ESL PRESCHOOLERS' INTERPRETATION OF NONVERBAL COMMUNICATION

by

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Abstract

Studies indicate that children acquire both verbal and nonverbal acuity at a very early age. Since it is also agreed that the nonverbal forms of communication children learn are culture-specific the acquisition of nonverbal gestures by second language learners is of considerable interest.

A study by Kumin and Lazar (1974) indicates that first language speakers as young as three have considerable ability in encoding and decoding the group of gestures known as emblems. The present study extends their findings by comparing the decoding of gestures by native English speakers (age 3-5) with non-native speakers. Thirty-six emblems and illustrators, two forms of commonly used gestures, were decoded by forty children, twenty native speakers and twenty ESL speakers. The gestures chosen were screened by a panel of ten practicing ESL teachers who considered them to be typical of classroom interaction. The videotape of the gestures was validated by 62 native speakers before being administered to the children.

Analysis of variance results indicate there is a main effect for age as well as a very strong effect for ethnicity (native speakers vs ESL). A Spearman's rho rank correlation on the sequence of acquisition of the gestures raises the interesting possibility that there may be a developmental pattern such as is found in the verbal domain.
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There is a legendary account of the voyages of Captain Cook which illustrates cultural conditioning. It is said that when Captain Cook landed on the Fiji Islands' beach and walked to meet an oncoming band of natives, he thrust out his hand in token of friendship. It never occurred to him that an offer to shake hands could be interpreted as a threatening gesture, because his countrymen were all conditioned to 'read' his gesture as friendly. In the split second of his action, however, the natives, who were not so conditioned, interpreted the thrust of hand and arm as an aggressive action, and promptly killed the explorer. Legend has it that before he made his gesture they were ready to be friendly; they just did not know about the conventional gesture we call a handshake.

taken from BODY CODE by Lamb and Watson (1979)
CHAPTER ONE

SCOPE AND FOCUS OF THE STUDY

A. Background of the Problem

In Canada, children of non-English-speaking background comprise an ever increasing percentage of the total school population. The Vancouver School Board, for instance, estimates that close to half of its student population speaks a language other than English as its mother tongue. Teachers, however, are still predominantly from the white, English-speaking, middle class majority and therefore bring to the teaching situation all that their cultural heritage and institutional training has taught them. The question then arises: "Are there areas of miscommunication between teacher and student by virtue of their different cultural, as well as linguistic, backgrounds?"

A history of extensive research in both first and second language acquisition ensures that teachers can be well prepared to meet the linguistic needs of their non-English-speaking students. However, researchers and writers such as Edward T. Hall (1959, 1969, 1976, 1983) and John Porter (1965), each from his own perspective, point out that acquiring the linguistic knowledge of the dominant culture is not enough to permit facile interaction with members of that group. Schrank (1975) tells us that from 200 to 5000 bits of nonverbal information per second are exchanged between two people engaged in an ordinary conversation. This he gauges to be 83% of an interaction, leaving a mere 17% for the verbal exchange. In our highly word oriented society this seems impossible, yet it is in North
American society that he collected his data.

Equality Now, the report of the Special Committee on Visible Minorities in Canadian Society, defines this component of communication as the hidden curriculum.

The hidden curriculum is the teaching of social and economic norms and expectations to students. These norms and expectations are so much a part of schooling that they are seldom questioned or consciously examined. They range from the assumption that all students are familiar with Christian heritage to assumptions about the meaning of eye contact, pause length and social distance. (p. 118)

The report goes on to say that many opportunities can be lost when this hidden curriculum is the basis of teaching methods used in the classroom where a large percentage of the students do not have these norms and expectations in common with their teacher.

One aspect of this hidden curriculum is what is known collectively as nonverbal communication. It is what Schrank concluded was the lion's share of any interaction. Extensive research (Birdwhistell, 1970; Hall, 1959, 1969; Lamb & Watson, 1979) indicates that nonverbal communication is indeed common to all, is used by everyone and appears to be culture based. In fact it is such an integral part of our development that "children acquire a nonverbal system of communication before the verbal system" (Weeks, 1979). Not only that, according to a study by Allen & Feldman (1975) children are better at decoding nonverbal behaviour than adults. With this in mind, in a multicultural and/or ESL (English as a Second Language) classroom, it seems
highly relevant to examine the nonverbal element of communication, especially that of the teacher, who is usually of a different cultural background from many of the students. Do the students, for instance, interpret the gestures commonly used to supplement, enhance or even replace the verbal message, in the way that the teacher has intended, or is there miscommunication, misunderstanding of intention or meaning?

Why is it important to know if there is misinterpretation of gestures? "It is important because a child's ability to learn from a teacher depends on the sharing of systems of nonverbal codification" (Byers & Byers, 1972, p.27). This means a way of behaving that is expected by the teacher, not taught, and since it is to a large extent below the level of conscious awareness, involves much more than polite formulae of speech. As Scheflen (1974) puts it: "If a person behaves in a customary and recognizable way his action will be communicative. It will evoke a common cognitive image in other people of the same culture." (p.21) Since native English-speakers acquire language and its attendant nonverbal strategies from birth and by example, they are already very adept by the time they begin formal schooling. The social and contextual appropriateness is taken as tacit knowledge in the classroom. For the second language learner, however, the social, contextual and nonverbal aspects, while present in any communication, must take a proverbial backseat to the linguistic because not only does the school system transmit knowledge via language, but also, society at large functions on a primarily verbal level. Consider, for instance, the difficulties involved for a second language
speaker to meet even the primary needs of food and shelter without using language to communicate. Thus while the native speakers are immediately at ease in the classroom situation and "know" without being explicitly taught what is appropriate language and behaviour in a given situation, the non-English-speaker has difficulty concentrating on the subject matter at hand because s/he is not conversant with the norms and expectations, the process of classroom interaction. Not knowing does not imply ignorance, however. ESL speakers may be painfully aware that something is missing in their ability to communicate and be at ease in a situation, but this missing element is not defined nor taught explicitly and in this way leads to the vertical socioeconomic mosaic of which John Porter speaks.

Hitherto it has, in essence, been demanded of minority children to take their culture off at the door like a coat and don the garment of the dominant group without any help or guidance concerning what is or is not appropriate in this new environment (Koogler, 1980). Furthermore, when teachers have been urged to become more multiculturally competent, they are often inappropriately advised to do such things as make eye contact and smile, neither of which behaviours are equally acceptable or similarly interpreted by all cultures (Wolfgang, 1977).

It is these nonverbal behaviours that first greet the non-English-speaking child who wishes to learn to communicate in English. An ESL teacher's mandate is to facilitate communication in all its aspects and thus help the second language learner to learn in his/her new language all that is necessary to enjoy full participation in English-speaking, Canadian society.
Therefore, if the teacher is cognizant of not only the linguistic aspects of the language, but also the similarities and differences of interpretation of some of our nonverbal communicative acts, it would further enhance this process. The intention is not to have this just be another burden for teachers, but rather the learning process should be that much easier with the conscious use of nonverbal means to aid comprehension and expression.

This study attempts to elucidate one little studied, but much used area of nonverbal communication behaviour. The group of gestures known as emblems, though used by teachers generally, are particularly prevalent in the ESL classroom because of their highly functional value and their ability to take the place of words, words that may not yet be understood by the learner.

An emblem is a conventionalized gesture (such as a head nod signifying 'yes') which can accompany speech or on occasion replace it. A number of emblems common to North American culture are highly appropriate as classroom management tools. For instance, meaningful actions spring to mind in association with such directives as: be quiet, sit down, stop, come here, get up. Even beyond management directives, many other emblems are useful such as the expression of feelings: I'm tired, it's hot (cold), I'm sad.

Closely related to emblems is another group of gestures called illustrators. This type of gesture seldom replaces but rather accompanies speech and serves to enhance the verbal message in some way such as visually demonstrating how long that
big fish caught really was. Emblems and illustrators together form a sizeable part of a teacher's repertoire of "facilitating" techniques used in the classroom, especially the ESL classroom. Thus, when the teacher lays a finger perpendicularly across closed lips or crooks and wiggles a finger at a child to 'come here', does the non-English speaker understand what the gesture, in this case an emblem, attempts to convey? The present study is an attempt to answer this question about a number of both emblems and illustrators.

Kumin and Lazar (1974) in their study with very young, Caucasian, middle class children demonstrated that children as young as three years old can decode and encode these types of gestures. The present study seeks to replicate their findings in part, and then extend the study by comparing the performance of Caucasian, middle class children with that of non-English-speaking children.

B. Assumptions
This study is based on the following assumptions.
1. Young children are able to decode the nonverbal gestures typically used in the classroom setting.
2. Both non-English-speaking children and native speakers of English of preschool age (3-5) have had enough exposure to television to be able to watch a videotape of gestures and interpret them as in "real life".

C. Research Questions
This is for the most part a first and exploratory study in
a field with no established research tradition. Therefore an attempt is made to answer the following questions.

1. Are there significant differences of interpretation of gestures between non-English speakers and native speakers of English?

2. Is there a consistent pattern of acquisition of gestures for either group of children?

3. Which of these gestures are interpreted similarly or differently by the two groups of children?

D. Scope and Organization of the Study

This study is confined to preschool children between the ages of three and five, where half the children are non-English-speaking, though they may be from more than one cultural group, and the other half have English as their mother tongue. The children of the two groups are matched as closely as possible in terms of age, and equivalent numbers of each sex are selected in both groups. The task consists of a "guessing game" where the children watch a videotape of 36 gestures performed by a practicing teacher of ESL and are asked to tell the investigator (with the help of an interpreter) orally what they think "the teacher is trying to tell her class". Each child's total response is recorded and later evaluated for semantic equivalence with the agreed upon interpretation of each gesture. This agreed upon interpretation is based on the consensus of interpretation given by 10 practicing ESL teachers as well as the test results from having 62 adults in ESL teacher training watch the videotape and give their responses.
Adults were used for this purpose in order to follow as closely as possible the Kumin and Lazar model. It was further felt appropriate since adults are the models from which children learn their nonverbal behaviour. Finally, adults who have grown up in this culture can reasonably be expected to be conversant with its nonverbal behaviour. Therefore their scores would provide a useful baseline against which both groups of children can be measured.

E. Limitations of the Study

The chief limitations of this study are:

1. The use of a videotape of performed gestures rather than a live performance may lead to some incorrect interpretation due to the incomplete contextual information available to the viewer.

2. Completely random selection of subjects was not possible within both the time framework and the nature of the study itself. Within the groups selected for study, children to some extent chose themselves, once they qualified according to age and sex, by being willing to attempt the task.

F. Definition of terms

The following terms are frequently used in this study and are defined as follows:

Non-English-speaking child refers to a child whose mother tongue is not English and has as yet only a minimal command of English.
Native speaker refers to a child whose mother tongue is English.

Mother tongue is the first language learned and used in the home.

Nonverbal communication refers to all that is communicated over and above the use of words, thus including nonverbal acts (see below) as well as coverbal (voice modifications, tempo, loudness, nasalization, etc.) behaviour.

Nonverbal act refers to bodily movement used to enhance, underline, accompany or replace speech.

Gesture refers to a nonverbal act that may be accompanied by speech. Generally speaking, a gesture involves some or all of the following: facial expression; hand and arm movement; total body movement.

Emblem refers to a nonverbal act that has been conventionalized to the point where it has a direct verbal translation common to members of the same culture. An emblem, therefore, can stand alone (i.e. without speech) but can also be accompanied by its verbal counterpart.

Illustrator refers to a nonverbal act that accompanies speech, serving to enhance, clarify or underline the words spoken. An illustrator is rarely performed without verbal accompanyment.
CHAPTER TWO

REVIEW OF THE LITERATURE

I Related Research

A. Introduction

Now that the project has been outlined, it is necessary to consider it in its historical perspective in terms of related study in this field. In order to set out the history of theory and research that bears on the present study, it is first necessary to step back and look at a more global perspective of communication and especially its nonverbal aspects. From this vantage point one can more easily understand how this study came into being and its relative place in the fast growing body of research concerning the nonverbal component of communication.

Communication can be likened to a tapestry of intricate design. Most people have some idea of how it is put together, but only an expert craftsman can speculate on the elements of its design, and even the expert tends to focus on one aspect rather than the whole.

Using the verbal to describe the nonverbal has for centuries been the domain of novelists and playwrights, who seem to have been endowed with heightened powers of observation. If they had been asked whether the nonverbal is important in communication, the present meteoric rise of research in this field would have taken place much sooner. Anyone who has read Sir Arthur Conan Doyle's stories of Sherlock Holmes, sleuth
extraordinaire, or Agatha Christie's accounts through the eyes of Hercule Poirot, fastidious and acutely observative Belgian detective, is well aware how much is communicated by actions as well as such things as manner of dress, stance and facial expression. Even the physical set up of a room can be considered for its significance, especially where it controls interpersonal distance. Still earlier in the world of fiction, Shakespeare deftly described the power of the nonverbal element in communication in such passages as the following from Troilus and Cressida (Scene 4.5, Lines 54-57). His acute observer was Ulysses.

Fie, fie upon her!
There's language in her eyes,
her cheek her lip.
Nay, her foot speaks;
her wanton spirits look out
At every joint and motive of her body.

In a more scientific mode, Darwin (1872/1965) in his treatise, The Origin of the Species pointed out the prevalent use of nonverbal communication to express emotion. It took nearly a century for his work to be re-examined (Ekman, 1973) and its true value acknowledged.

Nonverbal communication as a separate field of study was first considered by psychologists and psychoanalysts. In their attempts to help their patients, they became acute observers of behaviour because it gave them valuable clues concerning the "hidden" problems which were, often as not, verbally
contradicted by their patients. Since nonverbal communication is part of all interaction and occurs largely below the level of conscious awareness, careful observation and thoughtful interpretation can obviously be of great benefit in the analyst-client relationship. In fact, we are all amateur psychoanalysts. Who has not arrived on a scene involving friend or family and interpreted a "feeling" being transmitted as anger, distress, or sadness. No words need be spoken, you walk into the room and you "know". Expressions like "a picture is worth a thousand words do not only refer to a two-dimensional scene on canvas. However, despite the myriad examples that abound both in literature and research it is still far too common, especially in Western society, to assume that the words are the message, and nonverbal communication is only a minor adjunct which may be relevant when the communicants don't speak the same language. Language, after all, is a "conventionalized code that is dependable and predictable" (Dittman, 1978, p.70). In fact, Funk and Wagnalls' definition of communication leaves little room for the nonverbal: "transmission or exchange of ideas, information, etc. as by speech or writing". Harrison (1983) postulates that at least part of the reason for the emphasis on the verbal part of communication lies in the fact that Western thinking, following a tradition that dates back to Plato and Aristotle, conceives of communication as a product of the intellect, whose primary function is to interpret in words the static, rational reality out there beyond the fingertips.

In contrast, Eastern teaching has long emphasized the importance of social harmony, which Harrison claims is achieved
through ritualistic acts, careful husbandry of time and space and judicious use of anything else that will further the ultimate goal of unity with self, others and the world at large. He attributes the recent growth of interest in and respect for the nonverbal component of communication to the corresponding increase in contact and interaction between these two worldviews.

Whatever the historical reasons for this society's verbal orientation, a wider perspective on communication is increasingly becoming evident. In fact the power of the nonverbal to influence the consumer is being exploited by such persons as advertisers and salespeople who now use highly sophisticated media to mold public choice. In advertising, nonverbal communication may be being used to deliberately trick or sway perception. Advertisers also use nonverbal communication in an attempt to determine our true feelings no matter what we "say".

In terms of education, the definition of what entails communication, a key skill to be taught, is expanding. Montagu (1967) makes it clear that the primary purpose of education is to help children acquire the art of communication since, in his view, children literally learn how to be human through communication. Certainly this entails more than learning how to talk, read and write. Like Victoria (1970), he believes that education is, in essence, a communication process, not only in the Funk and Wagnalls sense of transmission of knowledge, but also as it relates to interpersonal interaction. Here again the nonverbal component of communication is strongly implicated for
who can interact satisfactorily on a personal level without making automatic use of the norms and expectations that are part of social intercourse.

It is unfortunate that the study of human communication has been rather rigidly departmentalized. Linguists have traditionally pursued the study of language as if it were an abstract system that is fully self-sufficient and therefore can be analyzed quite apart from the context of and/or purpose for its use. While punctuation and grammar help, they do not give any indication of the speaker's attitude toward the listener, toward what is said and why, nor can they take into account how the utterance has affected the listener.

Anthropologists and other social scientists, on the other hand, have given much attention to that part of human interaction that is communicative but not necessarily linguistic. Their perspective lies in the understanding of the individual as a member of a group and in his/her attempts to communicate within the constraints set out by this membership. The language used in this attempt is regarded as a relatively minor component in the complex act of communication.

Neither perspective seems to admit the possibility that communication involves both a language of words and a repertoire of non-linguistic behaviours. Harris (1981) in his book, The Language Myth postulates that what is needed is an "integrational linguistics" which would consider both the words spoken and the contextual setting of the utterance. This setting would include both the physical environment and the actions of the communicants.
Harris, a linguist himself, never once mentions nonverbal communication in his book but indicates that the genesis, over the last twenty years, of various branches of linguistics (for example, sociolinguistics) is symptomatic of the dissatisfaction within the field that the original perspective on language is inadequate to the task of encompassing all that communication implies. Despite these movements toward a more wholistic approach to communication, nonverbal communication is still considered as a field apart and will be discussed as such here.

It has been determined that the nonverbal part of a conversation is by far the larger part of communication. Birdwhistell (1970) estimates that only about 30 percent of an interaction between two speakers of the same culture is verbal, Schrank (1975) suggests it is 17 percent and Mehrabian (1972) allots only 7 percent. While these figures must not be taken as definitive, they do again indicate clearly the hitherto unheeded importance of the nonverbal part of communication. Pennycock (1985) sums it up succinctly when he quotes David Abercrombie as saying: "We speak with our vocal organs, but we converse with our whole body."

Before proceeding to describe the parameters of nonverbal communication per se, it may be helpful to summarize some of the more significant differences between the verbal and the nonverbal parts of communication. Condon and Yousef (1975) outline five areas of obvious contrast.

1. Spoken language varies from place to place but there is a tendency to believe that much of nonverbal communication is universal. Though this has not been proven to be strictly true
(more on this later) there is some basis in fact to the assumption that nonverbal communication is "natural" in the sense of being not consciously learned.

2. The spoken language has been laid out as a system and can therefore be systematically learned (and taught). Birdwhistell (1970) has made a valiant attempt to treat nonverbal communication as a communication system but at present scholars are not able to set out "rules" similar to grammar and syntax simply because, as yet, we still know too little about the topic. The obvious implication is that if it is not a well defined system, we cannot take it apart and teach it as is done with language.

3. The spoken language has been recorded in writing for all. A dictionary or phrase book will give the meanings and usage of even foreign words. Though attempts have been made, there is no dictionary of body language except a few outlines of culture specific hand gestures. There is no way to check on the meaning of what a "speaker" may have meant.

4. If a speaker is not completely understood s/he can be asked for clarification or repetition. It would be extremely odd to ask a speaker what was meant by the frown and sudden exhalation of breath together with rolling eyes that the listener observed.

5. Words can lie. Except perhaps under duress, we exercise some conscious control over what we say. Though possible, it is very difficult to control our nonverbal behaviour.
B. Nonverbal Communication

The intricate tapestry we call communication has now yielded up its main secret. Like the warp and woof on a loom, it takes both verbal and nonverbal to complete the message of its design, to communicate. Taking the relatively fixed nature of language as the warp, it is the nonverbal, the woof, that is at liberty to vary, to create a unique tapestry by variations in texture, mood, even the meaning of the message.

To continue the analysis it seems vital to delve deeper into the very nature of nonverbal communication so that other experts may add their viewpoints. One will have an educational perspective, the other a cross-cultural perspective. Finally, the contextual background for the present study which combines nonverbal communication with education in a cross-cultural setting, can be presented.

What then precisely does nonverbal communication entail? Smith (1984) defines nonverbal communication, used synonymously with nonverbal behaviour in the present study, as including "all essentially non-linguistic phenomena which impinge on and influence the human interaction process." (p. 175) From this definition it is certainly clear that "nonverbal" implies much more than "not words". Condon & Yousef (1975) list twenty-four areas subsumed under the rubric of nonverbal communication and point out that, depending on your perspective, many more may be included. In general terms nonverbal communication includes kinesics, proxemics, paralanguage and artifacts. Less easy to classify but also of note are the use of time and silence in interaction.
1. Kinesics

The term kinesics refers to all bodily movement that is involved in the communication process. The term was coined by Ray Birdwhistell, whose minute analysis of body movement pioneered this area of noverbal communication. Setting out to study body movement (kinesics) as a communication system, he labelled minute bits of movement or gesture, kinemes. An example would be an eyebrow raise. These can then be further subdivided into kines and still further into allokines. This proves necessary in order to analyze all bodily movement, since the body is literally in constant motion during an act of communication (Pennycock, 1985). Needless to say such painstaking analysis is nigh impossible with only the human eye for observer, but can be more readily accomplished with the aid of sophisticated filming techniques.

The development of Birdwhistell's system closely parallels the phonetic divisions used by linguists, such that a kineme is the nonverbal parallel for the phoneme, the kine for the phone, the allokine for the allophone. He seems to have drawn this parallel quite deliberately in an effort to point out the importance of this part of communication, which had hitherto not been considered significant enough, or if so, too unmanageable and undefinable to study along rigorous research methodology lines.

Though painstaking analysis using this system was not embraced wholeheartedly, the larger concept of a kine-morpheme, the nonverbal equivalent of a morpheme, led to a fracturing of the entire area of kinesics into intense study of various of its
subsystems. Thus, as well as some "whole body" movement studies, there are a wealth of studies in selected areas such as facial expression (Ekman et al, 1972; Boucher & Ekman, 1975), eye movement and gaze (Bakan, 1971; Argyle et al, 1974), and gesture (which includes stance and posture, hand, arm and trunk movement) (Michael & Willis, 1968; Cohen & Harrison, 1973; Ekman, 1976; Lamb & Watson, 1979).

What is suggested by these studies is that we all use kinesics in our interaction with others and we modify our behaviour based on social and cultural rules. Our ability to interpret correctly the kinesics of others is hampered by our lack of conscious awareness of our own, especially where the interactants stem from different cultures or sub-cultures.

2. Proxemics

Here again one man has coined the term and led the field of study. Edward T. Hall, widely travelled anthropologist, defines proxemics as "...the interrelated observations and theories of man's use of space..." (Hall, 1969, p1). This includes interpersonal distance (personal space), touch (both intentional and accidental body contact) and the use of space on a larger scale (architecture, for instance).

What these studies have clarified is that man's personal boundary does not end with the skin but rather includes a flexible sphere of influence that expands and contracts depending on such factors as mood, social setting and the relationship to the "other" in any given interaction.

Hall sees all use of space as culture based and draws on
examples from around the world to show the influence culture has on proxemic behaviour. Though Hall dominates the field, others working in this area include Nine-Curt (1976) with touching patterns of Puerto Ricans and Jourard (1966), who has done world-wide studies of cross-cultural touching behaviour.

3. Paralanguage
This term was first used by Trager (1958) as a global term for all aspects of voice modification in speech. Therefore, included were such factors as voice timbre (which gives information on mood, age, sex, etc.), voice quality (rhythm, tempo, articulation and the like) and vocalization (noises made such as laughter, crying, mmmmm, uh-uh or uh huh).

Since then the narrow sense of paralanguage as above has been expanded by some to include all of what is called nonverbal communication in this study. The part called paralanguage here has been renamed paraverbal or coverbal behaviour. This wider definition appears to be gaining favour (Pennycock, 1985). Therefore the reader should be cognizant of this alternate classification, although for the purposes of this review Trager's long established definition and usage holds.

Key (1975) identified several factors that influence the voice: nasalization, palatalization, labialization, pharyngealization, sound placement and the use or non-use of the voice. The significance of these qualities lies in the culturally different use made of them. For example, English speakers use labialization exclusively when speaking to young children (what we know as baby talk) while German speakers use
it as part of normal speech. An English speaker would not take kindly to being addressed with what he considers a condescending, babyish manner at a business meeting, for instance.

4. Artifacts, Time and Silence

Last, but not least, is the part of nonverbal communication created and consciously manipulated by man. Artifacts include the physical environment in which the interaction takes place, from the pictures on the wall to the colour of the rug, from the position of the seating available to how much light there is in the room or area. Also included are the personal adornments the communicants choose to wear, including jewellery, clothing, make-up and even hair styles and colours. When someone repeats the old adage that "the clothes make the man", it implies much more than the cut of his suit or lack of it. What you wear speaks loudly about you, with whom you ally yourself, what your priorities are and in a very real sense whether or not you get the job or make the sale.

What has not yet been mentioned is the importance of time and silence in communication. In Western society time is very much a commodity: Time is money; Don't waste my time. Being on time is very important and a tardiness of more than a very few minutes calls for extensive apologies, unless of course the intention was to express displeasure or anger by being deliberately late.

In Latin America being "on time" in the Western sense is considered rude, to say the least, in the Arab world it is
difficult to pin down the day for a dinner date, let alone the hour. Hall (1983) explores the use of time in considerable detail in his recent book, The Dance of Life.

Silence, also, is a very strong nonverbal message and has been explored in relation to paralinguistic behaviour (see above) where it involves the length of pause in conversation turn-taking, and also in its use more generally (Hall, 1959). Silence is considered valuable in some societies (Japan, Hopi) and downright uncomfortable in North American social interaction. A stony-faced silence in a North American business meeting implies displeasure and certainly not agreement with the topic under discussion. In Japan, this same semblance of displeasure may signify agreement.

To reiterate, a large portion of any interaction, personal or social, is communicated by the nonverbal features outlined, be it facial expression, voice quality, gesture, interpersonal distance while communicating, setting, or personal dress chosen for the interaction. It is said you cannot not communicate in the presence of another person, even your silence sends a message to be interpreted as social and cultural norms dictate. Or as Patterson (1983) so succinctly puts it: "All behaviour is communication." (p.37)

C. Education and Nonverbal Communication

Although the previous section examines nonverbal communication in isolation, it must be kept in mind that neither
the words spoken in an interaction nor the accompanying nonverbal elements usually exist as solo entities but are both integral parts of the complex tapestry called communication. The only acceptable purpose for such compartmentalization is the furtherance of understanding of the whole. The education expert, rather than looking at what nonverbal communication is, is more concerned with its uses in the classroom setting.

Argyle (1975), from his perspective of psychology, considers the primary functions of nonverbal communication to be fourfold:

a. to express emotion
b. to convey attitude (like/dislike; superior/inferior, etc.)
c. to present the self to others (clothing, stance, etc.)
d. to accompany speech (feedback and vocalizations; emphasize, underline words; etc.)

Do teachers and students use the nonverbal in these ways in the classroom? Since our classrooms are highly verbally oriented the last function listed is certainly likely, and a moment's reflection will remind us that neither teacher nor student stop being human and interacting as such simply because the situation is a classroom. Exchange of ideas and feelings, as well as encouraging, criticizing, questioning and the like are part of teaching, too.

As Woolfolk & Brooks (1983) put it, "Teachers and students are involved in an ongoing, reciprocal influence process...in which both participants are simultaneously making judgments, communicating attitudes, and attempting to influence while being
influenced themselves, with nonverbal cues playing a major role in the exchange." (p.106) Stevick (1982) provides a good traditional education metaphor: "If verbal communication is the pen which spells out details, nonverbal communication provides the surface on which the words are written and against which they must be interpreted." (p.163)

One of the first major studies that considered nonverbal communication in the classroom was done by Grant & Hennings (1971), and looked specifically at the nonverbal activity of the teacher. In their seminal work they categorized the teacher's nonverbal actions in the following manner:

a. conducting - gestures and motions which control participation
b. acting - using the body to build interest, clarify, amplify, etc.
c. wielding - as technician, manipulating the environment
d. personal - motions with no instructional purpose.

The first three come under the rubric of instructional motions. Of these, conducting was observed to occur during 62.5% of the teacher's actions, while wielding was exhibited 28.7% of the time, leaving the remaining 8.8% for acting. Personal motions when compared with instructional were used an average of 22% of the time. Thus three fourths of the nonverbal communication used by the teacher is used directly, though perhaps not entirely consciously, in connection with the teaching act, which of course implies transmission of knowledge.

If so much nonverbal activity is the norm in the classroom, and we accept even the more conservative estimate of
Birdwhistell (1970) that 70% of communication is nonverbal, it seems highly appropriate that teachers be made more explicitly aware of the nonverbal facets of communication. This need has been stressed by many researchers in the field, notably Koch (1971a), Thompson (1973) and Galloway (1970, 1976). Pre-service and in-service training in nonverbal communication and awareness have been implemented in at least some centers (French, 1971; Love & Roderick, 1971). Still, the present lack of teacher training programs that include nonverbal communication seems to indicate that teacher awareness of nonverbal communication is not yet considered a vital part of teaching skills taught.

On the heels of the work of Grant & Hennings came a rash of studies looking at the classroom situation from the perspective of teaching, each concentrating on a particular aspect of the nonverbal (proxemics, kinesics, etc.). Among the results indications are that classroom environment can influence student behaviour and achievement (Baron, 1972; Stebbins, 1973; Romney, 1975), as can proximity to the teacher (Adams & Biddle, 1970).

The use of gestures, eye contact and facial expression as an influence on student performance and whether or not the student liked or was willing to co-operate with the teacher were researched by such persons as Mehrabian, 1971; Breed, 1971; Wyckoff, 1973, and, more recently, Smith, 1984.

Perhaps the classic example of the power of nonverbal communication in the classroom is reported by Rosenthal & Jacobson (1968) in *Pygmalion in the Classroom*. Students were randomly assigned to the category of "intellectual bloomer", indicating that the coming school year should see them making
great strides in cognitive development. This information was then given to their teachers. What is crucial here is that all of the students participating in the study were given standard I.Q. tests but the "bloomers" were selected randomly, regardless of their scores. At the end of the school year those labelled as "bloomers" evidenced a sharp rise in I.Q. scores, while the control group exhibited only normal development. The researchers attribute this phenomenon to subtle nonverbal cues that make up what we call teacher expectations.

Of course it must be remembered that the nonverbal influence is not unilateral. Not only are teachers constantly interpreting the nonverbal behaviour of their students and responding accordingly, but also the students in turn are interpreting their teachers' behaviours in terms of friendliness, approval and liking (Kelly, 1973; Smith, 1984).

Looking from Birdwhistell's perspective, Keith et al (1974) concluded that the nonverbal part of classroom interaction was more important than the verbal, while Koch (1971b) relates personal observations in which a teacher's neutral voice tone did not deter student interest in the topic because her nonverbal behaviour as she spoke captivated them. This lack of synchrony between the verbal and nonverbal was also observed to be of importance by Galloway (1970, 1971) and Woodall & Burgoon (1981), so much so that the latter concluded that the more "out of synch" the two levels of communication, the less the total message will be accepted or believed. Further if there is a conflicting message, it is the nonverbal that tends to be believed.
Though this review is by no means exhaustive, it can be concluded that what teachers do is at least as important as what they say. What is missing so far is a discussion of the element of culture, another factor in today's classrooms. Does culture have any effect on the nonverbal communication taking place in the multicultural classroom so common in Canadian schools? Before tackling this multiplicity of interacting factors it is necessary to look at nonverbal communication from the cross-cultural perspective taken by anthropologists and other social scientists.

D. Cross-cultural Studies and Nonverbal Communication

So far the studies reported here have been conducted in Western societies by Western investigators on Western subjects. What is made clear by Edward T. Hall (1976), considered by many the foremost authority on culture and its effects on behaviour and communication, is the important role culture plays in human interaction: "Culture is man's medium; there is not one aspect of human life that is not touched and altered by culture." (p.16).

Therefore it can be assumed that, although all humans use nonverbal communication in interaction, what Western researchers have learned of nonverbal communication is specific to Western societies' norms and expectations. This is indeed the case. Hall's (1959,1956,1976) work with foreign diplomats and others who must interact across cultures is rich with examples of
miscommunication founded in the cultural differences of the interactants' nonverbal behaviours.

Kinesics is called body language by Wood (1981). She defines it as "all reflexive and nonreflexive movements and positions of the body that communicate emotional, attitudinal and informational messages." (p.189) She states further that "body language is culture bound, and a body motion may communicate two entirely different messages to members of two different cultural groups." (p.173) This fact has been borne out by others including Efron, 1972; Garretson, 1976; LaFrance & Mayo, 1978; Lamb & Watson, 1979; Smith, 1984, so much so that some dictionary-like accounts of gestures have been compiled, for example Morsbach, 1973 & Nine-Curt, 1976.

Birdwhistell (1970) states that "although we have been searching for 15 years, we have found no gesture or body motion which has the same social meaning in all societies." (p.5) He argues further that "insofar as we know, there is no body motion or gesture that can be regarded as a universal symbol." (p.81) This may be considered an extreme statement. It is, in fact, a definitive comment on one side of the still ongoing controversy concerning whether nonverbal communication is based in "nature", as postulated originally by Darwin (1872/1965) or "nurture", as Birdwhistell implies. (Interestingly enough the same dichotomy is still in evidence in the verbal domain of communication.)

The only area lending itself to the possibility that nonverbal communication has universal tendencies across cultures is in the expression of emotion, particularly in the face. In looking for these universals in expression Eibl-Eibesfeldt
(1970) discovered that even the congenitally deaf and blind express basic emotions in a way that is recognizable by and similar to that of normal hearing and seeing people.

Further study of expressive behaviour demonstrated that, while there are similarities of interpretation of the nonverbal expression of emotions (Ekman & Friesen, 1971; Eibl-Eibesfeldt, 1970, 1983; Argyle, 1975), these nevertheless show much variation depending on the socially learned and culturally specific "display rules" (Ekman & Friesen, 1975). According to Harper et al (1978) these display rules control the extent of expression by:

a. intensification - in some cultures emotions such as grief are highly exaggerated;

a. deintensification - Germans and Britons, for example are known for their understatement of emotion;

c. neutralization - in Western societies boys are told not to cry or show fear;

d. masking - deliberate or culture dictated display as when the "sore loser" pretends to applaud the winner or the Japanese smile to hide anger or sorrow.

One of the most extensive studies in this area is the PONS (Profile of Nonverbal Sensitivity) Test created by Rosenthal et al (1979). It consisted of a 45-minute black and white motion picture in which a Caucasian woman enacted various emotions which were then interpreted by 2300 people representing 20 different countries. Channels available to the observer (sound, no sound, sound and voice, etc.) were mixed randomly. Their main findings address the nature vs nurture issue.
They discovered that there was great variability in ability to decode. This would suggest that the universality of expression is not supported. Nonetheless, even the cultural groups that did worst on the test did better than chance, while groups culturally and linguistically similar to the PONS Test encoder (Britain, Canada, New Zealand, Australia) did far better on the test than cultures that are very different (like Japan), though still not as well as members of the same cultural group as the encoder. This finding suggests support for the nurture side of the issue. No solution to the controversy has been found but research continues.

What has been clearly demonstrated in this part of the review is that nonverbal communication in general, and body movement (including proxemics and kinesics) in particular, is culture-specific and that incorrect use of this part of communication can lead to situations ranging from amusement through misunderstanding to insult. Hall (1976) even ventures to say that cultures as closely allied as the Americans and the British have problems "reading" each other's nonverbal behaviour correctly. The PONS Test concurs.

E. The Interface - Nonverbal Communication, Education and Cross-cultural Studies

The examination of the tapestry here called communication is now complete. The experts in all three areas, nonverbal communication, education and cross-cultural studies, have amply
demonstrated its complexity. It has been pointed out thus far that nonverbal communication is an integral and vital part of communication, plays an important role in the teaching/learning situation and, for the most part, varies considerably across cultures. However, to the reader from an educational perspective the foregoing review raises at least as many questions as it has answered.

For instance, what does the factor of cross-cultural differences in nonverbal behaviour imply for the teacher? If it is really important, does that mean we are dealing with miscommunication on the nonverbal level constantly because many of our students are not members of our culture group? If nonverbal communication is vital how do the ESL speakers learn English? Surely we can't be expected to learn their cultural nonverbal communication when we have representatives of several cultures in our classes? On the other hand, they must learn to live in our culture, so shouldn't the onus be on them to learn our nonverbal behaviour patterns? How do you teach nonverbal communication and which culture or culture group should be used as the model? Would knowing their nonverbal communication patterns help us in our attempts to teach them to speak English? The list of queries could go on and on and, unfortunately, the general response is, "Not enough is known; not enough research has been done as yet, to advocate any one plan of action."

Foreign language teachers were perhaps the first group to recognize that there was more to teaching a language than its grammar and syntax (see for example Allen & Valette, 1972; Norstrand, 1974). Hall (1959) had stated that "culture is
communication and communication is culture." (p.191) Seelye (1974) agreed that "culture includes anything man has learned to do." (p.6) and defined several "extralinguistic" skills he felt needed to be included in foreign language teaching in order that students might gain some understanding of the culture whose language they were learning.

Though Seelye mentions behaviour, he did not consider it per se but rather as a reflection of the political, social, religious and economic systems which have shaped the people whose language is under study. In other words, what makes people of X culture act and react the way they do, rather than specifics of how they "behave" while communicating. Thus, if we look at nonverbal communication as including kinesics, proxemics, paralanguage and artifacts (see Section B), the emphasis is clearly on the last area.

What was still the proverbial missing link in the total tapestry of communication was the nonverbal: "We communicate simultaneously on at least three levels in interpersonal situations: The verbal, nonverbal and the cultural level which moderates and shapes the other two." (Wolfgang, 1977, p. 147). Seelye emphasized the cultural level, all teachers work naturally with the verbal, and finally, some attention began to be paid to the nonverbal.

Hayes (1972) noted the importance of the nonverbal in "colouring" a message as early as 1972 and in 1971 Green had suggested nonverbal "inventories" to supplement foreign language teaching. But it still took time to trickle through to all areas of education that it was a disservice to all if the nonverbal
component of communication was, relatively speaking, ignored.

First the second language teachers took note (Kirch, 1979, Barnett, 1983), then the regular classroom teachers began to see the nonverbal as an important element in the multicultural setting so common in today's classrooms (Feldman, 1977; Grove, 1977; Wolfgang, 1977, 1979, 1981; Matluck, 1979).

ESL Teachers, to date, have had to be content, for the most part, to glean information from other educational fields (Grove, 1977), although some attempt has been made to train them for their unique role (Taylor, 1976; Adler & Towne, 1978; Heaton, 1978). Role playing activities have become a very popular adjunct to classroom learning (for instance Nine-Curt, 1976) as have other materials and games that focussed on differences of perception based in culture (for instance, Levy, 1979).

Though the increase in teacher and student awareness is laudable, most of these activities do not take a language barrier to communication into consideration, but rather take up the issue of nonverbal communication differences after the students have learned English or in the case of foreign language learners, teach the nonverbal component in the students' native language. In fact, as will be outlined later, there is a dearth of material in the literature that focusses on the role of nonverbal communication in the ESL classroom setting.

To summarize, though there is increasing awareness of nonverbal communication cross-culturally, and some attempts at teacher training, there are still large informational gaps that deal with the interface of all three areas, nonverbal, cross-cultural and educational. A case in point is the survey done by
Donaghy (1984). Of over 100 research facilities responding to a survey conducted internationally, six of the ongoing studies were linked with education, four looked at nonverbal communication cross-culturally, while only one dealt with an educational setting that involved more than one culture, and that was in Italy. It is within this gap that the present study occupies a small space.

II Gestures as a part of Nonverbal Communication

This study focusses on a subset of the area previously defined as kinesics, the sum total of bodily motions involved in communication. Kendon (1984) defines this area as gesture, a global term loosely defined earlier and much employed in this presentation:

"I use 'gesture' to refer to any instance in which visible action is mobilized in the service of producing an explicit communicative act, typically addressed to another, regarded by the other (and the actor) as being guided by an openly acknowledged intention, and treated as conveying some meaning beyond or apart from the action itself." (p.81)

Gestures distinguish themselves further as a group because they vary widely between cultures, so much so that, as mentioned earlier, gesture dictionaries have been created. Therefore, such easily identifiable subsets of nonverbal communication are eminently suitable for a study that is considering the
possibility of cultural differences of gesture interpretation.

A word of caution is here in order before proceeding to further subdivided categories. Although many gestures have literal "translations" in words, it is still vital to examine gestures in context. Such popular books as *How to read a person like a book* leave one with the impression that a gesture has one and only one inviolable meaning, regardless of the circumstances in which it is used.

Consider the gestures used by referees in football, soccer or basketball. True they have conventionalized meanings common to all who play, referee, score and watch the games, but one of these gestures enacted in a social setting would not necessarily be construed to mean the same thing it did on the playing field or court, unless of course the game was the topic of discussion thus making the context appropriate for such interpretation.

A more general example would be a "finger to nose" gesture which is regarded as an expression of doubt in popular nonverbal interpretation parlance. The encoder may very simply have an itchy nose. As Lamb & Watson (1979) put it, ",..proper reading of gestures depends...on understanding the underlying convention.." which in turn "..presupposes a similar cultural understanding " (p.15).

With these cautions in mind let us now proceed. The types of nonverbal behaviour that come under the rubric of gesture have been grouped in various ways. Of these, emblems and illustrators constitute the focus of this study. They will be first defined, then the research that specifically relates to emblems and illustrators will be presented.
A. Emblems

According to Ekman (1983) this term was first used by Efron in 1941 and is defined as "...symbolic actions where the movement has a very specific verbal meaning, known to most members of a sub-culture or culture, and typically employed with the intention of sending a message." (p.89) Further he states that "...the person performing the emblem takes responsibility for having communicated, for having said something with his face or body. He can be held accountable for his message." (p.89)

Words do not need to accompany emblems to convey meaning nor is the context a necessary component (Ekman, 1976). In other words, the meaning is totally unambiguous when the action is seen in isolation of its contextual occurrence. What remains is whether one interprets, for example, the head nod for YES as 'yes, I agree' as is done in North America, or 'yes, I'm listening but not necessarily agreeing or understanding' as is the case in Japan. Examples of emblems would be the head nod for YES (as above), shoulder shrug for I DON'T KNOW or a circle made with the index finger and thumb for A-OK.

A quick perusal of the list of emblems employed in this study (see Chapter III) demonstrates that those chosen are what Lamb & Watson (1979) call functional gestures and fit well into the large portion of instructional motions observed by Grant & Hennings (1971). Though there are a number of gestures that are encoded in the same way across cultures, their meanings are often radically different. The OK sign, for instance, quite benign in North American circles, is insulting or even obscene in some cultures (Harrison, 1974) and means 'money' in Japan.
B. Illustrators

According to LaFrance & Mayo (1978), illustrators are gestures that accompany the verbal message in an interaction and serve to underline, emphasize, or illustrate the words. They are primarily enacted via the hands, although other parts of the body can come into play. An example would be to accompany the words "it was this big around" with arm and hand movements enclosing a circle.

These gestures are less conventionalized and therefore can vary considerably in interpretation as well as enactment. Unlike emblems, they are very much tied to the linguistic content and flow of the verbal message. Illustrators tend to vary in type and frequency with ethnic group or culture, increase when a message is difficult to convey in words (define a zig-zag, for instance), or be used in a "fishing for the right word" sense to finish a thought (Ekman, 1976).

Since what chiefly distinguishes emblems and illustrators from other gestures is their intentionality, they have received the most attention in the research (see for example Cohen & Harrison, 1973). Ekman (1983) reports that many studies have been and are being conducted to establish "emblem repertoires" of various cultures around the world. In fact there is great variation in the number of emblems consistently used by different cultures, from less than 70 in the U.S. to over 300 in Iran (see for example Garretson, 1976; Creider, 1977; Morris et al, 1979).

In this area, also, some nonverbal universals were discovered. For instance, there are a number of emblems that look
the same but have different meanings in different cultures. Peter Collet (1982) cites many examples of miscommunication based on one culture's interpretation of another culture's emblems. Historically, also, cryptic use has been made of the fact that members of one culture do not understand the emblems of another. Still today, secret societies use a nonverbal signal of some sort to identify members and keep out intruders.

There are a number of "messages" that have an emblematic and definitive performance, though the enactment differs from one culture to the next (Ekman, 1983). What this means is that there are emblems for greetings, departures, insults and directions found in all cultures studied to date, but the enactments used vary from one group to the next (compare the HELLO handshake to the bow and steepled hands greeting in Eastern cultures).

Foreign language teachers, as mentioned earlier, have long been interested in emblems and illustrators in particular, because they are a relatively stable reflection of the nonverbal style of the target language group (see for example Brault, 1963; Barnett, 1983; Nine-Curt, 1983). In actual fact, people who have travelled have long been aware of the sometimes dramatic difference between cultural gesture displays.

Consider, for instance, the effusive use of gestures (including emblems and illustrators) by the French or Italians compared to the very low key expression of the British. This sometimes radical difference was clearly demonstrated in Efron's (1972) classic study of New York Yiddish-speaking Jews, Southern Italians, and the assimilated offspring of both groups. His
intention was to compare gesture styles with a view to finding differences based on racial descent. Instead he found very clear differences based on cultural practice.

As a side issue, he found that the types of gestures used were also very different. The Italians used many gestures that were highly pictorial (illustrations to the words) while the Yiddish speakers used gestures that served more regulatory functions and used the pictorial gestures not at all. In terms of emblems, the Italians had a large standardized repertoire (and invented extra ones freely when necessary) while the Jews did not. These findings have as yet not been explored further but such tendencies could potentially be useful as teaching/learning tools.

Little research has been done in terms of the communicative value of gestures in general, the when and how of their use (Kendon, 1983), or in the comparison of gestures or any of their subsets across cultures. Work done in the classroom has been discussed earlier in this review. It has chiefly related the influence of teacher behaviour, student reaction and their interaction, where both are members of the same cultural group. In the multiethnic setting we have gone little further than the stage of "awareness of differences".

Considering the long history of the study of verbal communication, it is probable that a long time and much work stands between teachers and the knowledge they are now beginning to seek in the nonverbal area. It is comforting, however, to see that linguists have at least recognized the existence of the nonverbal as part of the communication pattern (see Hatch, 1983),
if only in terms of specialized speech such as motherese and
foreigner talk. Still much is left unknown about the interactive
factors of nonverbal, verbal and cultural in a cross-cultural
setting.

In terms of children and nonverbal communication, as is the
modus operandi of the present study, research to date
demonstrates that the following are present, in some cases at a
remarkably young age. They are:

a. culture based guidelines of physical attractiveness as
well as a relationship between attractiveness and popularity
(Cavior & Lombardi, 1973; Dion, 1973)

b. developmental stages of proxemic behaviour (Aiello &

c. early responses to and production of facial expression
(Ekman, 1973) as well as eye contact (Norton & Dobson, 1976)

d. culture and age related paralinguistic behaviour
(Dittman, 1972; Wood, 1976)

e. awareness of cultural differences in nonverbal
communication (Weeks, 1979)

f. sex and age as factors of how well nonverbal behaviour
is decoded (Pendelton & Snyder, 1982)

g. indications that young children use more gestures and
rely on them more for communication (Evans & Rubin, 1979).

Cross cultural differences in nonverbal communication
dealing specifically with very young children are somewhat rare
and so far have not included non-English-speakers. Carol Koogler
(1980), doing field work as an anthropologist in integrated
kindergarten classrooms in the United States, found that the
differing cultural styles of behaviour between white and black children created disharmony when the black children appeared to impede participation in activities.

The "different" ways of responding to music and dance as exhibited by the black children created a conflict because of how the white teacher reacted to, and interpreted that behaviour. When the group interacted with a black teacher no conflict developed, presumably because her reaction to the same type of behaviour from the children was in keeping with their common cultural background.

Two research projects have focussed on the use of emblems specifically, only one of which used "cultural group" as a variable. Michael & Willis (1968) had children age 4 to 7 communicate 12 messages without using words: go away, come here, yes, no, how many, how big, be quiet, I don't know, hi, goodbye, shape (round, square, etc.), let me have your attention. The results showed that: all the children are better decoders than encoders, older children do better than younger children on all tasks, middle class children do better than lower class children in both encoding and decoding and boys were more accurate decoders than girls.

The second study did not include culture as a factor, but rather looked for ability to decode and encode in relation to sex and age. The researchers, Kumin & Lazar (1974), used a video tape of 30 emblems with two age groups of middle class, Caucasian children, age 3 to 3.5 and 4 to 4.5. Their findings include the following: ability to decode and encode improves with age; boys decoded more emblems in the younger group; girls
decoded more emblems in the older group; girls at both age
levels encoded more emblems than the boys of corresponding ages;
both groups decoded significantly more emblems than they were
able to encode; there were some emblems that neither group could
encode as well as some that were encoded and decoded with 100%
accuracy by all groups.

Both studies demonstrate that emblems are certainly a
viable category for study with young children. The increased
ability with age hints at the possibility of a developmental
pattern, perhaps coinciding with language development stages.
Neither study considered the possibility that the reason a child
decodes or encodes incorrectly may be related to different
interpretations based on cultural background. Rather the
implication seemed to be that the lower class children of the
Michael & Willis study were merely slower to develop, not
different.

A well known example of this type of interpretation
difference concerns the daughter of a university professor who
was given a standard I.Q. test. One question depicted a man
chopping wood and the child was asked whether the man was
working or relaxing. She said that he was relaxing which, of
course, was considered wrong by the creators of the test. When
queried later about what it was the man was doing she knew, but
related that her father, who spent all day in the classroom and
office, enjoyed chopping wood to 'relax', as he put it.

A final summation will help pull together the various
threads that make up communication. What the sum total of
research into nonverbal communication from all perspectives confirms is the complexity of human communication. Furthermore, the nonverbal element is much more vital than has hitherto been acknowledged and it is made even more elusive and complex because it is molded and modified in various ways by the cultural dictates of a group or sub-group. Taking culturally created nonverbal communication into a classroom containing many cultures only compounds the complexities of communication.

As yet, little research deals with all these elements as the interactive factors they are, while none has attempted to do a cross-cultural study in the classroom that involves non-English-speakers. The next chapter outlines the design and implementation of just such an attempt.
CHAPTER THREE

METHODS

"Every educational system is irrevocably linked to its society's class structure, social mobility, basic values, social norms, and even the structuring of rewards and punishments."


As the last chapter indicates, there is a rapidly expanding body of knowledge in the field of nonverbal communication. Equally prolific is research into nonverbal communication in the classroom setting. A great deal is now known about teacher/student interaction on the nonverbal level, and there is an increasing awareness of how teachers influence, whether consciously or not, the attitude and performance of their students. The research also confirms the culturally based nature of nonverbal communication, pointing to miscommunication problems in racially and culturally mixed settings, that seem to be rooted solely in differing cultural norms and behaviour expectations.

To date little has been done beyond pointing out that different cultural groups do indeed react and interact differently on the nonverbal level. Part of the reason for this lack is the difficulty inherent in studying body movement. It is extremely difficult to analyze movement, even if one had the sophisticated equipment required and were to use the micro-
analysis system invented by Birdwhistell (1970).

The more concrete and definable subgroups of gesture known as emblems and illustrators, however, have been successfully employed in research with all age groups, including young children. The study of common North American emblems done by Kumin & Lazar (1974) is only one example. On this promising basis the present research has been founded.

A. Design

In essence this study is of an ex post facto design (this term is more precisely defined later), where the ethnicity, age and sex of the subjects are the independent variables. Under scrutiny is their ability to decode a specific group of gestures from the subgroups known as emblems and illustrators. These were chosen because their interpretation is relatively invariable and they are typical of the gestures commonly used in an ESL classroom setting.

Kumin & Lazar (1974), on whose study the present work is partially based, grouped Caucasian, middle class children by age and sex, then asked them to decode and encode gestures under fairly standardized conditions. The gestures their study used had been validated by college students of the same cultural background as the children.

The present study, began with the emblem list of Kumin and Lazar. This list was taken to several practicing English as a second language (ESL) teachers, who discarded some items due to
lack of popular usage, while adding others which they did use consistently in the classroom. The new list was then taken to ten ESL teachers in the Vancouver area. Each teacher separately was asked to act out the emblems and illustrators given the verbal cues. Again some minor changes proved necessary when there was no consensus of interpretation. The final list of thirty-six emblems and illustrators became the master for the next stage - the videotape. A single ESL teacher agreed to perform the emblems and illustrators while the researcher recorded them on videotape. This final list appears below with the illustrators marked by (I).

Table I
Emblems and Illustrators - Master List

| YES | OVER THERE |
| QUIET | PAST TENSE(I) |
| IT SMELLS BAD | THAT'S GOOD (WELL DONE) |
| NO | STOP |
| LET'S THINK ABOUT IT | GO AWAY |
| LOUDER (CAN'T HEAR YOU) | I'M SAD |
| O.K. | I'M AFRAID |
| LISTEN | COME HERE |
| HELLO | I'M ANGRY |
| YOU | DON'T DO THAT |
| GET UP | I'M HAPPY |
| I DON'T BELIEVE IT(SURPRISE) | I DON'T KNOW |
| GOODBYE | I'M COLD |
| ME | WELL--SORT OF |
| SIT DOWN | I'M HOT |
| WHAT TIME IS IT? | IT'S TOO LOUD |
| EVERYBODY (I) | I'M TIRED |
| BIG AND ROUND(I) | TASTES GOOD(YUMMY) |

Next, a multiple choice test (see Appendix A) was created to accompany the 36 "actions" on the videotape. The test included a fifth "fill in your own answer" option for those who might disagree with the given wording for the other four choices.
To validate it, the test and the accompanying videotape were administered to classes of ESL teacher trainees at the University of British Columbia. A total of 62 adults took the test. The results, expressed as a percentage, are listed in Table II.
Table II

Percent Scores of Adults on Emblem and Illustrator Test

<table>
<thead>
<tr>
<th>ITEM</th>
<th>%CORRECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>97</td>
</tr>
<tr>
<td>QUIET</td>
<td>97</td>
</tr>
<tr>
<td>IT SMELLS BAD</td>
<td>97</td>
</tr>
<tr>
<td>NO</td>
<td>98</td>
</tr>
<tr>
<td>LET'S THINK ABOUT IT</td>
<td>82</td>
</tr>
<tr>
<td>LOUDER(CAN'T HEAR YOU)</td>
<td>90</td>
</tr>
<tr>
<td>O.K.</td>
<td>76</td>
</tr>
<tr>
<td>LISTEN</td>
<td>79</td>
</tr>
<tr>
<td>HELLO</td>
<td>35</td>
</tr>
<tr>
<td>YOU</td>
<td>92</td>
</tr>
<tr>
<td>GET UP</td>
<td>89</td>
</tr>
<tr>
<td>I DON'T BELIEVE IT(SURPRISE)</td>
<td>84</td>
</tr>
<tr>
<td>GOODBYE</td>
<td>73</td>
</tr>
<tr>
<td>ME</td>
<td>100</td>
</tr>
<tr>
<td>SIT DOWN</td>
<td>98</td>
</tr>
<tr>
<td>WHAT TIME IS IT?</td>
<td>87</td>
</tr>
<tr>
<td>EVERYBODY</td>
<td>66</td>
</tr>
<tr>
<td>BIG AND ROUND</td>
<td>93</td>
</tr>
<tr>
<td>OVER THERE</td>
<td>98</td>
</tr>
<tr>
<td>PAST TENSE</td>
<td>8</td>
</tr>
<tr>
<td>THAT'S GOOD(WELL DONE)</td>
<td>97</td>
</tr>
<tr>
<td>STOP</td>
<td>95</td>
</tr>
<tr>
<td>GO AWAY</td>
<td>95</td>
</tr>
<tr>
<td>I'M SAD</td>
<td>97</td>
</tr>
<tr>
<td>I'M AFRAID</td>
<td>98</td>
</tr>
<tr>
<td>COME HERE</td>
<td>98</td>
</tr>
<tr>
<td>I'M ANGRY</td>
<td>85</td>
</tr>
<tr>
<td>DON'T DO THAT</td>
<td>100</td>
</tr>
<tr>
<td>I'M HAPPY</td>
<td>93</td>
</tr>
<tr>
<td>I DON'T KNOW</td>
<td>100</td>
</tr>
<tr>
<td>I'M COLD</td>
<td>100</td>
</tr>
<tr>
<td>WELL--SORT OF</td>
<td>97</td>
</tr>
<tr>
<td>I'M HOT</td>
<td>100</td>
</tr>
<tr>
<td>IT'S TOO LOUD</td>
<td>90</td>
</tr>
<tr>
<td>I'M TIRED</td>
<td>100</td>
</tr>
<tr>
<td>TASTES GOOD(YUMMY)</td>
<td>97</td>
</tr>
</tbody>
</table>

As expected, the scores were quite high. There were, however, a few notable exceptions. Much confusion was expressed concerning the interpretation of HELLO and GOODBYE. What was enacted on the videotape as HELLO was judged to be GOODBYE by 53 percent of adults tested, while only 35 percent thought it was indeed HELLO. On the other hand, there was 73 percent agreement
that what was enacted as GOODBYE was what most people would judge to mean GOODBYE. Thus, although emblems are considered highly conventionalized, there are still possibilities of misunderstanding even within a cultural group when two emblems are very close in visual appearance as is the case here. What would have given the final clue for correct interpretation, the situational context and/or accompanying words, was absent.

The three illustrators included are: EVERYBODY, BIG AND ROUND and PAST TENSE. As noted earlier, illustrators can be quite variable in their enactment. They were included nevertheless because the ten teachers who aided in the creation of the master list agreed that they were frequently used, and agreed on a common enactment. There was, however, great variance in responses given on the test. For instance, while 93 percent were in accord concerning BIG AND ROUND, only 66 percent correctly interpreted EVERYBODY, while only 8 percent interpreted PAST TENSE as indicating the past tense. One alternative answer for this last was "behind me", which received 85 percent of responses. During the debriefing discussion with the adults, this test item was queried in all groups. It became apparent that those who had taught ESL knew this illustrator to be a tense marker, while those who had not taught had no idea at all what the gesture might mean and therefore took to be correct the literal interpretation suggested by the back over the shoulders hand gesture --i.e. "behind me".

Though there were momentary blackouts between actions, it was not possible to administer the test to the above groups without stopping the tape several times. This would have to be
taken into consideration when testing the children. It also appeared that the multiple choices were adequately representative, as very few opted for their own wording as allowed by option five.

B. The selection of subjects

In following the Kumin and Lazar model, it was decided to use children of preschool ages. This was further considered a useful age group to study for several reasons. First, their chances of having little exposure to North American culture would be significantly greater than for school age children. This was desirable to enhance the possibilities of differences being disclosed based on cultural upbringing, between these children and their native English-speaking equivalents.

Second, these classes had been organized specifically to meet a perceived need, namely the cultural and linguistic disadvantages apparent when these children entered the school system at age five.

Finally, since it is also generally agreed that the early years of schooling are of primary importance in shaping children's attitudes toward schooling itself, it seemed particularly important to facilitate their adjustment at this juncture, should the present study bring to light some significant data.
The twenty ESL subjects, 10 male and 10 female, were selected from several preschool programs in the Vancouver area. Their ages ranged from 43 months to 61 months; 7 were East Indian, Hindi or Punjabi speakers and 13 were Chinese, Cantonese speakers. It is a reflection of the schools' locations within the Vancouver area that all twenty ESL children were members of only these two ethnic groups. The specific contributors of subjects were enrolled in ESL preschool programs at the Immigrant Resources Project preschools or the Sexsmith Demonstration Preschool. The selection of subjects involved the preschool teacher's evaluation of each child based on the following criteria:

a. the child's exposure to English language and culture is minimal

b. the child's social development is advanced to the point where s/he feels confident enough to go willingly with the researcher and translator to the testing room (i.e. away from the familiar environ of the preschool classroom)

c. the child is willing to participate in the task

d. the child's parents consent to having the child participate.

It had been decided to attempt to test equal numbers of boys and girls. This proved easily achievable because of the large number of children available.

The twenty native English speakers were all students at the Child Study Centre in Vancouver. They were of mixed heritage but all spoke English as their mother tongue. They were selected from the four classes at the Centre using the same criteria as
for the ESL children (except that there was no need of a translator). They were further matched to the already tested ESL children by age and sex. When a child proved unwilling to attempt the task, or his/her parents were not willing to let the child participate, another child was chosen until twenty children had been tested. Each of the forty children was tested by the same researcher, with the help of a translator where the ESL children were concerned.

C. Data Collection

The adults had been told with what the study concerned itself and what the task involved. This was of course not possible nor particularly desirable with such young children. Instead a standardized pattern was created by the researcher. The task was set up as a guessing game. After introductions and settling in the testing room the child was told the following:

I'm going to show you a teacher on this T.V. Her name is Suzie. She's a teacher just like (name of child's teacher). She's playing a game with her class. Do you like playing games? (allow child to elaborate briefly)

This game is a guessing game. In this game, she is pretending she cannot talk but wants to tell her class something. She uses only actions, no words.

Now, let's you and me try this game and see if you can guess what I'm trying to say with my actions.

If I go like this (shaking head side to side) what do you think I mean? (elicit answer "No"; if child seems unsure, give a second example)

That's right. I can see that you know how to play this game. Now
let's turn on the T.V. and play the game with Suzie and her class.

Are you ready? (make sure child is attending, looking at T.V.) Here's the first one.

(Stop the videotape after each gesture to ask for an answer if it has not already been called out. Encourage the child to make a guess. When the child does not know the answer be supportive saying that some are tricky even for grownups.)

(Record the answer given.)

O.K., now let's try the next one.

(Conclude the test with encouragement, thanks for playing the game and emphasize how well they did, what good guessers they are.)

A pilot study of two English-speaking children was conducted. Several minor issues came to light. It had never been intended that the children should have to either read the test or choose one of the multiple choice options when presented with them orally. However, the researcher intended to record each child's answer using the multiple choice format. As it turned out, this proved too time consuming even for the researcher who had created the test. It seemed easier to simply write down the exact words of each child and later compare these with the agreed upon answers. This was because the children, unlike the adults, did not tend to respond with a word or two. Rather, they would explain quite imaginatively, and at some length, what they felt was occurring. Attempting to sum this up on the spot to see if it would fit one of the categories of the multiple choice test was perceived as leading to hasty and possibly wrong "retranslation" on the part of the researcher. The very young age of the subjects precluded lengthy time intervals between
"actions" as they simply stopped attending to the task if too much time elapsed. Even without pauses for lengthier transcriptions of answers, the videotape took six minutes, including the momentary blackout between actions. As with the adults, the tape nonetheless had to be stopped several times to give time for responses and the recording of same. Therefore, as back-up, and to facilitate the smooth flow of testing, the children's answers were also recorded on cassette.

The pilot study clearly demonstrated that the children did indeed recognize a large number of the gestures and could interpret them. In fact, they often shouted out the answer before the action was actually concluded on the videotape. Thus all was in readiness for the actual testing of the subjects.

D. Scoring Technique and Reliability

The testing proceeded using the format outlined earlier. Once each child had been sucessfully tested, s/he was registered on the response sheet only by sex, age in months and ethnic origin.

The tests, when completed, were numbered from 1 to 40, then photocopied. One set was scored by the researcher, the other by an independent adult who had seen the videotape and taken the test himself. He was provided with the agreed upon correct answers for those items with which he was not familiar. Semantic equivalences were accepted. For example, for the emblem of head nodding "Yes", a child's answer of "She's saying it's O.K. to do
that." was considered correct.

When the tests had been scored, they were rematched by number and any disagreements in scoring were examined. Individual items were checked for any differences. In the rare instance where no agreement between the two scorers could be reached, the conservative route was taken and the item was marked wrong.

E. Presentation of Data

The data collected were grouped by age, sex and ethnicity. Ethnicity was defined in two ways: the division of subjects into ESL and native speaker groups and the further division of the ESL group into Chinese and East Indian. The thirty-six emblems and illustrators used in the study were considered as a whole, as individual items and in terms of the subset of nineteen emblems this study has in common with the Kumin & Lazar study. Under consideration was the ability of the children (based on age, sex and/or ethnicity) to decode these gestures. Also, both the group of thirty-six and the group of nineteen were evaluated in terms of rank correlation. The presentation of the results of these analyses is the topic of the next chapter.
CHAPTER FOUR

RESULTS

To refresh the reader's memory, the original research questions are restated below.
1. Are there significant differences of interpretation of gestures between non-English speakers and native speakers of English?
2. Is there a consistent pattern of acquisition of gestures for either group of children?
3. Which of these gestures are interpreted similarly or differently by the two groups of children?

The forty subjects divide into two equal groups, native speakers (NS) of English and non-English speakers (ESL). Subjects were also divided into age groups. The forty subjects ranged in age from 43-61 months and divided conveniently into equal groups at 53 months. Thus the younger group included a range from 41-53 months while the older group contained those aged 54-61 months. Since by far the majority of the children's ages fell into the middle of their respective age ranges it was considered less cumbersome to label their age groups as age 4 and age 5 respectively.

With a view to statistical analysis, the first two research
questions were reformulated as null hypotheses. For the purpose of presenting the findings, each such hypothesis will be stated below in conjunction with the results that pertain to it. Significance level for the hypotheses is set at $p=.05$.

**Hypothesis 1**

The first question as a null hypothesis reads as follows:

No significant differences in score will be found with respect to age, sex or ethnicity.

Ethnicity in this case refers to the cultural/linguistic membership to which the two groups of this study loosely belong, i.e. native speaker (NS) or non-English speaker (ESL).

Using the raw scores of all forty subjects a simple line graph was constructed as shown in Figure 1.
Figure 1.

Graph of Total Scores

- Native Speakers
- ESL Speakers
- Total Group
Scores ranged from ten correct out of thirty-six to a high score of twenty-seven. As the graph clearly shows the ESL group received the bulk of the lower scores while the native speakers scored considerably higher.

To explore the differences further an analysis of variance was performed. To allow for a factorial design with all factors crossed, the forty subjects were divided into equal groups based on sex, age and ethnicity (ESL vs NS). The results of the analysis of variance are listed in Table III.

Table III
Analysis of variance for Emblem/Illustrator Task Performance

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (age)</td>
<td>58.2015</td>
<td>1</td>
<td>58.2015</td>
<td>4.25</td>
<td>.0474*</td>
</tr>
<tr>
<td>B (sex)</td>
<td>3.3811</td>
<td>1</td>
<td>3.3811</td>
<td>0.25</td>
<td>.6226</td>
</tr>
<tr>
<td>C (ethnicity)</td>
<td>439.1920</td>
<td>1</td>
<td>439.1920</td>
<td>32.08</td>
<td>.0000*</td>
</tr>
<tr>
<td>AB</td>
<td>46.5185</td>
<td>1</td>
<td>46.5185</td>
<td>3.40</td>
<td>.0746</td>
</tr>
<tr>
<td>AC</td>
<td>11.0587</td>
<td>1</td>
<td>11.0587</td>
<td>0.81</td>
<td>.3755</td>
</tr>
<tr>
<td>BC</td>
<td>16.2383</td>
<td>1</td>
<td>16.2383</td>
<td>1.19</td>
<td>.2843</td>
</tr>
<tr>
<td>ABC</td>
<td>5.0900</td>
<td>1</td>
<td>5.0900</td>
<td>0.37</td>
<td>.5463</td>
</tr>
<tr>
<td>Error</td>
<td>438.1167</td>
<td>32</td>
<td>13.6911</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1017.7968</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

KEY a = age  B = sex  C = ethnicity
* = significance at p=.05 or better
Table III shows that age is a significant factor but sex is not. As the graph above demonstrated, ethnicity in this analysis was a significant factor (in fact, at far above $p=.01$). Therefore the first hypothesis, that there is no significant difference in score based on age, sex or ethnicity is upheld with respect to sex, but should be rejected with respect to age and ethnicity.

**Hypothesis 2**

The second question written as a hypothesis postulates: There will be no significant correlation between the rank orders of interpretation scores for the native speaker and non-English speaker groups.

First, all total scores were converted to rank scores with respect to age and ethnicity as Table IV shows. The sex factor, having proven insignificant in the analysis of variance, was not considered here.
<table>
<thead>
<tr>
<th>Emblem or Illustrator</th>
<th>NS 4 yr.</th>
<th>NS 5 yr.</th>
<th>ESL 4 yr.</th>
<th>ESL 5 yr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2.5</td>
<td>5.5</td>
<td>4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>I don't know</td>
<td>2.5</td>
<td>8.5</td>
<td>4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>No</td>
<td>2.5</td>
<td>2.5</td>
<td>4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>I'm cold</td>
<td>2.5</td>
<td>1.0</td>
<td>4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>I'm afraid</td>
<td>6.0</td>
<td>5.5</td>
<td>4.0</td>
<td>10.5</td>
</tr>
<tr>
<td>Quiet</td>
<td>6.0</td>
<td>5.5</td>
<td>9.5</td>
<td>4.5</td>
</tr>
<tr>
<td>I'm tired</td>
<td>6.0</td>
<td>2.5</td>
<td>4.0</td>
<td>10.5</td>
</tr>
<tr>
<td>Don't do that</td>
<td>10.5</td>
<td>11.0</td>
<td>4.0</td>
<td>14.5</td>
</tr>
<tr>
<td>I'm sad</td>
<td>10.5</td>
<td>8.5</td>
<td>9.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Me</td>
<td>10.5</td>
<td>12.5</td>
<td>13.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Come here</td>
<td>10.5</td>
<td>5.5</td>
<td>13.5</td>
<td>4.5</td>
</tr>
<tr>
<td>I'm happy</td>
<td>10.5</td>
<td>15.0</td>
<td>13.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Goodbye</td>
<td>10.5</td>
<td>16.0</td>
<td>9.5</td>
<td>10.5</td>
</tr>
<tr>
<td>It's too loud</td>
<td>14.5</td>
<td>12.5</td>
<td>9.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Stop</td>
<td>14.5</td>
<td>17.5</td>
<td>16.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Tastes good (yummy)</td>
<td>16.0</td>
<td>22.0</td>
<td>13.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Sit down</td>
<td>17.0</td>
<td>19.5</td>
<td>16.5</td>
<td>14.5</td>
</tr>
<tr>
<td>I'm hot</td>
<td>18.0</td>
<td>10.0</td>
<td>18.5</td>
<td>18.0</td>
</tr>
<tr>
<td>Go away</td>
<td>19.0</td>
<td>24.5</td>
<td>18.5</td>
<td>21.5</td>
</tr>
<tr>
<td>You</td>
<td>21.0</td>
<td>31.0</td>
<td>20.5</td>
<td>21.5</td>
</tr>
<tr>
<td>That's good (well done)</td>
<td>21.0</td>
<td>19.5</td>
<td>22.5</td>
<td>18.0</td>
</tr>
<tr>
<td>Get up</td>
<td>21.0</td>
<td>22.0</td>
<td>20.5</td>
<td>21.5</td>
</tr>
<tr>
<td>Over there</td>
<td>23.0</td>
<td>24.5</td>
<td>22.5</td>
<td>21.5</td>
</tr>
<tr>
<td>It smells bad</td>
<td>24.0</td>
<td>14.0</td>
<td>25.5</td>
<td>18.0</td>
</tr>
<tr>
<td>I'm angry</td>
<td>25.0</td>
<td>31.0</td>
<td>25.5</td>
<td>24.0</td>
</tr>
<tr>
<td>What time is it?</td>
<td>26.0</td>
<td>17.5</td>
<td>25.5</td>
<td>26.5</td>
</tr>
<tr>
<td>O.K.</td>
<td>27.5</td>
<td>31.0</td>
<td>29.0</td>
<td>26.5</td>
</tr>
<tr>
<td>Big and round</td>
<td>27.5</td>
<td>27.5</td>
<td>25.5</td>
<td>29.5</td>
</tr>
<tr>
<td>Louder (can't hear you)</td>
<td>30.0</td>
<td>27.5</td>
<td>33.5</td>
<td>26.5</td>
</tr>
<tr>
<td>Hello</td>
<td>30.0</td>
<td>27.5</td>
<td>33.5</td>
<td>26.5</td>
</tr>
<tr>
<td>Listen</td>
<td>30.0</td>
<td>22.0</td>
<td>29.0</td>
<td>29.5</td>
</tr>
<tr>
<td>Everybody</td>
<td>32.0</td>
<td>27.5</td>
<td>29.0</td>
<td>32.5</td>
</tr>
<tr>
<td>I don't believe it</td>
<td>34.0</td>
<td>34.5</td>
<td>33.5</td>
<td>32.5</td>
</tr>
<tr>
<td>(surprise)</td>
<td>34.0</td>
<td>34.5</td>
<td>33.5</td>
<td>32.5</td>
</tr>
<tr>
<td>Let's think about it</td>
<td>34.0</td>
<td>34.5</td>
<td>33.5</td>
<td>32.5</td>
</tr>
<tr>
<td>Well--sort of</td>
<td>34.0</td>
<td>34.0</td>
<td>33.5</td>
<td>32.5</td>
</tr>
<tr>
<td>Past tense</td>
<td>36.0</td>
<td>34.5</td>
<td>33.5</td>
<td>36.0</td>
</tr>
</tbody>
</table>
Second, a Spearman's rho rank correlation coefficient was computed for pair combinations with the following results.

Table V

Spearman's rho rank correlation of rank scores for selected groups

<table>
<thead>
<tr>
<th>GROUPS</th>
<th>rho</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS + ESL</td>
<td>0.843</td>
<td>.01</td>
</tr>
<tr>
<td>NS (4yr) + NS (5yr)</td>
<td>0.928</td>
<td>.01</td>
</tr>
<tr>
<td>ESL (4yr) + ESL (5yr)</td>
<td>0.872</td>
<td>.01</td>
</tr>
<tr>
<td>NS (4yr) + ESL (4yr)</td>
<td>0.834</td>
<td>.01</td>
</tr>
<tr>
<td>NS (5yr) + ESL (5yr)</td>
<td>0.767</td>
<td>.01</td>
</tr>
</tbody>
</table>

**KEY:** NS = native speaker
ESL = non-English speaker

What the table indicates is a high rank correlation for all groupings both within-groups and between-groups, regardless of which of the two criteria for group membership used (age or ethnicity).

For interest's sake the ESL group was further divided into its two ethnic groups, Chinese and East Indian. Though these groups are small, thirteen and seven respectively, and the findings must therefore be treated with appropriate caution, it is noteworthy that all pair combinations here yielded the same
high correlation in rank order as was found with the larger groups.

Finally, it was decided to further test these findings by comparing the native speaker group of this study with another native speaker study group, the Kumin & Lazar (1974) study. This could thus serve as a model of the decoding ability of North American, Caucasian, middle class English speakers.

Nineteen of the thirty-six gestures used in this study matched those used by Kumin & Lazar. These nineteen gestures (all emblems) and their rank scores are listed in Table VI below. For further comparison, the ESL group of this study was also ranked with the native speaker groups of both studies.
### Table VI

**Rank scores for emblems common to both studies**

<table>
<thead>
<tr>
<th>Emblem</th>
<th>K &amp; L</th>
<th>NS</th>
<th>ESL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiet</td>
<td>1.0</td>
<td>5.5</td>
<td>5.0</td>
</tr>
<tr>
<td>No</td>
<td>2.0</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Hello</td>
<td>3.0</td>
<td>18.5</td>
<td>17.5</td>
</tr>
<tr>
<td>Yes</td>
<td>4.5</td>
<td>2.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Come here</td>
<td>6.0</td>
<td>8.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Naughty (don't do that)</td>
<td>9.5</td>
<td>8.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Goodbye</td>
<td>4.5</td>
<td>8.0</td>
<td>12.0</td>
</tr>
<tr>
<td>I'm tired</td>
<td>7.0</td>
<td>5.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Stop</td>
<td>8.0</td>
<td>10.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Get up</td>
<td>9.5</td>
<td>14.0</td>
<td>15.5</td>
</tr>
<tr>
<td>I'm cold</td>
<td>12.0</td>
<td>2.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Tastes good (yummy)</td>
<td>13.0</td>
<td>12.0</td>
<td>15.5</td>
</tr>
<tr>
<td>Too loud</td>
<td>11.0</td>
<td>10.5</td>
<td>10.0</td>
</tr>
<tr>
<td>It smells bad</td>
<td>14.0</td>
<td>15.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Louder (can't hear you)</td>
<td>15.0</td>
<td>18.5</td>
<td>17.5</td>
</tr>
<tr>
<td>I don't know</td>
<td>17.5</td>
<td>2.5</td>
<td>7.0</td>
</tr>
<tr>
<td>I'm hot</td>
<td>17.5</td>
<td>13.0</td>
<td>8.0</td>
</tr>
<tr>
<td>O.K.</td>
<td>16.0</td>
<td>17.0</td>
<td>19.0</td>
</tr>
<tr>
<td>What time is it?</td>
<td>19.0</td>
<td>16.0</td>
<td>13.5</td>
</tr>
</tbody>
</table>

**KEY:**
- K & L = Kumin & Lazar group
- NS = native speakers (this study)
- ESL = non-English speakers (this study)

A Spearman's rho rank correlation coefficient computed for the two native speaker groups proved significant at p=.05 with a rho of 0.405. The correlation between the Kumin & Lazar study group and the ESL speakers of the present study was also significant at p=.05 with a rho of 0.683. The continued high correlation even across studies indicates clearly that the hypothesis that there is no significant correlation between the rank orders of interpretation scores for native speaker and ESL groups should be rejected.
Further Findings

Noting that the age groups of the Kumin & Lazar study overlapped and extended the age groups of the present study, it was considered of relevant interest to compare the age related results of the decoding ability of the Kumin & Lazar study group with the native speaker group in the present study. For this purpose the percent scores are tabulated in Table VII.
Table VII

Percent scores for emblems common to both studies

<table>
<thead>
<tr>
<th>Emblem</th>
<th>Kumin &amp; Lazar</th>
<th>Helmer (NS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>age 3</td>
<td>age 4</td>
</tr>
<tr>
<td>No</td>
<td>93</td>
<td>100</td>
</tr>
<tr>
<td>Quiet</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Hello</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Yes</td>
<td>79</td>
<td>100</td>
</tr>
<tr>
<td>Come here</td>
<td>79</td>
<td>93</td>
</tr>
<tr>
<td>Naughty (don't do that)</td>
<td>79</td>
<td>71</td>
</tr>
<tr>
<td>Goodbye</td>
<td>79</td>
<td>100</td>
</tr>
<tr>
<td>I'm tired</td>
<td>71</td>
<td>93</td>
</tr>
<tr>
<td>Stop</td>
<td>64</td>
<td>93</td>
</tr>
<tr>
<td>I'm cold</td>
<td>50</td>
<td>86</td>
</tr>
<tr>
<td>Get up</td>
<td>57</td>
<td>93</td>
</tr>
<tr>
<td>Tastes good (yummy)</td>
<td>43</td>
<td>64</td>
</tr>
<tr>
<td>Too loud (I won't listen)</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>It smells bad</td>
<td>36</td>
<td>57</td>
</tr>
<tr>
<td>Louder (can't hear you)</td>
<td>29</td>
<td>57</td>
</tr>
<tr>
<td>I don't know</td>
<td>14</td>
<td>43</td>
</tr>
<tr>
<td>I'm hot</td>
<td>14</td>
<td>43</td>
</tr>
<tr>
<td>O.K.</td>
<td>7</td>
<td>57</td>
</tr>
<tr>
<td>What time is it?</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Mean Score (%) 55 76 66 76

KEY: NS = native speaker

As expected the percent scores again demonstrate the similarity in scores for both studies as well as the trend for the older children to score higher than the younger ones.

The third research question, concerning similarities and differences of interpretation of gestures between the two larger groups of the present study, can best be discussed by simply scrutinizing the scores obtained. Table VIII summarizes the initial testing results converted to percent scores.
Table VIII
Percent scores for all thirty-six Emblems and Illustrators

<table>
<thead>
<tr>
<th>Emblem or Illustrator</th>
<th>Native Speaker</th>
<th></th>
<th>ESL Speaker</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>age 4</td>
<td>age 5</td>
<td>age 4</td>
<td>age 5</td>
</tr>
<tr>
<td>Yes</td>
<td>100</td>
<td>100</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Quiet</td>
<td>90</td>
<td>100</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>It smells bad</td>
<td>20</td>
<td>70</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>100</td>
<td>100</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Let's think about it</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Louder(can't hear you)</td>
<td>0</td>
<td>30</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>O.K.</td>
<td>10</td>
<td>30</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Listen</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Hello</td>
<td>0</td>
<td>30</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>You</td>
<td>50</td>
<td>60</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Get up</td>
<td>50</td>
<td>60</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>I don't believe it (surprise)</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Goodbye</td>
<td>90</td>
<td>90</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>Me</td>
<td>80</td>
<td>100</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>Sit down</td>
<td>70</td>
<td>80</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>What time is it?</td>
<td>20</td>
<td>30</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>Everybody</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Big and round</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Over there</td>
<td>40</td>
<td>60</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Past tense</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>That's good(well done)</td>
<td>40</td>
<td>70</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Stop</td>
<td>70</td>
<td>100</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Go away</td>
<td>60</td>
<td>60</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>I'm sad</td>
<td>90</td>
<td>90</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>I'm afraid</td>
<td>100</td>
<td>90</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>Come here</td>
<td>80</td>
<td>100</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>I'm angry</td>
<td>20</td>
<td>50</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Don't do that</td>
<td>100</td>
<td>80</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>I'm happy</td>
<td>80</td>
<td>100</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>I don't know</td>
<td>100</td>
<td>100</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>I'm cold</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>Well--sort of</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I'm hot</td>
<td>60</td>
<td>70</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>It's too loud</td>
<td>90</td>
<td>80</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>I'm tired</td>
<td>100</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Tastes good(yummy)</td>
<td>80</td>
<td>80</td>
<td>30</td>
<td>10</td>
</tr>
</tbody>
</table>
These data indicate a number of trends as outlined below:

1. There are several gestures that are interpreted equally well by both groups, that is, 75% accuracy or greater. These are:
   - QUIET
   - I'M TIRED
   - COME HERE
   - I'M SAD
   - I DON'T KNOW
   - I'M AFRAID
   - I'M COLD

2. There are also a number of gestures that neither group interpreted well, that is, 25% accuracy or less. These are:
   - LET'S THINK ABOUT IT
   - HELLO
   - LOUDER(CAN'T HEAR YOU)
   - EVERYBODY
   - O.K.
   - BIG AND ROUND
   - LISTEN
   - PAST TENSE
   - I DON'T BELIEVE IT (SURPRISE)

3. The gestures that seemed to discriminate well between the two groups are:
   - YOU
   - GO AWAY
   - GET UP
   - I'M ANGRY
   - GOODBYE
   - I'M HAPPY
   - SIT DOWN
   - I'M HOT
   - OVER THERE
   - TASTES GOOD (YUMMY)
   - STOP

Therefore in terms of the third research question we can definitely state that there are distinct differences between the two groups (ESL vs NS) in terms of their ability to decode the
In conclusion, the general parameters of the findings of this study can be summarized as follows:

1. There are significant differences of interpretation of gestures (emblems and illustrators) between ESL speakers and native speakers of English. Age also is a significant factor.

2. There seems to be a definite ordering, a rank correlation of the gestures known with respect to age and ethnicity.

3. While there are some gestures that both groups decoded in a similar way, there are also a number of gestures which definitely discriminate between the two groups with respect to ethnicity.

Further comment and discussion of these data follow in the next and last chapter of this presentation.
DISCUSSION, CONCLUSIONS AND IMPLICATIONS

I Comparison with the Kumin & Lazar study

In part due to the scarcity of relevant studies, it was decided to model the present study as far as possible on the Kumin & Lazar study. Since the results have proven to be similar it increases confidence in the further findings of this study. The analysis of variance shown in Table III (see Chapter Four) indicates similar results to that of the Kumin & Lazar study: age is a significant factor in ability to decode, while sex is not. For convenience in the rest of this discussion, the Kumin & Lazar study will be referred to as the old study while the present study will be called the new study.

From this generalization the new study departs from the old. Instead of channel (encode and decode), the new study divided the subjects as native speakers of English and ESL speakers. A very strong main effect was found to relate to this ethnic division (p=.01) leading to the possible conclusion that native speakers are acquainted with more gestures common to their culture than are their non-English-speaking counterparts. Such a conclusion is certainly borne out by the literature cited earlier which assures us that nonverbal communication is culture specific.

Considering that the age groups in both studies exhibited significant differences in decoding ability, it was decided to proceed one step further by doing a Spearman's rho rank
correlation coefficient. For this purpose only the 19 emblems both studies had in common were used. These emblems and their corresponding percentile scores were outlined in Table VII.

The similarity in scores as well as the almost universal trend for the "older" group to do better than the "younger" is plain even at this level of computation. This brings up the interesting possibility that what we are looking at is part of a developmental acquisition pattern similar to that found in the verbal domain. The mean scores (%) of the four groups of Table VII, however do not present evidence towards this "developmental acquisition theory".

Both studies show that the older children do significantly better than the younger ones. One could surmise from this that, since the younger group of the new study is older than the younger group of the old study, their mean score should be higher, which indeed it is (compare 55% to 66%). Thus the difference could be attributed to development. However, based on this logic the older group of the new study should score higher than the older group of the Kumin & Lazar study; they are on average one year older than the Kumin & Lazar group. This is not the case.

Why the older group of the new study has a mean score identical to that of the older Kumin & Lazar group remains a matter for further exploration. It is, however, not too farfetched to suppose there is less of a difference in acquisition between age 4 and 5 than there is between age 3 and 4. Weeks (1979) hints at this possibility and practical experience with children in this age group points out the verbal
parallel. There is a tremendous difference in verbal ability between a three year old and a five year old, while the difference is not nearly so dramatic between ages 4 and 5.

Also of note are the three glaring discrepancies in score between the old study and the new. The emblems HELLO, LOUDER and I DON'T KNOW were decoded with radically different success by these two study groups. The enactment of HELLO in the new study might be in question because the adults who validated the gestures also had a great deal of difficulty with this emblem. There is no easy explanation for the other two, however. The rank scores (Table VI) bear out these discrepancies but nonetheless show a significant overall correlation.

II The Present Study

Before discussing the implications, both theoretical and practical, of the findings of this study, the results and possible conclusions implied are briefly reviewed here.

First, the results of the analysis of variance (Table III) indicated a moderate effect for age (p=.05) and a very strong effect with respect to ethnicity (p=.01). As the reader will recall, this latter refers to the cultural/linguistic difference between the two major study groups (ESL and NS). The stage is thus set for concluding that both ethnicity and age are factors in the interpretation of gestures of a given cultural group.

Second, the Spearman's rho rank correlation coefficient, universally high for all groupings (p=.01), seems to indicate
that a developmental acquisition pattern in the decoding of gestures is a definite possibility.

Third, there are some definite similarities and differences in interpretation between the two groups based on ethnicity. As may be recalled there were nine gestures, all emblems, which both groups interpreted well: YES, QUIET, NO, COME HERE, I DON'T KNOW, I'M SAD, I'M AFRAID, I'M COLD and I'M TIRED. According to Ekman (1983) these fit into the categories of emblems found to exist in all cultures studied, though not necessarily performed in the same way. It can be supposed then, that the performance of these nine items must be similar enough for the subjects of this study to guess at their intended meanings. Furthermore, research bears out the cross-cultural similarities of expression of emotion, into which category the last four emblems listed fit.

The other side of the coin is items on which neither group did well. It is consistent with the research that all three illustrators included in the study (EVERYBODY, BIG AND ROUND, PAST TENSE) fall into this category. Illustrators, the reader will recall, generally accompany speech, are not particularly conventionalized and therefore are free to vary from one performance to the next. If performance is so variable, it stands to reason that no given performance can be guaranteed to trigger a specific interpretation.

The biggest discrepancies in interpretation between the two groups occurred with eleven gestures. Of these GOODBYE and STOP are of particular interest in this context because the former is known to be very culture-specific while the latter, considered
an almost universal traffic signal in large cities, is not common in other settings—except in schools. One could surmise that the school socialization of preschoolers may well not have extended to this emblem yet.

The tangential question that arises here concerns which study subjects were likely to guess correctly the more difficult questions. A perusal of the raw scores for individual gestures points out that the high scorers, almost exclusively the native speaker group, were the ones who correctly decoded the more difficult items, while the low scorers correctly decoded almost none of them.

The final section of this thesis seeks to collate the findings of this study with previous research and theory in an effort to relate it to both further theoretical work and practical, realistic use, especially in the classroom.

III **Drawing Conclusions and What They Imply**

Heslin and Patterson (1982) state that culture is one of the three key subject variables (along with sex and personality) that is difficult to manipulate in research, so much so that "even though we might find differences in terms of one of these dimensions, we cannot attribute the cause for those differences to that dimension." (p. 116) The reason simply is that individuals selected for that particular variable are very likely to be different in terms of a host of other variables as well, any of which could contribute to the true reason for the
demonstrated difference. So for instance, with the culture (ethnic) variable of this study, the difference that analysis (or even raw scores) clearly shows could be due to differences in educational opportunities, exposure to television, socio-economic status, interaction experience, cross-cultural experience or innumerable other factors. In fact the same could be said of the other factors considered here, age and sex.

Nonetheless this study has proceeded because it can provide valuable opportunities and information, in short, progress in the understanding of individual and group differences. Therefore, with the above cautions in mind, the possible conclusions and implications generated from this undertaking are set out here in terms of their potential in guiding teacher/student interaction, teacher training and future research in this area.

A. Theoretical Implications

This study is classified as ex post facto research and as such, by definition has not introduced the "treatment" that makes one group different from another (Borg & Gall, 1979). That is, this design, also known as the causal-comparative method, does not allow its user to declare that condition $X$, in this case the differences in interpretation between native speakers and ESL speakers, is due to factor $Y$, in this instance, culture.

Since culture was earlier defined as everything man has learned to do, this variable was controlled as far as was
feasible in terms of what the subjects had not learned to do, namely speak and interact in English.

The literature review amply clarified the intimacy of the link between the verbal and nonverbal components of communication, leading to the logical leap on which this study is based: Non-English speaking children will not know the "English" nonverbal behaviours if they do not know the verbal. On the other hand, the studies cited earlier that deal with young children, clearly demonstrate that such youngsters do have a repertoire of nonverbal behaviours, can decode and encode them, and rely on them more heavily than do adults, to interpret messages.

It takes only another small intuitive leap to see that these young children who do not speak English verbally or nonverbally, must have a functioning nonverbal repertoire to go with the language they do speak. There was certainly no hesitation on the part of the ESL subjects in this study to volunteer interpretations.

Despite some shyness because of the alien situation, they seemed to take the testing situation as a learning task, often spontaneously copying the action just witnessed even if they didn't appear to know its North American interpretation. In fact, at times their mimicry of subtle nuances was so accurate that it led the researcher to wonder if perhaps they did know the correct interpretation but for some reason could not or would not transmit it verbally via the translator.

The fact that a translator had to be used, of course, could also have served to skew the findings somewhat. Therefore, in
theory, little can be assumed but much food for thought with the prospect of further investigation has been generated with these findings.

The result of the analysis, a highly significant difference of interpretation by the two groups, must be treated with appropriate caution though both research and practical experience give every reason to believe that culture does indeed make a great deal of difference in nonverbal communication behaviour.

Further, the fact that both groups were familiar with gestures per se and that the children were quite aware that these gestures "mean " things, fits with the research done by Kumin & Lazar as well as many others, for example Michael & Willis (1968), Aiello & Jones (1971) and Evans & Rubin (1979). Such similar findings also allow for the very cautious generalization that the same may be true of all young children.

Finally, the further manipulation of the data to obtain rank correlation coefficients yielded very promising results. It has been established that all children go through definitive stages in acquiring language, from babbling, through holophrastic and two-word sentences to telegraphic and finally adult-like speech (Fromkin & Rodman, 1978).

Considering that children acquire nonverbal communication strategies even before the verbal, it is reasonable to conjecture that there may be a similar acquisition pattern, as yet undocumented, in the nonverbal domain. Little research has been done in pursuit of such acquisition patterns but the high correlation coefficients of this study point out the intriguing
possibilities in this area.

B. Practical Implications

Argyle (1975) considers one reason that there are racial problems in countries where there are minority cultures, is the fact that the minorities are disliked "because members of the majority cultures cannot understand the minority group's nonverbal behaviour." (p.96)

Why pick on this particular aspect of cultural difference? The reason is that so much of nonverbal communication occurs below the level of conscious awareness. This results in feeling ill at ease or disliking someone without really knowing why because not only do people speak in different languages but they "converse" with different bodies.

The present study has sought to point this out, the implication being that teachers of minority children and especially ESL children need to know this difference exists before they can endeavour to act upon that information. And how can they act? They can proceed in three ways.

First, knowing there are differences, teachers can make a conscious effort to not jump to conclusions about their students' behaviour. 'He just ignored me when I motioned him to sit down. He's rude and uncooperative.'

Further, they can save themselves and their students a lot of pain by not trying to force the learners into a "normal" behaviour mode, like a coat that doesn't fit, which is in
reality only one culture's (the teacher's) version of what is "normal". This is not to deny the fact that the teacher as part of teaching communicative competence should specifically teach appropriate nonverbal behaviours, but rather to point out that these behaviours are appropriate with this language in this context. No cultural behaviour is inherently wrong but it may be contraindicated in a given setting in a given language.

Second, teachers can utilize the bits of practical information gleaned from studies such as this to modify their classroom behaviour. Knowing that certain gestures typically used in the classroom are easily understood even by ESL speakers, teachers can set out to use them more deliberately than before. By the same token, knowledge of gestures that are not understood cross-culturally should serve to curb their classroom use to avoid confusion, mistrust and other forms of misunderstanding.

Unfortunately, what sounds good in theory is not always related to practice. Take, for example, the back over the shoulders hand gesture that is used by many ESL teachers to exemplify the past tense. Granted, it is difficult to convey this concept with only words, especially when those words are not yet understood too well, but the prevalent use of this gesture in ESL classrooms is not an accurate indicator of its universal understandability.

On the contrary, it is well known that many cultures do not consider the past as being behind them, rather it is the future that is located there because, as they see it, we know our past and therefore can metaphorically see it before us, but we cannot
see our future. Yet this gesture (an illustrator) was included in this study precisely because the ESL teachers surveyed insisted on its frequent use. Not a single subject in the study, ESL and native speaker alike, had any idea of its intended meaning.

Third, knowing that even young children have acquired quite a large repertoire of gestures and are adept at decoding them, teachers can use this facility of the children to have them act as peer tutors, especially for the newcomers from the minority groups. Studies cited earlier show that not only will this help make the new students feel more at ease with their situation but also that children are better interpreters of nonverbal behaviour than are adults. This ability implies that a peer tutor will be more likely to "see" incomprehension and confusion on the part of the newcomer than will the teacher.

In terms of teacher training, studies such as this should reinforce the ever growing need for teachers to have more awareness and training in cross-cultural communication. Pennycook (1985) puts it well, being certain that teachers so trained will be better teachers because "they will increase their skills as directors of classroom behaviour; they will be better equipped to interpret student messages, which is especially significant when those students come from different cultural backgrounds; they will help their students become more culturally aware; and they will be more able to facilitate the acquisition of C2 (second culture) in their students." (p. 277)

In short, the common denominator with respect to the teaching of students of other cultures is that the teacher can
misread the nonverbal communication of the students with resulting incorrect inferences being drawn about the students in terms of their attitudes and abilities. This can be a costly mistake, costly for the student because, as the research makes clear, students will live up to or, in this case, down to their teachers' expectations. To avoid such a vicious cycle the onus is on the teacher to be more aware and seek training in cross-cultural differences where necessary. The reward is that both the teaching and learning processes will be enhanced.

C. Suggestions for further research

This study has, as mentioned earlier, generated as many questions as answers. In such a new and little explored field all avenues lead to new findings.

It is interesting to observe that, based on the results of this study, some gestures of North American culture are similarly decoded by other cultures. This would need replicating to assure its reliability. On the other hand, past studies seem to clearly indicate that the primary emotions of happiness, sadness, fear, surprise, anger and disgust are pancultural universals. Yet, two of these (anger, happiness) were not well decoded by all the subjects. Of course the fault may simply lie with the encoder. Those two gestures were, in fact, part of the group of gestures that discriminated best between the two groups, native speaker and ESL speaker. Therefore it seems in order that they all be investigated further to determine which
truly are discriminators between the groups or if one or several of the limitations of this study has confounded the results.

Methodological considerations complicate this issue further. It may be, for instance, that simply giving more contextual information would facilitate decoding. Furthermore, whether these gestures in particular, or any others of this study, are associated with specific settings (school, home, playground, television, etc.) is not clear. One avenue for research in this regard would be to attempt to create a list of gestures which seeks to link the acquisition of gestures with specific contexts.

What must also be remembered is that this study is based solely on the North American interpretation of the gestures employed. No attempt has been made to assess the how and what of alternate interpretations. Here again several potential studies come to mind:

1. Are ESL students as proficient at encoding these gestures as native speakers?
2. Would the results of this study be different if an ESL learner had been the encoder on the videotape?
3. Would culturally different groups of children be better able to decode these thirty-six gestures if the encoder were a child, whether native speaker or ESL?

In reviewing this study in terms of replicating or improving, the following areas deserve consideration:

1. Some attempt should be made to control the socialization of the children. The more reticent ones may know as much but be less able to deal with the alien interaction situation.
2. Attention span may influence the results. Despite keeping the testing time down to a minimum, some youngsters stopped attending at intervals. Furthermore, the constant reminding to attend may influence the results. Therefore an attempt to control these factors could result in a different outcome.

3. The socio-economic backgrounds of the children may affect results. The native speakers of this study were all from middle class or above backgrounds while the ESL speakers hailed for the most part from working class neighbourhoods. An attempt to control this type of cultural background in study subjects should be made.

4. There is no explanation as to why the five year olds of this study did not do better than the four year olds of the Kumin & Lazar study. A study with multiple age groups could attempt to elucidate this matter. Extending this study either longitudinally or cross-sectionally could also prove of benefit in determining if developmental acquisition patterns do exist.

5. The specific variables of the testing situation in this study also deserve further scrutiny. As queried in the recommendations above, how would the results differ if a live performance were used instead of a videotape, a child was the encoder instead of an adult, an encoder of a minority group were used instead of one of a North American background, the total context of the situation were available instead of the limited version used here?

In reference to point four above, it must be remembered that very little is known about nonverbal acquisition outside of North America. The few studies cited here demonstrate an early
acquisition of nonverbal behaviours for North American children. This study has suggested the possibility of an acquisition pattern for both native speakers of English and non-English speakers, but we cannot assume that young children in other cultures acquire similar nonverbal knowledge or acquire it in similar patterns. It would require much further investigation to establish the possibility of a definitive repertoire of behaviours linked to development in this culture, let alone in other culture groups.

And what of other culture groups? It is necessary first to initiate studies that look specifically at the acquisition of gestures of other cultural groups: how, when and in what context they are acquired and how they are decoded and encoded. Only then can research go forward to compare and contrast the interpretation of gestures across cultures.

Finally, the underlying theme of this study has been the promotion of communication as a whole within the classroom setting. Studies should be conducted to determine whether the use of gestures does in fact enhance comprehension and communication. Despite the methodological difficulties outlined, much of value to both student and teacher still waits to be disclosed.

D. Closing Remarks

Both teacher and student bring their social values, norms and expectations to the teaching/learning situation. These are
to a significant extent conveyed via nonverbal communication. It is unfortunate, but true, that by far the majority of teachers in the public school system still hail from the dominant middle class, Caucasian, English-speaking culture of Canada, while more and more of their students come from a multiplicity of cultural and ethnic backgrounds. The days of typifying "the problem kids" as those from the proverbial wrong side of the tracks, while not entirely gone, are giving way to a more enlightened approach to the "disadvantaged" backgrounds of these students. Still, the term disadvantaged itself implies that what the learners of the dominant social group have is somehow better or "normal". This simplistic summation of a highly complex problem is one that all teachers should question.

The nonverbal is not only a systematic part of the total act of communication but also a learned, culture-based set of behaviours. Therefore we are really dealing with that somewhat nebulous and all encompassing concept "cultural differences." This study has sought to shed some small illumination on one aspect of "cultural differences", the interpretation of emblems and illustrators.

It has long been assumed that nonverbal communication is "natural" and that one does not have to learn how to communicate feelings, use gestures to illustrate conversation and the like. Yet it is now abundantly clear that we know these things and have learned them in a specific cultural framework. Furthermore, culture-specific behaviour can lead to serious misunderstanding when members of two different cultures, even though they speak the same language, try to interact.
Since the first glimmer of interest in the value of nonverbal communication in education some twenty years ago, a great deal of useful information has been generated. However, the ethnic composition of classrooms has changed dramatically in that time and the research has not accurately reflected that difference, rather it has been largely ignored. With a multicultural policy in place, the presently burgeoning interest in the cross-cultural aspect of communication is hardly surprising.

It is known that social class, sex, race and/or ethnic difference serve as discriminating factors in schools because of the differences in cultural expectations within a school system that has been set up by the dominant cultural group (Galloway, 1984). Not nearly enough is known to enable teachers and students to avoid misleading each other to their own detriment as individuals and as teachers/learners.

This study has made a small contribution in terms of knowledge, the sort of knowledge that will hopefully help facilitate interaction and communication among cultural groups in the classroom, especially the teacher-student dyad. For if there is not good communication, there is, at best, haphazard learning. Participation is not excluded, learning does take place, but at what cost to the learner?
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### APPENDIX A - MULTIPLE CHOICE QUESTIONNAIRE FOR EMBLEM/ILLUSTRATOR TEST

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
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<tbody>
<tr>
<td>1) a) yes b) no c) I agree d) hello e)</td>
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<tr>
<td>2) a) mouth b) I'm thinking c) quiet! d) no e)</td>
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<tr>
<td>3) a) a sneeze b) smells bad c) hold your breath d) hold your nose e)</td>
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<tr>
<td>4) a) That's a no-no! b) smells bad c) not d) yes! e)</td>
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<tr>
<td>5) a) let's think about it. b) I have a headache. c) close your eyes. d) I wonder? e)</td>
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<tr>
<td>6) a) That hurts my ears. b) louder (can't hear you) c) come on d) all say it e)</td>
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<tr>
<td>7) a) O.K. b) the letter &quot;0&quot; c) you're wonderful! d) I like it. e)</td>
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<tr>
<td>8) a) can you hear me? b) I'm talking. c) listen! d) loud! e)</td>
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<tr>
<td>9) a) how are you? b) hello. c) goodbye. d) see you around. e)</td>
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<tr>
<td>10) a) all of you b) they c) you d) we e)</td>
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<tr>
<td>11) a) sit down. b) get up. c) all together d) this way up e)</td>
<td></td>
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<tr>
<td>12) a) if you say so b) I don't believe it! (surprise) c) I don't believe it! (you're lying) d) Hell e)</td>
<td></td>
</tr>
<tr>
<td>13) a) goodbye. b) hello. c) can you come here? d) this is my hand. e)</td>
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<tr>
<td>14) a) me I b) you c) we d) us e)</td>
<td></td>
</tr>
<tr>
<td>15) a) get up! b) sit down! c) come here! d) quieten down! e)</td>
<td></td>
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<tr>
<td>16) a) my wrist b) my arm c) right here d) what time is it? e)</td>
<td></td>
</tr>
<tr>
<td>17) a) everybody b) you c) bring together d) come here. e)</td>
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<tr>
<td>18) a) tall b) big and round c) a circle d) a square e)</td>
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<tr>
<td>19) a) it's right here. b) it's close by. c) it's over there. d) it's gone. e)</td>
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<tr>
<td>20) a) behind me b) past tense c) I'm hot. d) future tense e)</td>
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</tr>
<tr>
<td>21) a) that's not good. b) that's good. (well done) c) so-so d) poor work e)</td>
<td></td>
</tr>
<tr>
<td>22) a) get going. b) stop. c) quiet. d) I'm in charge. e)</td>
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<tr>
<td>23) a) what is it? b) shake your wrist. c) go away. d) come here. e)</td>
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<tr>
<td>24) a) I'm sad. b) I'm sorry to hear that. c) I'm angry. d) I was wrong. e)</td>
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<tr>
<td>25) a) I'm afraid. b) I'm sorry. c) I'm sad. d) I'll come too. e)</td>
<td></td>
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<tr>
<td>26) a) go there. b) come here. c) all together d) we e)</td>
<td></td>
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<tr>
<td>27) a) I'm sad. b) I'm happy. c) I'm angry. d) I'm hurt. e)</td>
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<tr>
<td>28) a) don't do that! b) the clock ticks like this. c) this is my finger. d) hold up your finger. e)</td>
<td></td>
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<tr>
<td>29) a) I'm sad. b) I'm afraid. c) I'm tired. d) I'm happy. e)</td>
<td></td>
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<tr>
<td>30) a) I'll tell you. b) maybe. c) that's O.K. d) I don't know e)</td>
<td></td>
</tr>
<tr>
<td>31) a) I'm sleepy. b) I'm tired. c) I'm cold. d) I'm hot. e)</td>
<td></td>
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<tr>
<td>32) a) well---sort of b) no. c) I don't know. d) yes, it is. e)</td>
<td></td>
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<tr>
<td>33) a) what a day! b) I'm hot. c) this is how you do it. d) O.K. e)</td>
<td></td>
</tr>
<tr>
<td>34) a) it's too loud! b) my ears are cold. c) my head hurts. d) listen. e)</td>
<td></td>
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<tr>
<td>35) a) I'm cold. b) stretch your arms. c) I'm tired. d) I'm hot. e)</td>
<td></td>
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<tr>
<td>36) a) tastes good. b) tastes awful. c) rub your tummy (stomach). d) lick your lips. e)</td>
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