

OBJECTIVELY MEASURING SENSITIVITY TO AMERICAN
NONVERBAL COMMUNICATION IN ENGLISH AS A
SECOND LANGUAGE

By

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CHAPTER I

NONVERBAL COMMUNICATION:

A FUNCTION OF CULTURE

Cross-Cultural Studies and Nonverbal Communication

When a discussion about two different cultures emerges as the topic of a conversation, the focus of the discourse usually concerns the two cultures' similarities and differences. Typical travelers to foreign lands almost invariably return with descriptions of sites seen and reports of bureaucratic complexities, but their favorite stories frequently revolve around cultural misadventures. As most seasoned globetrotters will attest, an ability to function in a foreign language does not insure an ability to function in a foreign culture. As a consequence, linguists, sociologists, psychologists, and anthropologists have laboriously endeavored to unearth and illuminate the force that weaves language and culture into consistent, yet varied patterns of human behavior.

As studies of multilingual and cross-cultural interactions have progressed, a non-linguistic element in intercultural discourse has often been indicated as a confounding factor--incompatible nonverbal communication systems. Genelle Morain (1976) in Kinesics and Cross-Cultural Understanding aptly summarizes this intriguing impediment to communication:

Those who interact with members of a different culture know that a knowledge of the sounds, the grammar, and the vocabulary of the foreign tongue is indispensable when it comes to sharing information. But being able to read and speak another language does not guarantee understanding will take place. Words in themselves are too limited a dimension. The critical factor in understanding has to do with cultural aspects that exist beyond the lexical--aspects that include the many dimensions of nonverbal communication. (p. 1)

After identifying nonverbal communication (NVC) as an important area for cross-cultural research, many scholars have tended to concentrate on one controversial aspect of nonverbal behavior--its origin. Two fundamental philosophies exist concerning the development of the nonverbal behavior of an individual: 1) the innate position and 2) the environmentally-determined position.

Innatists postulate that nonverbal behavior is inborn and, consequently, universal. This position was espoused by Charles Darwin (1899), who claims that headshaking as a negative indicator, occurring in the majority of cultures, is evidenced as an unlearned behavior emerging at infancy when a baby turns his head away from his mother's breast to indicate a refusal to continue nursing. While Darwin concludes that the majority of nonverbal expression and gesture is inborn, he also acknowledges that some aspects are culturally specific, e.g., kissing and nodding. Likewise, Eibl-Eibesfeldt (1972) accepts the innatist theory while conceding that "there are many cases, however, where it is difficult to see how a complex pattern of behavior, as for

example a facial expression, or a whole syndrome of behavior, could have been acquired innately" (p. 305). Rosenthal, Hall, DiMatteo, Rogers, and Archer (1979) summarize the predicament of the innatists by stating, "Most theorists--even those who have worked to establish the existence of at least some cross-culturally recognizable expressions--acknowledge the importance of cultural variables for the accurate recognition of nonverbal behaviors" (pp. 209-210).

Proponents of the environmentally-determined view, in contrast, assert that nonverbal behavior is learned from the nonverbal and cultural environment of the individual. Edmund Leach (1972), in his chapter "The Influence of Cultural Context in Man" from Hinde's Nonverbal Communication, writes, "The majority of social anthropologists, relying on their intimate ethnographic knowledge, maintain that, even at the level of close person-to-person relationships, there is remarkably little cross-cultural standardization of signal and response" (p. 330). Mark L. Knapp (1972) reports that former innatist R. L. Birdwhistell, reflecting on his past research into universal gestures, during an interview with the New York Times, said, "There are no universal gestures. As far as we know, there is no single facial expression, stance, or body position which conveys the same meaning in all societies" (p. 19). Some scholars, such as Genelle Morain (1979), have devoted books, chapters of books, or both to describing the many different nonverbal behaviors found throughout the world's cultures. Michael Watson (1970), reporting on his research into proxemic behavior, concludes that "people from different cultures cannot be relied upon to attach the same meaning to the same elements of proxemic behavior . . . thus, when people from cultures employing different patterns of proxemic

behavior interact, interference is likely to occur with consequent alienation from interaction" (p. 115). Finally, using an objective test of nonverbal sensitivity, Robert Rosenthal et al. (1979) tested over 2,300 non-American individuals to discover how well people from different cultures could decode American nonverbal behavior; the results from that research, containing a wide variety of test scores, led Rosenthal and his associates to reject the innatist view of nonverbal-behavior development. Considering the observations of these scholars and the exceptions recognized by the innatists themselves, I find it virtually impossible to conclude that culture has had no effect on the evolution of the different nonverbal systems evident in the world. Consequently, in this investigation I will assume that cultural environment does indeed dictate an individual's nonverbal competence.

The Code-Switching Hypothesis and Nonverbal Communication

Many communicative settings in multilingual or multidialectal communities, countries, and/or cultures require the communicator to switch from one language or dialect to another. The motivation for this switch may be as overt as beginning a conversation with a person who speaks a different language or as subtle as speaking to someone with a different status. Funso Akere (1980) defines code-switching as "the surface realization of an underlying process in which the sociocultural factors of status, integrity, and self-pride . . . are manipulated or evoked for the purpose of achieving effective communicative ends" (p. 104). In other words, a set of criteria, known by the members of a

given culture and multilingual community, determines when a given dialect or language is used and with whom. Of course the proponents of this hypothesis view this phenomenon as an environmentally learned code, for, as they maintain, a code that is appropriate for one village (or multilingual community) would be foreign to another village (or multilingual community) in a different region of the same country.

Unfortunately, the application of code-switching in the real world is not always easily applied or accessible. For example, Gibbons (1983) reports that bilingual youths in Hong Kong are criticized for switching and mixing Cantonese and English although the code-switch is appropriate in their restricted circles. In such instances, the system of code-switching for the community appears to be in a state of transition. An example of code-switching in conflict is offered by Gannon (1980) who describes an inhospitable reaction from French-speaking Canadians when he attempted to switch from English to French: "Each attempt that I made to communicate with French-speakers in French was frustrated either by a response in English, or worse, as far as I was concerned, by an apparent inability on the part of my listener to understand me" (p. 91). In this case, the target language was known, but the target-language user was unfamiliar with the code-switching criteria within the target-language community. Gannon (1980) writes that a French-speaking friend told him that if he "wanted to communicate in French-speaking areas of Quebec, [he] should not always use French, but English as the occasion demanded" (p. 91). Consequently, both multilingual ability and code-switching competence must be engaged before cultural criteria are met and social acceptance is extended; even then, subdivisions of a community (such as the Hong Kong youth) may operate according to a

specialized code-switching system.

This hypothesis has been refined to include not only linguistic switching but also cultural behavior switching. The cultural component in the code-switching was pointed out by Akere (1980), who notes that dialect and interpersonal behavior are modified depending upon the status of the two people engaged in a discourse. These behavioral switches are evident in the American culture even in monolingual dyadic encounters. Drecksel (1977), through her Interaction Analysis Profile, has developed an analytical system of describing the nonverbal switching, occurring in a two-person exchange, that identifies the status of each party as either dominant, submissive, or equal. While Akere describes behavioral switches accompanying dialect changes and Drecksel specifically identifies nonverbal behavior switches in a monolingual setting, Katsuragi (1974) has shown that individuals who are both bilingual and bicultural switch not only languages but also nonverbal behavior codes. In summary, three significant aspects of the code-switching hypothesis for NVC are:

- 1) Monolingual and multicultural discourse interactants operate according to an established behavioral code; this code includes nonverbal communication guidelines.
- 2) In a multilingual situation, more than one behavioral code may be accessed and necessary in different discourse contexts; these codes include nonverbal communication behaviors.
- 3) When bilingual interactants switch from one language to another, nonverbal codes are also switched; therefore, adept users of a second language should be able to switch from their native nonverbal behavioral codes to the NVC code used by the targeted

language/cultural community.

English for Speakers of Other Languages
and Nonverbal Communication

In the field of teaching English as a second language (ESL) to speakers of other languages, little attention has been given to NVC in journals and textbooks. Some scholars, such as Nine-Curt (1975), emphasize that since NVC is a cultural phenomenon and since such phenomena are learned, NVC should be taught in the ESL classroom; however, like Nine-Curt, they seldom elaborate on how to teach it. Of course, some ESL instructors have offered nonverbal teaching suggestions. For example, Bachman (1973) suggests playing short dramatic films in the classroom, alternating between showings with and without sound. Bedford (1972) as well as Via (1984) have described role-playing exercises that emphasize the nonverbal element of communication. In response to the constraints of a content-controlled university ESL course, Yeats (1983) proposes the incorporation of role-playing and videotaped scenes of a television program as a means of facilitating nonverbal acquisition utilizing minimal amounts of class time. Despite the efforts of these individuals and others, the ESL profession does not emphasize NVC as a critical component of the instructional curriculum.

Any discussion of nonverbal communication and ESL would not be complete without addressing the position maintained by Harvey M. Taylor, a well-known ESL scholar in the area of NVC. In his article "Training Teachers for the Role of Nonverbal Communication in the Classroom," Taylor (1976) encourages future ESL teachers to make their students aware that differences do exist between their native cultures' nonverbal

systems and the NVC code in the American culture. However, in "Beyond Words: Nonverbal Communication in EFL," his contribution to Readings on English as a Second Language for Teachers and Teacher Trainees, Taylor (1980) clarifies his earlier position by stating, "In summary, the general position that I am advocating is that we not teach American nonverbal communication for production in EFL but rather that we limit ourselves to teaching it for recognition only" (p. 567). How can Taylor consistently reconcile his "recognition only" position with his statement that "total communication includes not only verbal exchange, but also an exchange of body signals" (Taylor, 1976, p. 43)? (Exchange is grounded in the semantic notion of dual interaction.) Taylor's position may be based upon the time restrictions associated with many ESL instructional situations. However, as more classrooms become communication-oriented rather than grammar-oriented, the opportunities for instruction in NVC production will increase. As a result, I believe the direction of ESL research in NVC should move towards encouraging both the decoding (recognition) and encoding (production) of the nonverbal system of the target culture.

Concerning the evaluation of nonverbal competence in ESL, several scholars have laid a theoretical foundation for the necessity of an effective measuring tool. Soudek and Soudek (1983) have asserted that similar to degrees of language proficiency, there will be different degrees of nonverbal communication proficiency in another culture, ranging from a passive understanding of some fundamental gestures to fluent and active gesture-switching.

(p. 101)

Canale and Swaim (1979) identify nonverbal communication as a significant

component in their discussion of strategic competence as an aspect of communicative competence; furthermore, they claim

It seems that discrete-point tests will also be useful in our proposed communicative approach (to testing). This is because such tests may be more effective than integrative tests in making the learner more aware of and in assessing the learner's control of the separate components and elements of communicative competence. (p. 71)

While integrative testing derives a more comprehensive perspective on a student's language ability, integrative tests appear to be of less use in evaluating a person's cultural understanding. John Upshur, in Croft (1965), states

It has become a cliché to observe that some foreign student is performing poorly because he is 'suffering from culture shock.' Cultural orientation programs . . . are handicapped to the extent that participants cannot be 'graded' on their lack of cultural understanding. . . . They likewise suffer from too little information that specifies which aspects of the new culture are not understood by the participants. There exists, therefore, a clear need for test instruments and procedures which can supply reliable and valid measures of cultural understanding. (pp. 355-356)

Upon investigation, no ESL tests of nonverbal communication ability were found to be in existence; however, a test referred to as the Profile of Nonverbal Sensitivity (PONS) has been developed and administered to non-American-culture (C_1) oriented subjects. The PONS was administered to a cross-cultural sample population of 2,300 people

from twenty countries; only six of these countries are either non-Western and/or non-English speaking. When necessary, Spanish, Hebrew, and German forms of the PONS answer sheet were utilized. After the sampling was completed, Rosenthal et al. (1979) recorded their investigations, which I have summarized below.

- 1) The nonverbal test items are identifiable (answerable) by members of other cultures; furthermore, some C_1 subjects performed as well as some of the Americans tested previously.
- 2) American examinees did possess an advantage over C_1 examinees because the American samples did perform better, as a whole, than did the C_1 samples.
- 3) A wide disparity in scores existed between the C_1 groups, an occurrence that dispels the innatest theory of nonverbal acquisition.
- 4) Evaluations of the sensitivity of C_1 members are valid because, according to Rosenthal et al. (1979), "even the lowest scoring cross-cultural samples performed at better than the chance level" (p. 211).

The data from the research with the PONS suggest the practicality of a similar test designed specifically for C_1 subjects. The primary objective of this study is to determine if an evaluative instrument can indeed be developed that will objectively measure a non-American-culture-oriented individual's sensitivity to the American nonverbal communication system. Such a test should allow both teachers and students of ESL to--in the words of John Upshur (1965)--"estimate from a test score how well an individual is able at the time of testing to understand and behave appropriately in a target culture community"

(p. 358). A NVC test for C_1 individuals can provide both the ESL instructor and the student with a concrete indication of the student's ability to decode American nonverbal communication; the instructor may then provide the student with the relevant nonverbal data needed to improve the student's encoding (as well as decoding) ability. This focused instruction, instead of an indiscriminate inundation of nonverbal explanations and illustrations, will allow students to hone the strategic component of their communicative competence, providing them with an increased ability to participate in natural and unstructured discourse.

In this study, consequently, I will attempt the following:

- 1) To construct an effective testing device for measuring the NVC sensitivity of students of ESL;
- 2) To discover if some aspects of American NVC are more problematic for ESL students than others;
- 3) To determine, from the resulting data, a constructive course for further research into the testing of nonverbal communication in ESL.

CHAPTER II
DEVELOPMENT OF THE PROFILE OF AMERICAN
NONVERBAL COMMUNICATION SENSITIVITY

Test Design

As indicated earlier, the conceptual catalyst for the development of the Profile of American Nonverbal Communication Sensitivity (PANCS) was the lack of an objective evaluative instrument specifically for measuring nonverbal competence in ESL. Several significant questions required consideration before the PANCS could be designed:

- 1) How comprehensive should such a test of NVC be?
- 2) How should the nonverbal content be presented?
- 3) How would the examinees be expected to respond to the test items?
- 4) How much time would be necessary for administering such a test?

Nonverbal behavior is generally examined through a discussion of several recognized channels that communicate nonverbal meaning: gestures, gaze, eye management, facial expressions, postures, body movements, touching, prosodics, proxemics, object language, and environmental language. While several of these descriptors are self-defining, some require clarification. Gestures are considered to be idiomatic body movements; gaze and eye management refer to a wide range of nonverbal signals (also referred to as affects) from turn-taking in a

conversation to the portrayal of welling emotions; prosodics refers to vocal suprasegmentals such as pitch, loudness, stress, pauses, etc.; proxemics refers to the distance maintained between interactants in different discourse situations; object language includes the use of items such as clothing, jewelry, and designs for communicative purposes; and environmental language includes such nonverbal indicators as architecture, color, and lighting. After determining the basic components of NVC, I addressed the problem of deciding how comprehensive such a test should be. An effective ESL test should sample a true cross-section of the communicative behavior being measured. Therefore, a test of NVC should include samplings from the majority of the channels described above. In accordance with this conclusion, I designed the PANCS to include aspects of all the channels previously mentioned except environmental language, a channel omitted due to the technical constraints of assembling the test items.

The next question requiring examination was that of how to present the NVC content. As earlier noted, previous tests of nonverbal ability focused on a limited number of channels due to their medium (e.g., slides, illustrations, photographs) for presenting NVC data. Robert Rosenthal et al. (1979) describe the limitations of such media when testing facial expressions in their book Sensitivity to Nonverbal Communication by saying

- Some of the disadvantages of using still photographs include:
- (1) the inability of judges to see how long an expression lasts;
 - (2) possible confusion between permanent facial features (e.g., a "permanent frown") and temporary emotional expressions; and
 - (3) the absence of the successions or blends of different

emotions as they occur in real life. (p. 12)

Rosenthal et al. (1979) conclude their remarks about NVC testing media by asserting, "Films and videotapes produce much higher levels of decoding accuracy [than do still photographs]" (p. 12). Furthermore, Gitter, Kozel, and Mostofsky (1972) researched decoding accuracy by comparing still photographs with 16mm film and discovered that filmed facial expressions significantly increase decoding efficiency. As a consequence of this evidence, I chose video as the vehicle for presenting the nonverbal cues that would serve as the test items.

Since ten nonverbal channels had to be incorporated into one testing instrument, I sought a common denominator that would group two or more channels into a broader division of nonverbal communication that would function as a unifying, organizational convention--a designating section for the test. Finally, four sections were specified:

1) Gestural Emblems, 2) Affects of Emotion, 3) Affects of Relationship, and 4) Contextualized Affects.

The first of these four sections, Gestural Emblems, is composed of a series of idiomatic gestures that are illustrated by either a young American male or female. The emblems exhibited in this section come from a study conducted by Johnson, Ekman, and Friesen (1975) that identified a list of emblems that were decoded correctly by virtually every American interviewed. This section of the PANCS is the only section that emphasizes primarily only one channel; however, gaze, eye management, facial expressions, and body movement are also evident.

The second section, Affects of Emotion, is structured around four channels that communicate the emotional state of the encoder. The primary channels employed in this section are facial expressions, eye

management, postures, prosodics. Each facial expression is exemplified by either a young male or one of two young female Americans; the eye movements and prosodics are performed by either the male or a young female. This section is divided into two subsections: Part A, which evaluates the facial expressions, eye movements, and postures, and Part B, which tests only prosodics. The subdivisions were required for two reasons:

- 1) The nonverbal data in Part A are visual images, and the data in Part B are audible sounds.
- 2) The nature of the data in Part B (various pronunciations of the name David) required clarification so that the examinee would not be disoriented by the shift in input and response procedures.

The prosodic component of Part B is presented through different pronunciations of a single word--David. This method of presenting prosodic data is identified as standard content input. Standard content readings, as researched by Davitz and Davitz (1959), Beir and Zautia (1972), and Zuckerman, Lipets, Korvumaki, and Rosenthal (1975), have been demonstrated to successfully evaluate prosodic decoding abilities. Since the PANCS is intended for non-American examinees, the other two forms of prosodic input devices (foreign languages and content-free speech) were discarded. (Foreign languages were not used in this ESL test for bias reasons, and content-free speech, a means of technologically altering the morphological data, was not employed because of its artificial nature.) The emotions presented in this section (anger, fear, surprise, happiness, and sadness) are five emotions that Mark L. Knapp (1980), author of Essentials of Nonverbal Communication, identifies as "those

that have been uncovered by virtually every researcher since 1940" (p. 167).

Affects of Relationship, the third section, focuses on body movement, postures, gestures, touching, and proxemics. Like the second section, this section is divided into two subdivisions: Part A, which evaluates the examinee's understanding of American social status as discernible through nonverbal characteristics, and Part B, which is primarily concerned with degrees of intimacy between two interactants. The behavior for the nonverbal input for Part A was partially influenced by the interactants' previous experiences and was partially guided by Knapp's (1980) "Summary of Status and Power Gestures," a table that describes the characteristic nonverbal behavior conveying status (see page 159 in Knapp, 1980, for table). The nonverbal behavior displayed in Part B was also influenced by the interactants' personal experience; however, the proxemic zoning of the interactants was monitored so as to conform to the proxemic zones outlined by Hall (1959) in his definitive text The Silent Language. The visual input for each item in Section Three is portrayed by two young Americans (one male and one female).

The fourth and final section, Contextualized Affects, integrates all of the previously-used channels and adds the tenth--object language. In this section, the nonverbal data are displayed through a series of three short scenes involving two people: one young American man and one young American woman. In two of the scenes, objects (e.g., a letter, a telephone, a pen, and a chair) are incorporated and thus influence the nonverbal messages communicated by the discourse participants. For each scene, the interactants were provided with character descriptions, a situational setting, and general blocking (staging) assignments. The

interactants generated the verbal discourse and nonverbal behavior that they deemed appropriate for themselves in such a situation. By using scenes, various non-idiomatic gestures, subtle attitudes and relationships, and other less-crystalized nonverbal data were provided a context that permitted objective evaluation.

After determining that video would be the testing medium and organizing the test into four functional divisions, I examined the question of how the examinees should be expected to respond to the test items. Multiple choice questioning, which is used in the PONS, was chosen as the testing format. However, unlike the PONS, which offered only two choices, the PANCS test items include from three to five possible responses (depending upon the section) for each question. For the first section, each visual image may be described by one of three possible responses; these responses are in the form of verbal expressions (e.g., "Get lost!"; "Come over here, please"). In Section Two, the visual or audible input has five possible responses, consisting of five different emotions. (In Part B on the final test form, the responses were reduced to four emotions and item-analysis constraints were applied.) In both parts of the third section, three responses were offered. In Section Four, the number of responses varied in deference to the nature of the question; if a question involved identifying an emotion, five possible responses would be listed; if a gesture was tested, three verbal expressions would be offered as responses, etc.

Finally, the issue of test-administration time was considered, and much attention was given to an earlier study performed by Yeats (1984). In that study, the conclusion was drawn that not only should the time for response be short, but response time should be determined by the

length of the visual image and the complexity of the responses (choices). Some visual images, such as the gestures in the first section, are only two seconds in duration and have complex responses; therefore, more time must be allotted for choosing an answer. In contrast, some sections, such as the status relationships in the third section, contain visual images that are six seconds in duration and have uniform responses. As a consequence, items like those described in the third section should have less lag time between questions than do questions like those in Section One. Since the speed of the test is controlled by a video machine, time must be allotted for the reading of the directions for each section and subdivision. In addition, the introductory titles and an initial example would require some time. Ideally, after all the pretesting is completed, the test should be approximately thirty minutes long.

Preparation and Administration of the Pretests

Since the "questions" were to be visual images, it was necessary to know the answer before producing the question. In other words, in order to correctly videotape a question's visual stem, the person displaying the nonverbal behavior had to be aware of 1) the targeted behavior, 2) the desired channel for the behavior, and 3) a motivational context that would facilitate the encoding of the desired affect.

For each item in the test, the displayer was told what nonverbal affect was desired. In Section One, each gestural emblem was readily understood when the displayer heard the verbal expression that would serve as the correct response in the test booklet. Likewise in Section Two, the targeted emotion was easily conceptualized in the mind of the

displayer. For each question in the third and fourth sections, a given status was assigned to each of the interacting displayers who were also informed of the targeted interaction goal (e.g., Male: Superior/Female: Inferior; A is the dominant individual/ B is the subordinate).

Next, each displayer was informed about the targeted nonverbal channel. In Section One, the encoder could employ any channel that was associated with the targeted emblem; however, some channels were excluded due to the focal position of the video camera. (The encoders were also requested to avoid using their lips to form the verbal expressions used to identify the desired emblem.) In Section Two, the video camera isolated the part of the displayer's body where the affect would occur. In the third section, the displayers utilized several different channels so as to exhibit their status or intimacy level; however, the focal point of the camera precluded the use of facial expressions, eye movement, and gaze. In the final section, the encoders were permitted to use any of the nonverbal channels that seemed natural for their situation.

The displayers were also provided with a motivational context, when applicable, that would assist them in encoding the targeted affect. In Section One, a context was seldom necessary due to the idiomatic nature of the gestural emblems. Frequently, in the second section, an encoder was in need of a context due to the tightly controlled area for displaying the emotion. The eliciting factor for the emotions in Section Two was often a minimal amount of verbal and visual interaction with an off-camera observer/coach. In the third section, a context was often provided, such as two old friends meeting after a lengthy absence from each other. In the fourth section, a motivational context served as the foundation for all the interactions between the discourse

participants. Each displayer was assigned a character description that would stimulate a realistic interaction between the two people.

Each of the displayers was videotaped performing the targeted affect after the pretaping preparations described above were completed. The displayers were two American female Caucasians (ages: thirty and twenty-six) and one American male Caucasian (age: twenty-three). The number of encoders was limited so that the examinees would not be distracted by repeatedly different displayers. In accordance with the PONS test, actors were not used. Rosenthal et al. (1979) wrote

We decided that the method of using a relaxed person enacting preselected scenes was preferable to using an [actor] who might use stylized code, or who might emphasize certain channels depending on whether [his/her] experience was on stage, on radio, or in television and motion pictures. (p. 27)

Instead of being actors, two of the displayers were ESL teachers, and one was a speech-language pathologist.

After the taping was completed, approximately three and one-half hours of videotape had been used. The most accurate representations of the targeted affects were selected and edited onto a single $\frac{1}{2}$ " VHS video cassette. (The editing process was repeated for each successive test form; however, those representations tested in the first pretest were reinserted into the subsequent tests.) After the video sequencing of images was established, an audio track that read the directions and announced the number of an approaching question was added.

Pretest One

The first pretest utilized PANCS test booklet A, and a total of seventy-nine questions were tested using PANCS A:

- 1) Section One: 20 items
- 2) Section Two, Part A: 15 items
- 3) Section Two, Part B: 7 items
- 4) Section Three, Part A: 8 items
- 5) Section Three, Part B: 8 items
- 6) Section Four: 21 items

The test was approximately forty minutes in length. The sample population of 100 Americans was drawn from the American Freshman Composition I sections at Oklahoma State University. The sample testing occurred over a period of two consecutive days and was administered by the same individual.

Prior to administering the pretest, an accuracy percentage floor of 85% correct was established as the basis for including an item in the final test form to be used in evaluating the non-American sample. This floor was specified so as to assure uniformity and lack of prescriptive bias in determining the correct response. The developers of the PONS assembled an eight-member committee to determine whether the recorded affect was 1) what the encoder intended it to be and 2) an accurate representation of the targeted affect. The accuracy floor was the primary factor in selecting the items to be included in subsequent test forms. This floor, when applied to this pretest, resulted in forty-three acceptable items:

- 1) Section One: 16 items
- 2) Section Two, Part A: 8 items

- 3) Section Two, Part B: 3 items
- 4) Section Three, Part A: 4 items
- 5) Section Three, Part B: 7 items
- 6) Section Four: 5 items

However, a fifty-item test was targeted with the following quotas for each section:

- 1) One: 15 items,
- 2) Two/A: 10 items,
- 3) Two/B: 5 items,
- 4) Three/A: 5 items,
- 5) Three/B: 5 items, and
- 6) Four: 10 items.

As a consequence, several alterations in distractors were implemented for the test booklet for the second pretest.

Pretest Two

The revised test, Pretest Two, contained a total of seventy questions:

- 1) Section One: 18 items
- 2) Section Two, Part A: 13 items
- 3) Section Two, Part B: 8 items
- 4) Section Three, Part A: 7 items
- 5) Section Three, Part B: 7 items
- 6) Section Four: 17 items

The test was approximately thirty-five minutes in length and was administered by the same individual who administered the first pretest.

The sample population consisted of 101 Americans in the Freshman

Composition II program at Oklahoma State University. The testing occurred over two consecutive days.

Once again, the accuracy floor of 85% was applied. The revisions of the first test form resulted in increased accuracy on the second pretest and fifty-four acceptable items:

- 1) Section One: 17 items
- 2) Section Two, Part A: 10 items
- 3) Section Two, Part B: 6 items
- 4) Section Three, Part A: 5 items
- 5) Section Three, Part B: 5 items
- 6) Section Four: 11 items

The changes exhibited in the second pretest also resulted in meeting the quotas established for each section and subdivision for the final version of the test.

CHAPTER III

THE INTERNATIONAL-STUDENT SAMPLING

Considerations

After pretesting the first two forms of the PANCS, I assembled a third form (Appendix A) that would be administered to a non-American sample. Before beginning the sampling, I addressed two major questions:

- 1) Should there be restrictions as to who can take the test?
- 2) What kind of obstacles to a fluid administration of the test might exist?

An obvious restriction that could preclude some internationals would be their language ability, which can be thought of as 1) their primary or native language dependence and/or 2) their degree of proficiency in the English language.

In their research with the PONS, Rosenthal and his colleagues (1979) translated their answer booklets into the languages of the different non-English-speaking groups they tested. While such an alteration would increase the quantity of subjects capable of being tested, that practice would also bias the results in several respects:

- 1) Some languages closer in origin to English could have an unfair advantage over more distantly originating languages.
- 2) Some languages could have a direct translation equivalent for an English word, and others might not have such an equivalent.

- 3) Some translations could lose or diminish the subtle semantic differences between distractors.
- 4) The translated test forms would not be the same test that had been subjected to the vigorous pretesting and item analysis process.

As a result of the bias potential of a translation, English was determined to be the language medium for the PANCS. As a consequence, only those international students capable of comprehending English would be able to take the PANCS. Since the test is in English, some minimal language proficiency is necessary so that the vocabulary and sentence structures will not impede examinee performance. (Since the students in my sample had obtained scores of 500 or higher on the Test of English as a Foreign Language and did not appear to experience comprehension problems, other ESL students with a TOEFL score of at least 500 should be able to take the PANCS without serious language-deficiency interference. Although subjects with a TOEFL score below 500 could possibly comprehend the English used in the PANCS, such internationals were not evaluated in this study.)

Finally, concerning the restrictions for potential examinees, the decision was made to exclude any individuals who had been taught by either of the two ESL instructors appearing as encoders on the video portion of the test. (The speech-language pathologist had no opportunity for extended contact with the sample population.) This restriction was applied so as to eliminate any bias that could be the result of extended exposure to the encoders.

With the targeted population clarified, the question of what kind of obstacles to a smooth administration of the test might exist was

considered. Two potentially complicating factors were identified: an unfamiliarity with multiple-choice tests and a fear of the unknown--a video test of nonverbal communication.

Many international students come to the United States to study and have never before seen an objective, multiple-choice test such as the PANCS. However, the subjects tested in this study had experienced at least one, if not more, of the following encounters with multiple-choice tests before taking the PANCS:

- 1) The TOEFL test, a multiple-choice test;
- 2) Previous multiple-choice examinations taken earlier at Oklahoma State University;
- 3) Orientation to multiple-choice tests either in a lower division education course (e.g., ED 1111: Introduction to College), at an intensive English program, or in some other kind of college-preparation setting.

The second complicating factor conceptualized as a concern for the international sample was the anxiety generated by the prospect of being tested for an understanding of the American nonverbal communication system by a videotaped test. Three precautions were taken to lessen the sample members' distress: 1) a short question-and-answer period about the PANCS and nonverbal communication occurred before the administration of the test; 2) a widely recognized gestural emblem (the "O.K." sign) was used as an example on the video tape, before the test itself began, and served to illustrate the multiple-choice format and answering process; and 3) the test began with the gestural emblems, the most visually apparent affects. These three precautions effectively prepared the subjects for the commencement of the test and the intricacies of the

final section.

The Questionnaire

In order to collect the examinee data necessary for evaluating student performance, I devised a questionnaire (Appendix B). I gave this questionnaire to each examinee before administering the PANCS; the time allotted for completing it was fifteen minutes.

One important function of the questionnaire was to determine which of the examinees had been taught by either of the two encoders that were ESL instructors. That information was solicited by using the format illustrated in Figure 1 below. This method of inquiry was chosen instead of either a list of all the ESL instructors at Oklahoma State University or a listing of the two encoding instructors' names. Those two methods were discarded so as to avoid random or chance identification of either or both of the encoders. However, at the end of each administration, the examinees were asked if they had been taught by any of the people appearing on the video tape. The questionnaires of those individuals answering affirmatively were collected and properly labeled with the name of the relevant encoder. Those questionnaires (and answer sheets) were then excluded from the data that are presented in this study.

OSU Teachers

Freshman Composition I (ENGL 1013): _____

Freshman Composition II (ENGL 1323): _____

English for Graduate Students (ENGL 0003): _____

Figure 1. Questionnaire: Past and Present ESL Teachers

The different characteristics of the sample were identified after the questionnaire had been processed. The sample population was composed of 152 subjects. (Two of these individuals, who did participate in the test, did not complete a questionnaire.) Of the 152 subjects, 121 were male, 29 were female, and 2 did not respond. The range of ages was from 17 to 42 with four subjects not responding. The 150 respondents represented thirty-four different countries (Table I) and twenty-seven different languages or dialects (Table II). After the subjects had completed the questionnaire, the testing procedure began.

The Test Booklet

Test Form C (Appendix A) of the Profile of American Nonverbal Communication Sensitivity contained fifty multiple-choice questions:

- 1) Section One: 15 items
- 2) Section Two, Part A: 10 items
- 3) Section Two, Part B: 5 items
- 4) Section Three, Part A: 5 items
- 5) Section Three, Part B: 5 items
- 6) Section Four: 10 items

A list of potentially unfamiliar words and their definitions was printed on the title page of the test booklet. The list contained the words affect, gesture, image, contextualized, scene, superior, inferior, loving, and hostile.

Each section and subsection contained a set of directions. The directions closely followed the sentence structure used for the instructions of the TOEFL. For example, in Sharpe's Barron's How to Prepare

TABLE I
COUNTRIES OF ORIGIN AND NUMBER OF
RESPONDENTS FROM EACH

Bangladesh	(2)	Mexico	(1)
Bolivia	(1)	Micronesia	(1)
Colombia	(1)	Niger	(1)
Cyprus	(3)	Nigeria	(1)
El Salvador	(1)	Pakistan	(8)
Greece	(1)	Palestine	(1)
Hong Kong	(3)	Republic of China	(2)
India	(6)	Sierre Leone	(1)
Indonesia	(5)	Singapore	(7)
Iran	(1)	Syria	(1)
Japan	(3)	Thailand	(3)
Jordan	(7)	Tunisia	(1)
Kenya	(1)	United Arab Emirates	(1)
Kuwait	(1)	Venzuela	(7)
Lebanon	(6)	Vietnam	(2)
Lesotho	(1)	West Malaysia	(1)
Malaysia	(66)		

TABLE II
 FIRST LANGUAGE AND NUMBER OF
 RESPONDENTS CLAIMING EACH

Arabic	(21)	Malayalam	(1)
Bahasa Maylaysiaian	(3)	Mandarin	(12)
Bengali	(2)	Mende	(1)
Cantonese	(2)	Micronesian	(2)
Chinese	(36)	Persian	(1)
English	(8)	Pushtu	(1)
French	(1)	Sesotho	(1)
Fun Kan	(1)	Spanish	(12)
Greek	(4)	Telugu	(1)
Hokkien	(1)	Thai	(3)
Indonesian	(5)	Urdu	(7)
Japanese	(3)	Vietnamese	(2)
Kikuyu	(1)	Yoruba	(1)
Malay	(18)		

for the TOEFL, the directions for Part A of Section I read:

For each problem in Part A, you will hear a short statement. The statements will be spoken just one time. They will not be written out for you, and you must listen carefully in order to understand what the speaker says.

When you hear a statement, read the four sentences in your test book and decide which one is closest in meaning to the statement you have heard. Then, on your answer sheet, find the number of the problem and mark your answer. (Sharpe, 1979, p. 169)

In comparison, the directions for Section I of the PANCS read:

For each question in Section I, you will see a short video image. The images will be shown just one time. You must watch carefully in order to see what the gesture is.

When you see a gesture, read the three responses in your test booklet and decide which one is closest in meaning to the gesture you have seen. Then, on your answer sheet, find the number of the question and mark your answer.

The PANCS directions were structured like the TOEFL's because almost all of the subjects in this sample had been exposed to and were familiar with the language (sentence structure) found in the TOEFL's directions. Finally, all of the directions of the PANCS, as well as the numbers for each question, were recorded on the video tape and were audible to the examinees through the speakers on the video monitors.

Results

The third test form of the PANCS was administered in the same 60' x 25' room as the first two forms. The video portion of the test was visible on two 25" black and white monitors that were elevated more than four feet above the floor. The administrator was the same individual for each administration and had also administered the previous pretests to the two American samples. The fifty-question test was twenty-seven minutes in duration.

The results of the 152 member sample, recorded here in percentages rather than in raw scores, are 1) an overall mean of 87.57, 2) a median of 88, 3) a mode of 88, 4) a range of 66-100 for the total-percentage-correct scores, 5) a discrimination index of 0.20, and 6) a reliability of 0.57. A superficial evaluation of these statistics would imply that the PANCS was ineffective in identifying the strengths and weaknesses of the examinees. However, as Table III clearly shows, the PANCS does show that

- 1) There is a difference in student performance between Americans and internationals.
- 2) There is considerable fluctuation in mean averages for the internationals between sections (from 78 to 94), but there is very little for the Americans (from 94 to 98).

Table III shows that the internationals received mean scores that were seven points lower than the Americans on both Sections One (Gestural Emblems) and Two (Affects of Emotion), equal to the Americans on Section Three (Affects of Relationship), and seventeen points lower than the Americans on Section Four (Contextualized Affects). These comparisons are very similar to the findings of Rosenthal et al. (1979), who

observed that the internationals on the PONS did poorer overall than did the Americans, but, at times, performed as well as the Americans, a pattern apparent in the data collected from the PANCS and illustrated in Table III.

TABLE III
MEAN PERFORMANCE BY SECTION ON PANCS C
FOR AMERICANS AND INTERNATIONALS

	Americans*	Internationals*
Section One	98	91
Section Two	95	88
Section Three	94	94
Section Four	95	78

* Means are untransformed scores.

An analysis of variance was performed on each section using sex, language, direct exposure to Western culture, and indirect exposure to Western culture as the independent variables for examining student performance on each section of the PANCS. (Direct exposure includes a respondent's number of past American teachers, friendships with Americans, and American roommates. Indirect exposure includes the number of books and magazines read by the respondent and the amount of television and movies watched.) Since the scores had been expressed as percentages, they were transformed with an arcsin transformation

prior to the analysis (see pages 399-400 in Winer, 1971, for process). All subsequent analyses were conducted with transformed data; however, for ease of discussion, averages are expressed in untransformed values. ANOVAs were performed using SPSSX (see SPSS Inc., 1983) programs and followed by Duncan New Multiple Range Tests as adapted for unequal cells (see pages 93-94 in Kirk, 1968, and Kramer, 1956) and estimates of omega-squared (see pages 484-488 in Hays, 1973). Since the number of individuals in some categories were rather small, it seemed inadvisable to attempt to calculate interactions, so only main effects were tested. This investigation was instigated in an attempt to determine whether selected characteristics of the PANCS examinees influenced their test scores. (The range of scores for each section was 73-100 for Section One, 40-100 for Section Two, 60-100 for Section Three, and 10-100 for Section Four.) As Table IV indicates, only indirect exposure significantly contributed to the differences in student scores on Section One, Gestural Emblems, with extended indirect exposure providing examinees with a significant advantage over no-exposure students. (See Chapter Four for the implications of these and subsequent statistical results.) Table V shows that both indirect exposure and language significantly contribute to differences in scores on Section Two, Affects of Emotion, with language accounting for almost 13% of the variance. Table VI shows that none of the measured variables significantly affected the scores on Section Three, Affects of Relationship. Finally, Table VII reveals that language significantly influenced student performance on Section Four, Contextualized Affects, with almost 8% of the variance attributed to that variable.

Finally, the variables of age and length of time in the United

TABLE IV
ANALYSIS OF VARIANCE: SECTION 1 OF PANCS

Source	SS	df	MS	F	ω^2
Sex	0.03	1	0.03	<1	
Direct Exposure	0.65	3	0.22	2.11	
Indirect Exposure	1.26	2	0.63	6.13*	0.064
Language	1.05	10	0.11	1.02	
Residual	<u>13.61</u>	<u>132</u>	0.10		
TOTAL	16.32	148			

Indirect Exposure	\bar{X}^{**}	n
No Exposure	0.89 ^a	42
Minimal Exposure	0.91 ^{ab}	47
Extended Exposure	0.93 ^b	60

* F-ratio is significant at the 0.05 level.

** Means with the same superscript do not differ at the 0.05 level (Duncan).

TABLE V
ANALYSIS OF VARIANCE: SECTION 2 OF PANCS

Source	SS	df	MS	F	ω^2
Sex	0.13	1	0.13	1.01	
Direct Exposure	0.48	3	0.16	1.27	
Indirect Exposure	0.97	2	0.49	3.88*	0.034
Language	3.94	10	0.39	3.15*	0.126
Residual	16.50	132	0.13		
TOTAL	21.22	148			

Indirect Exposure	Language	\bar{X}^{**}	n
No Exposure		0.85 ^{ab}	42
Minimal Exposure		0.83 ^b	47
Extended Exposure		0.86 ^a	60
	English	0.94 ^c	8
	Asiatic	0.92 ^{dc}	8
	Spanish	0.87 ^{edc}	12
	Malay	0.87 ^{edc}	20
	Mandarin	0.85 ^{fed}	12
	Chinese	0.84 ^{fedc}	40
	Arabic	0.83 ^{fed}	21
	Urdu	0.82 ^{fed}	13
	Indonesian	0.80 ^{fed}	6
	Greek	0.73 ^{fe}	4
	African	0.69 ^f	5

* F-ratio is significant at the 0.05 level.

** Means with the same superscript do not differ at the 0.05 level.

TABLE VI
ANALYSIS OF VARIANCE: SECTION 3 OF PANCS

Source	SS	df	MS	F
Sex	0.01	1	0.01	<1
Direct Exposure	0.27	3	0.09	<1
Indirect Exposure	0.73	2	0.36	2.22
Language	1.61	10	0.16	<1
Residual	<u>21.57</u>	<u>132</u>	0.16	
TOTAL	24.21	148		

TABLE VII
ANALYSIS OF VARIANCE: SECTION 4 OF PANCS

Source	SS	df	MS	F	ω^2
Sex	0.25	1	0.25	1.22	
Direct Exposure	0.58	3	0.19	<1	
Indirect Exposure	0.24	2	0.12	<1	
Language	4.45	10	0.45	2.20*	0.075
Residual	26.70	132	0.20		
TOTAL	32.16	148			

Language	\bar{X}^{**}	n
Spanish	0.87	12
English	0.87 ^a	8
Greek	0.87 ^{ab}	4
Arabic	0.84 ^a	21
African	0.82 ^{ab}	5
Chinese	0.80 ^{ab}	40
Malay	0.78 ^{ab}	20
Mandarin	0.77 ^{ab}	12
Urdu	0.73 ^{ab}	13
Indonesian	0.73 ^{ab}	6
Asiatic	0.67 ^b	8

* F-ratio is significant at the 0.05 level.

** Means with the same superscript do not differ at the 0.05 level (Duncan).

States were correlated with the Students' test scores on each section using SPSSX programs (see SPSS Inc., 1983). As Table VIII shows, age and test scores have an inverse relationship: as age increases, test scores decrease. In Sections One and Two, this correlation is significant. Partial correlations were also used in an effort to partial out the effects of length of time in the United States on the relationship between age and test scores. These partial correlations were performed because of the unexpected negative correlations between length of time in the United States and test scores resulting from the Pearson correlations. (An earlier Pearson revealed age and length of time in the United States to have a correlation of 0.41, a value that suggests that the influence of age could be affecting the time and test score correlation.) After the partials were completed, the correlations for age increased in Sections One and Four and decreased on Sections Two and Three. Likewise, the results of the Pearson correlations between test scores and length of time in the United States, recorded in Table VIII, indicate that the longer the PANCS examinees had been in the States, the poorer their scores were on Sections Two, Three, and Four. When the effects of age were partialled out, the positive correlations in Section One became stronger (from $r = 0.036$ to $r = 0.144$) and significant. The correlations of the other three sections remained negative, and Section Three remained significant.

TABLE VIII
CORRELATION COEFFICIENTS

	<u>Pearson Correlations</u>		<u>Partial Correlations</u>	
	Age	Time in U.S.	Age+	Time in U.S.++
Section 1	-0.224*	0.036	-0.262*	0.144*
Section 2	-0.194*	-0.089	-0.173*	-0.010
Section 3	-0.135	-0.183*	-0.066	-0.142*
Section 4	-0.011	-0.093	0.030	-0.097

*r is significant at 0.05 level.

+Coefficient reflects the partialling out of the effect of time in U.S.

++Coefficient reflects the partialling out of the effect of age.

CHAPTER IV

CONCLUSIONS AND DISCUSSION

Conclusions

From the results obtained by the Profile of American Nonverbal Communication Sensitivity, it seems apparent that internationals' sensitivity to American nonverbal communication can be objectively measured. The PANCS results can be analyzed through

- 1) Comparisons between American and international performances;
- 2) Examinations of the influence of several independent variables upon international student performance.

The conclusions drawn from this analysis will provide teachers of English to speakers of other languages with

- 1) A more accurate idea of the difficult areas of American nonverbal communication for international students in general;
- 2) A possible indication of those areas of American nonverbal communication that are most difficult for international students with certain background characteristics.

First, a simple examination of mean scores for PANCS C, illustrated in Table III, reveals a difference between Americans and internationals in decoding American nonverbal communication. The Americans, with a total mean of 96, more accurately decoded the test items on PANCS C than did the internationals, who obtained an overall mean of 88. The internationals' mean of 91 on Section One, the easiest section for the

Americans, is interesting because the Americans' score of 98% correct seems to suggest that the gestures contained in that section were and should be very easy to decode. In comparing the two means for Section One, the internationals' score, rather than establishing gestures as a source of serious communication interference, suggests that the meanings of the gestures displayed in this section are not universal, further disproving the innatist position.

In contrast to these observations, both Americans and internationals received a mean of 94 on Section Three, Affects of Relationship, the easiest section for the internationals and the hardest for the Americans. These results indicate two possible explanations:

- 1) Since many foreign cultures emphasize an awareness of social status on the part of the individual, perhaps non-American subjects are more sensitive to status relationships, even in the American culture, than are the Americans.
- 2) Since the international mean equals that of the Americans, Section Three must have failed to adequately evaluate the nonverbal signals indicating status, hence the low mean for the Americans and the high one for the internationals.

Some statistical evidence supports both conclusions. The fact that an analysis of variance for Section Three showed no variables significantly affecting the test scores (when all of the other sections did show some significant variable influence) and that, on the other sections, the internationals consistently did poorer than the Americans tends to suggest that this section is invalid. On the other hand, a significant partial correlation of -0.142 between test scores and length of time in the United States indicates that the longer individuals reside

in the U.S., the less sensitive they become to status relationships, a possible sign of the reduced significance placed upon an awareness of status in the United States and a possible reason for the Americans' difficulty in decoding those nonverbal signals related to status relationships.

As for Sections Two and Four, the Americans received a mean of 95 on both, indicating that the two sections were of relatively equal difficulty for them; in contrast, the internationals' means of 88 on Section Two and 78 on Section Four suggest that the content of these two sections were difficult for them to decode, with Section Four being significantly more difficult for the internationals to decode than it was for the Americans. In Section Two, nonverbal affects of emotion were isolated into separate nonverbal channels (e.g., eyes, facial expressions, body postures, and vocal cues); the internationals' performance implies that isolated affects are difficult for them to decode. However, Section Four incorporates many nonverbal channels (including those from Section Two) in a series of three scenes that provide a context for the nonverbal behavior being evaluated, and the internationals received an even lower mean, suggesting either 1) contextualized affects are difficult for internationals to decode or 2) a series of nonverbal affects presented at the same time or in conjunction with each other tends to tax examinee ability, making decoding more difficult. Rather than suggesting that the data from these two sections are contradictory, it seems apparent that the data are specifying those areas of American nonverbal behavior that are difficult for internationals to decode:

- 1) Isolated affects of emotion within a single nonverbal channel;
- 2) Multiple-channel affects within a discourse context.

While an examination of mean scores helps us determine the difficulty of each section for internationals in general, analyses of variance show us the influence of learner variables on test scores, allowing us to formulate more specific conclusions. The results of the ANOVAs (analyses of variance) used in this study are recorded in Tables IV-VI. The independent variables examined are sex (male or female), direct exposure to Western culture (e.g., Western teachers, friendships with Westerners, and living with Westerners), indirect exposure to Western culture (e.g., watching Western television and movies and reading Western books and magazines), and language.

The results of the ANOVAs performed on Section One show that only the level of indirect exposure significantly influenced student test scores; over 6% of the variance on this section was due to that learner variable. A Duncan was used to determine the level of difference between the indirect exposure classifications, revealing that extended indirect exposure to Western culture provides students with a significant advantage over students with no indirect exposure. One plausible explanation for this difference is that the gestural emblems displayed in Section One carry uniform meanings that could become understood by non-American individuals repeatedly exposed to their visual representations through either still or motion pictures. While the Duncan revealed an insignificant difference between minimal exposure and no exposure as well as between minimal exposure and extended exposure, the mean score for minimal exposure was two points above no exposure and two points below extended exposure, resulting in the expected sequencing for the three classifications.

Likewise, Section Two was significantly influenced by indirect

exposure, but it was also significantly affected by language background. The F ratio for indirect exposure ($F = 3.88$) accounted for 3% of the variance, and language, with an F ratio of 3.15, produced over 12½% of the variance of this section. (Overall, the F ratios from the ANOVAs of Section Two show decoding affects of emotion to be more influenced by learner variables than was Section One.) The Duncan performed on indirect exposure resulted, surprisingly, in a significant difference between extended and minimal exposure but showed no significant difference between no exposure and the other two classifications. These results follow the anticipated pattern concerning the significant difference between minimal and extended exposure; however, it is puzzling why no exposure, the insignificant division in this classification, has a mean that falls between minimal and extended exposure. As for language background, those internationals claiming English as their first language received the highest mean (0.94), and those examinees citing an African language as their first language received the lowest mean (0.69). There was no significant difference in test scores between the different oriental language groups, and they generally were more accurate in decoding isolated affects of emotion than were the more verbal Arabs, Greeks, and Africans. These findings support the presumption that examinees from noncontact cultures tend to be more sensitive to those nonverbal signals indicating emotional states in the American culture than are examinees from contact cultures. (See Watson, 1970, for further discussion concerning contact and noncontact cultures.) Furthermore, the fact that over 12½% of the variance (the highest level of variance attributed to any of the measured independent variables) was due to language background is consistent with the research performed

by Spurling and Ilyin (1984) who investigated the impact of learner variables on tests of English as a second language and concluded that language background is the most significant factor influencing test performance.

The ANOVAs for Section Three revealed that none of the designated learner variables significantly influenced the students' test scores, yet there must be some reason for a range of scores of 60 to 100. These results imply that one (or more) of the following explanations must be true:

- 1) The learner variables measured in this study influence examinee performance but not significantly.
- 2) Examinee performance is affected by some other independent variable(s) not measured in this study.
- 3) The difference in examinee scores must be due to the examinees' understanding of status relationships in the American culture.
- 4) This range of scores is due to poor test construction and, consequently, does not accurately reflect examinee ability.

While all four of these explanations have merit, the last two seem to be the more plausible. Although it would be expedient to conclude that Section Three is invalid, I believe that it is the subjects' decoding ability that determined their scores on this section. I have drawn this conclusion for two reasons:

- 1) It is conceivable that this range was not the result of the independent variables measured in the ANOVAs of this study since these variables proved to be insignificant 66% of the time in the other three sections.
- 2) It is conceivable that many internationals, displaced from

their native culture and linguistic environment, perceive a conscious awareness of the status of potential discourse participants as a crucial element in positive interactions and/or the avoidance of conflict, resulting in a high level of sensitivity to nonverbal indicators of status.

Considering these points, it is possible to conclude that Section Three does indeed measure decoding ability despite the results of the ANOVAs that showed no significant influences on the part of the learner variables measured.

The analysis of variance on Section Four showed that language has a significant affect on the decoding of contextualized affects. This variable accounted for 7½% of the variance on this section; the other variables did not significantly affect student test scores. On this section, Spanish speakers performed significantly better than did those individuals from other language backgrounds. However, both speakers of English and Greek received a mean of 0.87 as did the Spanish speakers. It is probable that the Spanish classification was deemed significantly different from English and Greek because the smaller cell sizes of the other two did not allow them to demonstrate the consistency in scores that the Spanish cell provided. The ranking of means for this section has yielded an interesting order: Greeks, Arabs, and Africans obtained higher scores than did the oriental language groups, an order virtually opposite of that on Section Two, Affects of Emotion. Furthermore, the Asiatic classification, which received the second highest ranking on Section Two, is the least adept at decoding the contextualized affects of Section Four, which contains some of the same affects in context that had been isolated in Section Two. (The Duncan for Section Four revealed

a significant difference between the Asiatic group and speakers of Spanish, English, and Arabic; however, the Duncan for Section Two revealed no significant differences between these language classifications.) These results suggest that individuals from contact cultures are able to more accurately decode American nonverbal signals (than are noncontact cultures) when they are provided with a discourse context offering an increased number of meaningful clues. In addition to the results of the ANOVAs used for section analysis, Pearson and partial correlations obtained some interesting statistical data.

The correlations, recorded in Table VIII, for Section One show that both of the variables measured using Pearsons and partials--age and length of time in the United States (time in the U.S.)--significantly influenced the test scores on this section. The Pearson coefficient of -0.224 for age implies that examinees become less proficient at decoding gestures as they become older. This conclusion is maintained ($r = -0.262$) after the affect of time in the U.S. is removed. However, this conclusion is complicated by the fact that the partial correlation coefficient for test scores and time in the U.S. shows a significant positive correlation ($r = 0.144$) for Section One, implying that examinees' scores become higher the longer they are in the United States. We can readily conclude, however, that, with all other independent variables being neutral, an older subject who was being tested in his home country and who had never been to the United States would receive a lower score on the PANCS than would a younger subject with the same location and travel restrictions. As for those examinees being tested in the United States, we can conclude that the examinee's age will be of greater hindrance than time in the U.S. will be of benefit.

As for Section Two, both the Pearson and the partial reveal a significant negative correlation between age and test scores on this section. In contrast, neither of the correlations were significant for time in the U.S.; furthermore, the partial for time in the U.S. ($r = -0.010$) shows this variable to be virtually neutral in this section. The negative correlations for age, however, suggest that older examinees will be less accurate in decoding American affects of emotion than younger examinees.

According to the results of this study, the length of time a person is in the United States is the only independent variable significantly affecting his test score on Section Three of the PANCS. (Age had insignificant correlations.) Both the Pearson ($r = -0.183$) and the partial ($r = -0.142$) show that the longer an examinee is in the United States, the less accurate he becomes at decoding the American nonverbal signals indicating the status of discourse interactants. One possible explanation for this correlation is that as internationals begin to rely more on their verbal communication ability to maintain positive relationships with Americans and become more accustomed to living in a foreign culture, they tend to rely less on a conscious awareness of nonverbal indicators of status to help them avoid possible conflict.

Finally, the correlations involving age and time in the U.S. on Section Four revealed no significant correlations. The Pearsons for both of the variables revealed weak, negative correlations. The partials produced a weak, positive correlation ($r = 0.030$) for age and a weak, negative correlation ($r = -0.097$) for time in the U.S. These coefficients mean that the scores on Section Four were not significantly affected by age and length of time in the United States.

Discussion

The data collected from the PANCS indicate that not all learner variables significantly affect test scores. The ANOVAs for all four sections showed sex to be insignificant, implying that examinee gender had an inconsequential affect on test performance. These results do not agree with the PONS research (Rosenthal et al., 1979) involving Americans since they discovered that women had a distinct advantage over men; unfortunately, Rosenthal and his associates did not examine the influence of sex on their non-American sample. However, the results from the PANCS do agree with findings by Spurling and Ilyin (1984) and Farhady (1982) who examined the impact of sex on tests of ESL proficiency and reported that gender was insignificant. Perhaps sex is not a major factor on ESL tests and on the PANCS because the positive or negative influences of sex are negated when an individual crosses linguistic and cultural boundaries. This conjecture seems logical since sexual biases--both positive and negative--vary between cultures. (For example, the advantages of gender are quite different between the American and Saudi Arabian cultures.) Like the variable of sex, the PANCS revealed direct exposure to American culture to have an insignificant influence on the different sections of the test. These results are surprising since it seems logical to expect close contact with Americans to influence an individual's nonverbal sensitivity positively, and a lack of close contact to have no positive influence or possibly even a negative one as was reported by Kim (1980). One possible reason for these results is that all of the subjects in this study were students at a large university and had extensive exposure to Americans in different communication settings even though they may

or may not have been in direct contact as defined for classification purposes in this study. As a consequence and despite the fact that the subjects may have had different levels of leisure exposure to Americans (defined in this study as direct exposure), they received relatively the same level of meaningful exposure to American nonverbal communication through their academic environment, thus negating the influence of the criteria used in establishing the divisions within the direct exposure classification of this study (see pages 45-50 in Krashen, 1982, for theoretical information). However, it would be interesting to see the affects of direct exposure (as defined in this study) on the scores of PANCS examinees who are in foreign countries and who are in work or study environments not so heavily influenced by Americans and their nonverbal behavior.

In contrast, the other learner variables measured in this study (time in the U.S., age, language background, and indirect exposure to Western culture) did have significant effects on test scores even though those influences were not always the expected ones. The negative correlations between age and test scores were anticipated and were similar to the results obtained by Spurling and Ilyin (1984). The significance of language had also been expected and was consistent with earlier research (Farhady, 1982; Hisama, 1980; Rosenthal et al., 1979; Spurling and Ilyin, 1984). Of the two occasions when indirect exposure was significant (in Sections One and Two), the results were what I have expected (see Table V). However, the most interesting aspect of this variable's significance is the fact that it is significant while direct exposure is not. Apparently, indirect exposure is significant because the criteria used in establishing the divisions for this variable are

based on the examinees' exposure to Western television, movies, books, and magazines during the time they are in their native countries, not after they arrive in the United States. Consequently, the divisions within indirect exposure allow significant differences to emerge in analysis, unlike the collapsed divisions of direct exposure. Finally, the negative correlations between time in the U.S. and the test scores for Sections 2-4 were unexpected, yet they do agree with the findings of Walburg (1978). I had presumed that time in the U.S. would be one of the stronger variables affecting decoding ability; however, research by Spurling and Ilyin (1984) shows length of time in the U.S. to be the least positively-significant variable they measured. Perhaps the reason for these negative correlations lies within the research performed by Kim (1980) who found that those immigrants to America spending the majority of their time within a strong ethnic subculture begin to have more difficulty acculturating into the American culture the longer they stay in the United States. I suspect that the effect of length of time in the United States on the ability to decode American nonverbal communication reflects much the same scenario: the longer the internationals tested in this study have remained in the States, the more they have clustered into linguistic and/or cultural units, thus reversing a factor that could otherwise enhance their communication abilities--the length of time they are in the American culture.

Before I began this study, it seemed prudent to establish a strict criterion for determining which of the items from the pretests would be included on the final test form--an accuracy floor. This floor was based on the number of Americans taking a pretest and required an item to be answered correctly by at least 85% of the subjects before it could be

included in the final test form. The reasoning behind the establishment of this arbitrary floor was

- 1) To eliminate the possibility of bias on the part of a single individual or a panel of judges;
- 2) To reduce potential objections to the results obtained by the PANCS due to item inclusions based upon the judgment of an individual or a panel of judges;
- 3) To increase validity by establishing test items as being decodable by a high percentage of a sample American population.

I believed at the beginning of this study and at the end that this floor was essential for my research since no NVC test like the PANCS, designed specifically for non-American subjects, had previously been developed. The foremost purpose of this study was to determine if such a specialized, objective test could be produced; it is now apparent that such a test can be developed. Consequently, I believe future research in the testing of American nonverbal communication in ESL should not be restricted by such a floor, an assertion I make for three reasons:

- 1) The data from the PONS have shown unequivocally that there are many differences in nonverbal decoding abilities among Americans when they are tested over their own nonverbal system; the reason for these differences is the different NVC sensitivity levels of the subjects.
- 2) An accuracy floor with a high percentage eliminates the testing of less-obvious nonverbal affects since the differences in the sensitivity of the Americans would force such items to be discarded; furthermore, if the percentage for the floor were decreased, the relevance of the floor

comes into question since the level of American consensus has been lowered.

- 3) The use of high-percentage floors as the major criterion for item analysis and selection tends to result in easier tests and, as a result, less-reliable tests with less discriminating ability than is desirable--as evidenced by this study.

In summary, accuracy floors in item analysis should be avoided in C_2 tests of nonverbal sensitivity because such restrictions do not facilitate the measuring of the total nonverbal spectrum in such intricate behavioral systems.

After my investigation with the PANCS, I can make several suggestions for future research in the evaluation of internationals' sensitivity to American nonverbal communication. First, as stated above, accuracy floors should not be used as the major criterion in item analysis; rather, more conventional means should be used in conjunction with the continued use of pretesting involving American subjects. Secondly, future research should attempt to construct tests emphasizing nonverbal communication in context. Such tests would probably provide a more accurate discrimination of decoding competence than would tests of isolated affects. Finally, the issue of decoding ability related to status relationships should be pursued to determine if internationals are indeed highly conscious of American status relationships, resulting in strong decoding abilities, and, if so, why.

In conclusion, the major purpose of this study was to discover if an objective evaluative instrument could be designed that would measure non-American-culture-oriented individuals' sensitivity to American nonverbal communication. This study showed that such an instrument

could be designed and developed. Furthermore, the data collected by that instrument revealed the influence selected learner variables had on examinee performance as well as identifying those aspects of American nonverbal communication that are easiest and those that are more difficult for internationals to decode. Then, avenues for future investigation were suggested that could constructively contribute to our understanding of our students' sensitivity to American nonverbal communication, a knowledge that could help us to help them interact in and experience the American culture and people in a more meaningful and rewarding way.

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APPENDIX

OKLAHOMA STATE UNIVERSITY

THOMAS BIRD

1900-1905

APPENDIX A

PROFILE OF AMERICAN NONVERBAL COMMUNICATION

SENSITIVITY: FORM C

PROFILE OF AMERICAN NONVERBAL COMMUNICATION
SENSITIVITY

Form C

Vocabulary

Affect -- a nonverbal signal/message

Gesture -- a body movement that communicates a message

Image -- a video picture

Contextualized -- occurring within a context

Scene - a short illustration of a dialogue between two people

Superior -- higher in authority

Inferior -- lower in authority

Loving -- showing love for another person

Hostile -- showing dislike for another person

Section 1: Gestural Emblems

Directions: For each question in Section 1, you will see a short video image. The images will be shown just one time. You must watch carefully in order to see what the gesture is.

When you see a gesture, read the three responses in your test booklet and decide which one is closest in meaning to the gesture you have seen. Then, on your answer sheet, find the number of the question and mark your answer.

Do not write on this test booklet.

- | | |
|---------------------------------|----------------------------------|
| 1. A. "You're too loud" | 8. A. "See you later" |
| B. "Listen carefully" | B. "Get over here, now!" |
| C. "I can't hear you" | C. "Come over here, please" |
| 2. A. "How could I be so dumb?" | 9. A. "Maybe not" |
| B. "Why are you so dumb?" | B. "No way!" |
| C. "Get your head together" | C. "Why me?!" |
| 3. A. "Your timing is off" | 10. A. "Give him the cold stare" |
| B. "Is it time yet?" | B. "I'm cold" |
| C. "It's time to go" | C. "You're as cold as ice" |
| 4. A. "It's time for bed" | 11. A. "Follow me" |
| B. "Be quiet" | B. "Listen to me" |
| C. "Shut up!" | C. "See you later" |
| 5. A. "See this chair?" | 12. A. "We're number one" |
| B. "Sit in this chair" | B. "One more time, please" |
| C. "Not this chair" | C. "I'm warning you!" |
| 6. A. "I really don't care" | 13. A. "Get lost" |
| B. "It wasn't me" | B. "Wait!" |
| C. "I don't know" | C. "Sit down!" |
| 7. A. "Do it faster" | 14. A. "I need some space" |
| B. "Absolutely not" | B. "I'm confused" |
| C. "Get lost" | C. "I'm hot" |

15. A. "Stop!"
B. "Push!"
C. "Hi!"

Section 2: Affects of Emotion

Part A: Directions: For each question in Part A of Section 2, you will see a short video image. The images will be shown just one time. You must watch carefully in order to see each affect.

When you see an affect, read the five responses in your test booklet and decide which one is closest in meaning to the affect you have seen. Then, on your answer sheet, find the number of the question and mark your answer.

16. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
17. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
18. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
19. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
20. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
21. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
22. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
23. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
24. A. Happiness B. Sadness C. Fear D. Surprise E. Anger
25. A. Happiness B. Sadness C. Fear D. Surprise E. Anger

Part B: Directions: For each question in Part B of Section 2, you will hear a pronunciation of the name David. Each pronunciation has an affect of emotion. Each David will be spoken just one time. You must listen carefully in order to hear each pronunciation.

After you hear a pronunciation, read the four responses in your test booklet and decide which one is closest in meaning to the pronunciation you have heard. Then, on your answer sheet, find the number of the question and mark your answer.

26. A. Happiness B. Sadness C. Fear D. Anger
27. A. Happiness B. Sadness C. Fear D. Anger
28. A. Happiness B. Sadness C. Fear D. Anger

29. A. Happiness B. Sadness C. Fear D. Anger
 30. A. Happiness B. Sadness C. Fear D. Anger

Section 3: Affects of Relationship

Part A: Directions: For each question in Part A of Section 3, you will see a short video image. The images will be shown just one time. You must watch carefully in order to see what the image is.

After you see an image, read the three responses in your test booklet and decide which one is closest in meaning to the relationship you have seen. Then, on your answer sheet, find the number of the question and mark your answer.

NOTE: M = Male F = Female

- | | |
|------------------------------|------------------------------|
| 31. A. M:Superior/F:Inferior | 34. A. M:Superior/F:Inferior |
| B. M:Inferior/F:Superior | B. M:Inferior/M:Superior |
| C. M and F: Equals | C. M and F: Equals |
| 32. A. M:Superior/F:Inferior | 35. A. M:Superior/F:Inferior |
| B. M:Inferior/F:Superior | B. M:Inferior/F:Superior |
| C. M and F: Equals | C. M and F: Equals |
| 33. A. M:Superior/F:Inferior | |
| B. M:Inferior/F:Superior | |
| C. M and F: Equals | |

Part B: Directions: For each question in Part B of Section 3, you will see a short video image. The images will be shown just one time. You must watch carefully in order to see what the image is.

After you see an image, read the three responses in your test booklet and decide which one is closest in meaning to the relationship you have seen. Then, on your answer sheet, find the number of the question and mark your answer.

- | | | |
|----------------|-----------|--------------|
| 36. A. Friends | B. Lovers | C. Strangers |
| 37. A. Friends | B. Lovers | C. Strangers |
| 38. A. Friends | B. Lovers | C. Strangers |
| 39. A. Friends | B. Lovers | C. Strangers |
| 40. A. Friends | B. Lovers | C. Strangers |

Section 4: Contextualized Affects

Directions: In Section 4, you will see three short scenes involving two people. At the end of each scene, you must answer several questions. Each scene will be shown just one time. You must watch carefully in order to see the contextualized affects.

After you see each scene, read the question in your test booklet. (Each question will also be heard from the video monitor.) Some of the questions will have video images.

After you read the question and see the video image, read the responses in your test booklet and decide which one best answers the question. Then, on your answer sheet, find the number of the question and mark your answer.

NOTE: Some questions will not have video images!

41. What did this gesture mean in Scene 1?
 - A. "Talk slowly"
 - B. "Go ahead and speak"
 - C. "I don't understand"
42. What did this gesture mean in Scene 1?
 - A. "That's nothing important"
 - B. "Would you repeat that?"
 - C. "Get out of here!"
43. What did this gesture mean in Scene 2?
 - A. "Tell me more"
 - B. "Let me talk now"
 - C. "Don't speak to me!"
44. Which answer best describes the relationship between the two people in Scene 2?
 - A. Friends
 - B. Lovers
 - C. Strangers
45. What was the woman's attitude toward the man at the beginning of Scene 2?
 - A. Friendly
 - B. Loving
 - C. Hostile

46. What did this gesture mean in Scene 3?
- A. "What did you say?"
 - B. "Well? Go ahead"
 - C. "What? Repeat that!"
47. What did this gesture mean in Scene 3?
- A. "Of course I do"
 - B. "Don't touch me"
 - C. "Get away from me"
48. Which answer best describes the relationship between the two people in Scene 3?
- A. Friends B. Lovers C. Strangers
49. At the end of Scene 3, what was the man's attitude toward the woman?
- A. Friendly B. Loving C. Hostile
50. At the end of Scene 3, what was the woman's attitude toward the man?
- A. Friendly B. Loving C. Hostile

THE END

APPENDIX B
QUESTIONNAIRE

English Educational History

1. Did you study English in elementary (primary) school? YES NO
 - 1a. How long? _____
 - 1b. Did you have Western teachers? YES NO
 - 1c. How many? _____
2. Did you study English in secondary school? YES NO
 - 2a. How long? _____
 - 2b. Did you have Western teachers? YES NO
 - 2c. How many? _____
3. Did you receive other English education in your country? YES NO
 - 3a. What kind? (Ex. language school, tutoring, etc.) _____

 - 3b. For how long? _____
 - 3c. Did you have Western teachers? YES NO
 - 3d. How many? _____
4. Did you study English in a college in your country? YES NO
 - 4a. How long? _____
 - 4b. Did you have Western teachers? YES NO
 - 4c. How many? _____
5. Have you studied English in a foreign country other than the United States? YES NO
 - 5a. Where? _____
 - 5b. How long? _____
 - 5c. Did you have Western teachers? YES NO
 - 5d. How many? _____

Western Culture Background

6. Before you came to the U.S., had you lived in a Western country?
 YES NO
- 6a. Which one(s)? _____
- 6b. For how long? _____
7. In your country, did you watch Western television or movies?
 YES NO
- 7a. Approximately how much Western television did you watch each week?

 (hours)
- 7b. Approximately how many Western movies did you watch each month?

8. In your country, did you read Western books or magazines? YES NO
- 8a. Approximately how many Western books did you read each month?

- 8b. Approximately how many Western magazines did you read each week?

9. In your country, did you have Western friends? YES NO
- 9a. How would you describe your relationship(s)?
 Best friends Friends Acquaintances
10. Currently, are any of your better friends Westerners? YES NO
- 10a. How would you describe your relationship(s)?
 Best friends Occasional friends
11. Have you lived in the room/home with a Westerner? YES NO
- 11a. How long? _____
12. Do you currently live in the same room/home with a Westerner?
 YES NO
- 12a. How long? _____

13. What day did you arrive in the United States?

(Month) (Day) (Year)

14. How much time have you spent in your country since you first arrived in the United States? _____

ADDITIONAL COMMENTS:

VITA^N

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