is not involving himself mentally in the class
activity. Further study might show that excessive preening
also reveals a lack of self-confidence that makes a
student afraid to involve himself in the class for fear
of failure. Non-participation, then, leads to boredom.

4. After reviewing the tapes, I came to a conclusion that the length of a pause between the instructor's asking a question and a student's responding seems to be a valid indicator of boredom. Forty-seven percent of the faculty and students responding to the survey rated the length of the pause as a strong or moderate indicator. Additional study would provide insight as to whether the students' lack of response resulted from boredom with the material or perhaps from not being confident of their interpretation of the question. If an instructor knew that his students were slow in responding because his questions were unclear, corrective measures could be taken, and improved teaching effectiveness would result.

5. Another area for further study closely associated with the length of pause between question and response is the pattern of student response, that is, whether a professor's question is followed by a single answer, which in turn is followed by another question-answer set; or whether a question might result in a brief discussion on one point involving the instructor and several students. Unidirectional response patterns may or may not be an indicator of boredom; however, additional research is needed because lively discussion is the antithesis of classroom boredom.

Not only were the purposes of this study carried out, but research questions posed at its outset were answered in this fashion:

1.   Kinesics and linguistics, as interrelated elements
of the communication process, should be studied together.
In fact, the two are interwoven so closely that to remove
one element for isolated study is to create an artificial
situation. The meaning of a message, according to Bird-
whistell, is carried about thirty-five percent through
verbal channels and sixty-five percent through nonverbal or
kinesic channels.

2.   Boredom indicators were identified and analyzed in
a number of ways--through analysis of the videotapes, through
formal surveys of both students and faculties at three
institutions, through informal written responses from
students, and through interviews.

3.   Boredom indicators can be both verbal and nonverbal.
The questionnaire listed twenty-three behavior types which
the respondents were asked to rate as strong, moderate,
weak, or no indicators of boredom. Thirteen of these types
were kinesic and ten were non-kinesic; however, some of the
categories included both verbal and nonverbal manifestations.
Although some types rated much stronger than others, not
one category was singled out as a non-indicator of boredom
exclusively.

4.   Students' and teachers' perceptions of boredom are
remarkedly similar. Only in two of the thirteen kinesic
categories analyzed were there differences, and both
received relatively low ratings as indicators. These are

excessive attention to notes and seating location. Students

perceive excessive attention to notes as a much stronger

indicator of boredom than do faculty members. In regard to

selection of seating location, only 16% of the faculty

considered it as a strong or moderate indicator whereas 33%

of the students labeled it as such.

5. Knowledge of boredom indicators can assist an

instructor in improving teaching effectiveness. Being

able to recognize these signals while a class is in progress

would let the lecturer know that perhaps a change to group

discussion is needed. Identifying bored students early in

the term would permit the instructor time to work individually

with these students and perhaps improve their chances of

success.

APPENDIX

MEMORANDUM

TO: Faculty

FROM: Helen White

SUBJECT: Questionnaire Concerning Student Boredom
          Indicators in the College/University Classroom

DATE: February 18, 1980

As a part of my doctoral dissertation study, I am compiling
and analyzing material pertaining to boredom in the college/
university classroom. The attached questionnaire is designed
to identify various boredom indicators and their relative
worth as determiners. Faculty opinion in this assessment
is essential; therefore, I am asking for your assistance.

Will you please complete and return the attached two-page
form to me no later than Thursday, February 22? It will
require approximately ten minutes of your time, and the
completed study should be helpful to all of us. For your
help, I will be very grateful.

You may leave the completed questionnaire at my office
(F-250), in my mailbox in the Liberal Arts office, or with
your divisional secretary. If you have questions, please
call me at Extension 237 or just come by the office.

Attachment

INDICATORS OF STUDENT BOREDOM IN THE
COLLEGE/UNIVERSITY CLASSROOM

Please complete the questionnaire by circling your response
to each question. Use the following scale:

        1 - Strong indicator of   3 - Weak indicator
              student boredom   4 - Non-indicator
        2 - Moderate indicator

1.	Yawning, nodding, dozing	1	2	3	4
2.	Frequent absences	1	2	3	4
3.	Habitual tardiness	1	2	3	4
4.	Excessive glances at clock or watch	1	2	3	4
5.	Posture (upright versus slouched)	1	2	3	4
6.	Facial expressions (amusement, perplexity, indifference)	1	2	3	4
7.	Eye contact with speaker	1	2	3	4
8.	Head nods (agreement or disagreement)	1	2	3	4
9.	Restlessness (fidgeting, feet shuffling, pen clicking, finger tapping, re-arranging papers and books)	1	2	3	4
10.	Preening (arranging hair, adjusting clothes)	1	2	3	4
11.	Reaction to external distractions (people entering the room, noise in the hall)	1	2	3	4
12.	Preparation for leaving before class is dismissed	1	2	3	4
13.	Last minute entrance into classroom	1	2	3	4
14.	Selection of seating location (back or sides versus front or center)	1	2	3	4
15.	Pattern of created excuses for leaving during class session	1	2	3	4

Indicators of Student Boredom, page 2

16. Generally late assignments   1 2 3 4

17. Poor quality of work in relationship to
     academic potential   1 2 3 4

18. Amount of student-instructor verbal
     interaction during class   1 2 3 4

19. Amount of contact with instructor out-
     side of class   1 2 3 4

20. Slow or no response to instructor's
     questions   1 2 3 4

21. Lack of notetaking   1 2 3 4

22. Excessive attention to notes   1 2 3 4

23. Discipline problems (talking, inappro-
     priate or unnecessary laughing,
     nonproductive arguing)   1 2 3 4

24. Other _____   1 2 3 4

Check the appropriate blank:

Faculty   _____   UTSI   _____   Male   _____

Student   MTSU   _____   Female _____
  Freshman   _____
  Sophomore   _____   Motlow _____
  Junior   _____
  Senior   _____
  Graduate   _____

TABLE 7

COMPOSITE FACULTY AND STUDENT RESPONSES
TO QUESTIONNAIRE (RESPONSES: 108)

Question Number	Strong Number	Strong Per-centage	Moderate Number	Moderate Per-centage	Weak Number	Weak Per-centage	Non Number	Non Per-centage	No Response
1	53	49	38	34	16	15	1	1	
2	34	32	36	39	25	23	12	11	1
3	14	13	39	36	29	28	25	23	
4	56	52	36	33	14	13	2	2	
5	12	11	32	30	42	39	22	20	
6	35	32	35	32	27	26	11	10	
7	22	20	35	32	29	27	21	20	1
8	19	18	27	25	29	27	30	28	3
9	45	43	43	40	13	11	5	4	2
10	19	18	34	32	45	41	10	9	
11	21	20	29	27	37	34	21	19	
12	28	26	45	42	25	23	10	9	
13	4	4	17	16	48	44	39	36	

TABLE 7 (Continued)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
14	10	9	17	16	40	37	41	38	
15	34	31	34	32	25	23	15	14	
16	18	17	34	32	34	32	21	20	
17	35	33	38	35	24	22	11	10	
18	14	13	46	43	30	29	17	16	1
19	12	11	19	17	34	31	43	41	
20	14	13	37	34	42	39	15	14	
21	23	21	36	33	27	25	22	20	
22	16	15	24	22	37	35	31	29	
23	45	43	35	32	20	18	9	8	

Note: Percentages are rounded to the whole number.

TABLE 8

COMPOSITE MOTLOW STATE COMMUNITY COLLEGE, MIDDLE TENNESSEE STATE
UNIVERSITY, UNIVERSITY OF TENNESSEE SPACE INSTITUTE

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
1	25	50	16	32	8	16	1	2	
2	10	20	16	32	15	30	9	18	
3	7	14	13	26	21	42	9	18	
4	21	42	19	38	9	18	1	2	
5	5	10	15	30	20	40	10	20	
6	18	36	17	34	13	26	2	4	
7	12	24	17	34	16	32	4	8	1
8	10	20	14	28	14	28	9	18	3
9	19	38	22	44	6	12	1	2	2
10	10	20	16	32	20	40	4	8	
11	5	10	12	24	24	48	9	18	
12	9	18	25	50	12	24	4	8	
13	1	2	6	12	22	44	21	42	

TABLE 8 (Continued)

Question Number	Strong Number	Per-centage	Moderate Number	Per-centage	Weak Number	Per-centage	Non Number	Per-centage	No Response
14	1	2	7	14	20	40	22	44	
15	9	18	16	32	16	32	9	18	
16	3	6	15	30	21	42	11	22	
17	13	26	15	30	15	30	7	14	
18	4	8	21	42	16	32	9	18	
19	2	4	12	24	13	26	23	46	
20	3	6	20	40	20	40	7	14	
21	7	14	15	30	16	32	12	24	
22	0	0	9	18	19	38	22	44	
23	11	22	21	42	12	24	6	12	

Note: Percentages are rounded to the whole number.

TABLE 9

MOTLOW STATE COMMUNITY COLLEGE FACULTY RESPONSES
TO QUESTIONNAIRE (RESPONSES: 21)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
1	10	48	8	38	3	14	0	0	
2	6	29	7	33	5	24	3	14	
3	6	29	7	33	6	29	2	9	
4	11	53	8	38	2	9	0	0	
5	2	9	6	29	11	53	2	9	
6	9	43	7	33	5	24	0	0	
7	8	38	7	33	5	24	1	5	
8	5	24	8	38	5	24	3	14	
9	10	48	9	43	2	9	0	0	
10	6	29	7	33	8	38	0	0	
11	4	19	5	24	10	48	2	9	
12	5	24	10	48	4	19	2	9	
13	1	5	4	19	10	47	6	29	

TABLE 9 (Continued)

Question Number	Strong Number	Strong Per-centage	Moderate Number	Moderate Per-centage	Weak Number	Weak Per-centage	Non Number	Non Per-centage	No Responses
14	1	5	6	29	8	37	6	29	
15	8	38	6	29	4	19	3	14	
16	3	14	10	48	6	29	2	9	
17	9	43	6	29	4	19	2	9	
18	2	10	9	43	8	38	2	9	
19	1	5	6	29	6	29	8	37	
20	2	10	11	52	6	29	2	9	
21	5	24	8	38	6	29	2	9	
22	0	0	6	29	9	42	6	29	
23	7	33	10	49	2	9	2	9	

Note: Percentages are rounded to the whole number.

TABLE 10

MIDDLE TENNESSEE STATE UNIVERSITY FACULTY RESPONSES
TO QUESTIONNAIRE (RESPONSES: 15)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
1	10	67	2	13	2	13	1	7	
2	3	20	5	33	3	20	4	27	
3	1	7	3	20	6	40	5	33	
4	7	46	4	27	3	20	1	7	
5	2	13	5	33	4	27	4	27	
6	7	47	3	20	5	33	0	0	
7	1	7	7	47	5	33	1	7	1
8	3	20	3	20	5	33	3	20	1
9	7	47	4	27	2	13	0	0	2
10	3	20	6	40	6	40	0	0	
11	1	7	5	33	7	47	2	13	
12	4	27	8	53	2	13	1	7	
13	0	0	1	7	6	40	8	53	

TABLE 10 (Continued)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
14	0	0	1	7	5	33	9	60	
15	0	0	6	40	5	33	4	26	
16	0	0	4	26	7	47	4	27	
17	3	20	6	40	4	27	2	13	
18	1	7	4	26	6	40	4	27	
19	0	0	1	7	4	27	10	66	
20	0	0	4	27	6	40	5	33	
21	2	13	4	27	5	33	4	27	
22	0	0	2	13	6	40	7	47	
23	2	13	3	20	8	54	2	13	

Note: Percentages are rounded to the whole number.

TABLE 11

UNIVERSITY OF TENNESSEE SPACE INSTITUTE FACULTY RESPONSES
TO QUESTIONNAIRE (RESPONSES: 14)

Question Number	Strong		Moderate		Weak		Non		No Responses
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
1	5	36	6	43	3	21	0	0	
2	1	7	4	29	7	50	2	14	
3	0	0	3	21	9	65	2	14	
4	3	21	7	50	4	29	0	0	
5	1	7	4	29	5	36	4	28	
6	2	14	7	50	3	22	2	14	
7	3	21	3	22	6	43	2	14	
8	2	14	3	21	4	28	3	21	2
9	2	14	9	65	2	14	1	7	
10	1	7	3	21	6	44	4	28	
11	0	0	2	14	7	50	5	36	
12	0	0	7	50	6	43	1	7	
13	0	0	1	7	6	43	7	50	

TABLE 11 (Continued)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
14	0	0	0	0	7	50	7	50	
15	1	7	4	29	7	50	2	14	
16	0	0	1	7	8	57	5	36	
17	1	7	3	21	7	50	3	22	
18	1	7	8	57	2	14	3	22	
19	1	7	5	36	3	21	5	36	
20	1	7	5	36	8	57	0	0	
21	1	7	3	22	4	28	6	43	
22	0	0	1	7	4	28	9	65	
23	2	14	7	50	2	14	2	14	

Note: Percentages are rounded to the whole number.

TABLE 12

COMPOSITE STUDENTS RESPONSES TO
QUESTIONNAIRE (RESPONSES: 58)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
1	28	48	22	38	8	14	0	0	
2	24	41	20	35	10	17	3	5	1
3	7	12	26	45	18	31	7	12	
4	35	60	17	29	5	9	1	2	
5	7	12	17	29	22	38	12	21	
6	17	29	18	31	14	24	9	16	
7	10	17	18	31	16	28	14	24	
8	9	16	14	24	14	24	21	36	
9	26	45	21	36	7	12	4	7	
10	9	16	18	31	25	43	6	10	
11	16	28	17	29	13	22	12	21	
12	19	33	20	35	13	22	6	10	
13	3	5	11	19	26	45	18	31	

TABLE 12 (Continued)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
14	9	16	10	17	20	35	19	32	
15	25	43	18	31	9	15	6	11	
16	15	26	19	33	14	24	10	17	
17	25	43	23	40	6	10	4	7	
18	11	19	25	43	14	24	8	14	
19	10	17	9	16	18	31	21	36	
20	11	19	17	29	22	38	8	14	
21	17	29	21	36	10	17	10	17	
22	16	28	15	26	13	22	14	24	
23	44	59	14	24	7	12	3	5	

Note: Percentages are rounded to the whole number.

TABLE 13

MOTLOW STATE COMMUNITY COLLEGE STUDENT RESPONSES
TO QUESTIONNAIRE (RESPONSES: 32)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
1	15	47	12	37	5	16	0	0	
2	12	38	11	34	7	22	2	6	
3	4	13	15	47	10	31	3	9	
4	18	56	11	35	2	6	1	3	
5	5	16	12	37	9	28	6	19	
6	7	22	12	37	6	19	7	22	
7	4	13	9	28	7	22	12	37	
8	4	13	4	13	8	25	16	49	
9	13	41	12	37	5	16	2	6	
10	5	16	9	28	15	47	3	9	
11	2	6	11	35	9	28	10	31	
12	8	25	10	31	10	31	4	13	
13	2	6	7	22	14	44	9	28	

TABLE 13 (Continued)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	
14	5	16	5	16	11	34	11	34	
15	14	43	9	28	5	16	4	13	
16	8	25	9	28	10	31	5	16	
17	16	50	10	31	4	13	2	6	
18	5	16	13	40	9	28	5	16	
19	3	9	8	25	9	28	12	38	
20	11	34	8	25	8	25	5	16	
21	8	25	12	37	7	22	5	16	
22	2	6	9	28	9	28	12	38	
23	10	60	8	25	3	9	2	6	

Note: Percentages are rounded to the whole number.

TABLE 14

MIDDLE TENNESSEE STATE UNIVERSITY STUDENT RESPONSES
TO QUESTIONNAIRE (RESPONSES: 26)

Question Number	Strong Number	Strong Per-centage	Moderate Number	Moderate Per-centage	Weak Number	Weak Per-centage	Non Number	Non Per-centage	No Responses
1	13	50	10	38	3	12	0	0	
2	12	46	9	35	3	12	1	4	1
3	3	12	11	42	8	31	4	15	
4	17	65	6	23	3	12	0	0	
5	2	8	5	19	13	50	6	23	
6	10	38	6	23	8	31	2	8	
7	6	23	9	35	7	27	4	15	
8	5	19	10	39	6	23	5	19	
9	13	50	9	34	2	8	2	8	
10	4	15	9	34	10	39	3	12	
11	5	19	6	23	13	50	2	8	
12	11	42	10	38	3	12	2	8	
13	1	4	4	15	12	46	9	35	

TABLE 14 (Continued)

Question Number	Strong		Moderate		Weak		Non		No Response
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage	
14	4	15	5	19	9	35	8	31	
15	11	42	9	35	4	15	2	8	
16	7	27	10	38	4	15	5	20	
17	9	35	13	50	2	8	2	8	
18	6	23	12	46	5	19	3	12	
19	2	8	1	4	12	46	11	42	
20	3	11	9	35	13	50	1	4	
21	5	19	9	35	7	27	5	19	
22	1	4	6	23	12	46	7	27	
23	15	58	6	23	4	15	1	4	

Note: Percentages are rounded to the whole number.

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