NONVERBAL COMMUNICATION IN THE CLASSROOM:
REPORT, ANALYSIS AND CRITIQUE OF EVALUATIVE INSTRUMENTS

BY

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A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Communications.

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With grateful acknowledgment for the guidance so generously given by the faculty of the Department of Communication of the University of Delaware. And with gratitude to George A. Borden who has skillfully and good-naturedly advised me.

To my husband and family a special tribute, for they have understood.

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CHAPTER I

CLASSROOM NONVERBAL COMMUNICATION

Nonverbal communication is a relatively neglected area in educational research, although many articles have been written about it in the field of anthropology, sociology, psychology, and psychiatry. This is probably because there is no system or language of nonverbal communication, and it is interpreted idiosyncratically rather than normatively.

In the above quote, an awareness of the impoverishment of methods available to evaluate classroom nonverbal behavior is expressed. Yet the richness of nonverbal experience in the classroom is evident. There, Galloway points out, "...all signs, actions and events have communicative consequences because such messages provide information."^2

Nonverbal communication in the classroom needs attention now. That attention needs to be paid, at least partly, through the means of an understandable, practical nonverbal evaluative instrument.

But again and again, the question in the field is,
"At this time, where are we in the study of classroom nonverbal communication, specifically in the nonverbal communication of the teacher?" This question requires the examination of a rather awkward body of knowledge.

SCOPE AND PURPOSE

This thesis is purposed to be a "gathering-together" and "centering-in" on the research currently available in teacher nonverbal communication. The increase in the number of studies investigating techniques for quasi or fully systematic observations and analysis of teacher nonverbal behavior suggests a "pooling" is in order to lessen their unwieldiness.

Used to its best advantage, the collecting and collating done here should make available a ready research tool, a "where-to-go," "what-to-get" document for those wishing to explore the field more deeply.

More than that, some perspective on "what's-useful-to-whom" (with the view tenaciously held that all studies are not meant to be all things to all teachers) will be maintained throughout.

In essence, the above will be accomplished with the following purposes:

1. to expose the reader to the range of teacher nonverbal communication by
highlighting the research conducted in the field and in the laboratory,

2. to suggest to the reader the breadth of background in nonverbal communication studies—some sociological, some anthropological, some psychological—into which the educationally-oriented studies are placed,

3. to analyze the viability of the instruments developed for and used as working tools in these studies in order to advise the reader of their applicability,

4. to supply copies of those instruments along with relevant data in appendix form,

5. to analyze the current status of the research on teacher nonverbal communications and to make suggestions for further research, including:

   a) an investigation of the merits and limitations of present instruments for future application,

   b) the recommendation as to future studies into problems not yet
solved or researched,
c) recommendations as to the
construction of a classroom non-
verbal evaluative instrument
accompanied by appropriate
methodological considerations.

The thesis will cover intensely, but will not be limited
to (others being included by reference, comparison and
contrast) the following authors in teacher nonverbal
communications:

- Galloway
- Victoria
- Love-Roderick
- Cheffers
- Civikly

The work of Flanders, Withall, and Grant and Hennings will
be included to the extent that the former five find their
bases in the verbally-oriented studies of the latter three.
Ample use will be made of work in teacher nonverbal
communication, some complete with instruments, some not,
done by the following: Breed, Schum, Strother, Medley
and Mitzel, Goldberg, Goldberg and Mayerberg, Grant,
Keith et al., Kleinfeld, Koch, Perkins, Schusler, and
Woolfolk and Woolfolk.

Only those studies concerned with affective non-
verbal communication acts that are observable by the
unaided eye and that occur within the context of the teaching/learning situation are included in this discussion. As fascinating as the unobservable facets of communication (e.g., extra sensory perception or the dilation of the pupil of the eye, etc.) are, they cannot at present serve as modes of teacher evaluation.

Moreover, paralinguistics, defined here as the study of the phenomena of voice (i.e., tone, accent, pitch, inflection, pause, etc.) and the verbal (i.e., words) will not be studied here EXCEPT as they intrude into several of the all-inclusive studies. The above procedure is necessary for the sake of manageability. It is done with full deference to the fact that the nonverbal and the verbal are interactive, mutually inclusive spectra. However, so many studies previously done deal exclusively with the verbal and, with the nonverbal now at "crisis," (i.e., having attributes resembling the Kuhnian pre-paradigmatic state\(^3\)) it is deemed most important to deal with the subject as stated above.

The aforementioned studies of teacher nonverbal communication will be divided into those which are exclusively nonverbal on the one hand and into those which are "mixes" of verbal and nonverbal on the other hand. They will then be further subdivided on the basis
of the instrument used as "springboard." For example, those using the Flanders instrument as a starting point will be considered as "like" species and grouped together.

THEORETICAL ASSUMPTIONS

Such a critique is unquestionably bound and limited by a number of theoretical assumptions.

Some argue that behaviors "...occur in characteristic, standard configurations, whose common recognizability is the basis of their value in communications." That is the assumption here, despite the seemingly smaller and apparently less consistent data available for nonverbal investigation in comparison to that available for verbal studies. Along with this is the acceptance, for the purposes of this thesis of its corollary—that nonverbal behaviors are measurable and codifiable.

Some circles contend that the verbal may be observed with more reliability than the nonverbal. Here, the assumption is that the verbal can perhaps be observed with more ease, but not necessarily with more reliability. In this work, there is a concern that the field "let go" of the dictionary of gesture-compiling, that it widen the stimulus-response limitations of the behaviorist, and that it replace anecdotal and casual descriptive (that is to say, subjective) observations. In their
place is the researcher's concern for a rigorous methodology and a base of empirical research. The studies are further assumed to rest in a comprehensive, contextual, realistic, holistic, and global setting.

In addition, there are as yet unresolved concerns with: the proper place of behavior study within culture (some cues are apparently culturally "set," others are "pan-cultural"), the question of instinctual versus learned behaviors, the "scientific" role of the observer (whether he/she be naive, trained or participant-observer). Such concerns are answered only tentatively or cautiously here.

At the same time, there is a rebellion herein (as supported by the "current research" section) against the still-made assertions by the verbally-oriented, that the verbal always dwarfs the nonverbal in both occurrence and meaning, that the verbal constitutes a more advanced style of meaning than the nonverbal, that the nonverbal is composed of so many complex cues that it cannot possibly be measured, that the nonverbal is so highly idiosyncratic that it cannot be codified, and that all nonverbal gestures are readily recognizable in the lower animals and so are easily reducible to the level of pure instinct.
RATIONALE

This project has merit in that, although reams of material are presented to student-teachers in our institutions as well as to our practicing teachers in the classroom by way of "in-service" meetings, most of it regards verbal presentation. There is little, and in the case of some institutions, no preparation of either student-teacher or teacher in nonverbal behavior, either in the recognition of cues in others (presumably students) or in the development of an effective vehicle for their own nonverbal behavior. In fact, the researcher was able to find no current college catalog stating the requirement of nonverbal training for prospective teachers.

It is also timely to the teaching profession that such "drawing-together-with-analysis" be done. With the advent of video-tape evaluation, and now of video-tape marketing of teachers, it is not only in the interest of bettering the students' educative and personal experience, but also in the interest of professional longevity that teachers, particularly when faced by the stark days of tenure-seeking, adopt a workable model of nonverbal behavior.

In addition, the study may create some awareness, that with six or more hours a day spent in the classroom

*As of September, 1977; Trenton, N.J. school officials will view video-tape teacher "performances" before hiring applicants.
during thirteen of the formative years of an individual's life and with (though estimates differ) a bulk of the "message" sent nonverbally, there is immense need to update resources, better experimentation, and to investigate assumptions. The communications field may well charge itself with service to the scholastic community at large and, more than that, with acting as "gatekeeper" to the body of research generated. When a teacher pleads, "Why did they ACT that way, when I SAID everything right??" is the communications expert to respond in rather vague Juilius Fast terms or in precise Mehrabian terms?

How are teachers, unless made aware, to know what messages they are sending nonverbally? How are they to recognize on what verbal and nonverbal bases students tend to determine their cultural and socio-economic "status," their disciplinary preferences, their "liking" or "disliking," formality or informality, autocraticness or democraticness?

**CURRENT RESEARCH**

Research completed by others in the area brings to bear the resolvability of many of the issues and further emphasizes the general resistance to or the lack of sophistication about the nonverbal on the part of educators. First, however, an apology for reporting such research in
a brief and "glossing" manner must be made. Lifting a study from its proper context necessarily "bends" and "distorts" it to some degree. Nevertheless, there has been found to be a high level of intercongruency among studies, with one work generally supportive of another's findings as Mehrabian and Friar point out. Many of the results are, in fact, redundant.

That the educational community itself is lacking in sophistication about the research on nonverbal behavior is a prime point included by many writers. Victoria finds that "The qualitative aspects of life [which he contends are relayed nonverbally] in the school environment are often perceived by students and teachers alike as unsupportive rather than supportive" and further posits that "...the process of communication determines the process of education." Galloway places responsibility directly at the "cues" of the teacher, stating, "Teachers must learn what their expression equipment means to them and to others. I see nonverbal behaviors and expressions as true extensions of the person," and Knapp sees implicit in the nonverbal model an interaction between source and receiver, offering:

...the amount of sensitivity to nonverbal cues is related directly to the amount of interpersonal
feedback a person receives and his receptivity and sensitivity to that feedback. The obvious implication of this is that the classroom situation can provide an atmosphere in which there is a free flow of feedback and interpersonal "coaching."12

Certainly, Victoria, Cheffers, Galloway, Civikly, Goldberg, Knapp, Grant and Hennings, Love and Roderick, and Woolfolk and Woolfolk agree; the classroom is territory open for nonverbal "discovery."

Despite the fact that "Nonverbal communication, in the form of gestures, positions and stances is [acknowledged by many to be] an inseparable part of the teaching process,"13 one finds sparse investigation into this area as compared with the verbal. Victoria reports that research has been primarily conducted regarding teachers' verbal communication with Simon and Boyer finding that of twenty-six instruments considered, twenty-five deal with the verbal mode while only seven provide for observation of the nonverbal mode.14 Grant and Hennings reiterate, "...when we look at descriptions of teaching, we find little that indicates the role played by nonverbal teacher activity."15 Koch quotes Halpin as stating that training programs for teachers "...ignore the entire range of nonverbal communication..."16

This lack of teacher preparation and low level
of awareness is somewhat ironic since leaders in the field have shown, as Knapp points out "...we can develop non-verbal skills."¹⁷ That is, training in nonverbal skills results in positive improvement in nonverbal awareness. Schum found that his experimental group, after training in nonverbal skills and self-analysis of teaching on video-tape, increased in positiveness of teaching style and in offering encouraging responses while lessening restricting behaviors.¹⁸ Strother et al., in an experiment in which none of the hypotheses was confirmed, attempted to correlate instruction in nonverbal communication for both student and teacher with student achievement and teacher competency. They find experimental methodology at fault for lack of confirmation while finding other non-measured positive outcomes of the unit of study.¹⁹

Victoria argues, "Cognizance by teachers of both the visual and verbal aspects of communication behavior may enhance their ability to more effectively relate to all pupils in teaching-learning situations."²⁰ Part of this cognizance may simply be achieved by raising the level of teacher awareness. "It is evident...that student-teachers [and experienced teachers as well] need to be aware of both their verbal and nonverbal communication behavior."²¹ Nonverbal cues may either be
"intentional" or "unintentional" according to Grant and Hennings.22 The evident lack of awareness may be corrected by efficient means such as those suggested by French.23 Additional instruction, beyond the awareness level, would include training in the recognition of behaviors, adoption of models, and self-evaluation. Such training has been proved effective. Kehoe reports on the positive results of teaching nonverbal skills in general,24 while Rosenthal et al., find that "women and girls do better than men and boys, although males in mental health and education do well enough to score like women."25 Rosenthal et al. owe the latter finding to the increased affective training of men in such fields. But important too is the finding that training of males tends to even out male/female scores.26 Moreover, democratic teachers score higher in nonverbal sensitivity than do autocratic teachers, an indication that personality interacts with nonverbal sensitivity scores. The addition of democratic principles training may cause nonverbal sensitivity scores to increase.27

Morganstern, basing his arguments on Gibson, Allen, and Ryan, calls for teacher training in nonverbal communication and for the development of effective teacher nonverbal models to that end. In doing so, he assumes that nonverbal skills are "trainable."28 All in all, recent
Beyond this, there is much assertion that the nonverbal realm is a more reliable and qualitative index and expression than the verbal, that the nonverbal is more influential and more efficient in meaning-production, and that it is more believable and more direct. As Leathers notes:

First, nonverbal, not verbal factors are the major determinants of meaning in the interpersonal context...**30
Second, feelings and emotions are more accurately exchanged by nonverbal than verbal means...31
Third, the nonverbal portion of communication conveys meanings and intentions that are relatively free of deception, distortion, and confusion...32
Fourth, nonverbal cues serve a meta-communicative function that is indispensable in attaining high quality communication...33
Fifth, nonverbal cues represent a much more efficient means of communicating than verbal cues...**34
Sixth, nonverbal cues represent the most suitable vehicle for suggestion.36

The implications to the classroom here are obvious. If so much of the content of communication is so important

* According to Mehrabian, from 93% up, to Birdwhistell, at least 30-35%.
** According to Victoria, nonverbal behaviors permit "...instantaneous perception of meaning within the context of interpersonal relations."35
and is conveyed by the nonverbal mode, why is it that studies into teacher nonverbal behavior remain "stalled" at a pre-paradigmatic state and are not being incorporated into the body of teacher training?

Continuing even further, Victoria finds nonverbal phenomena "...qualitatively predominant aspects of interpersonal relationships" that "...often are the most lingering retention of the event." (emphases mine) It would seem that quite apart from their sheer bulk, the nonverbal phenomena play THE MOST influential role in teaching/learning situations. Too numerous to cite here are the many examples of teacher behavior noted in the literature later recalled by observers, whether acting as trained judges, or as students, that rest upon behavior evidenced rather than upon words spoken by the teacher.

In fact, when the nonverbal is in contradiction to the verbal, the nonverbal is "believed" by the student according to the work of Mehrabian and Galloway who goes so far as to say:

For, indeed, a pupil who "sees" and "hears" kinesthetically may record a message in his mind which contradicts the verbal report rendered by the teacher.

Piled on top of that quantitative and qualitative powering by the nonverbal are such confusing results as follows:
Keith et al. point to the nonverbal "habits" of teachers, finding that while teacher-interns' approval tends to be passively, nonverbally expressed, their disapproval tends to be explicitly, verbally expressed; Woolfolk and Woolfolk point to the inferences of students, claiming, that when children are put in an ambiguous situation, they "assume" the worst. How, then, is the teacher, naive to nonverbal communications, to deal effectively with such phenomena in the classroom?

In fact, the reader of nonverbal research becomes "bogged down" in what looks like the "no-win-situation" of a teacher untutored as to the complexities of the field. On the one hand, "double-edged" or "double-bind" messages (i. e., incongruencies arising from inconsistencies within or between channels) appear to lead to psychological disturbances. Some documentation as to the cause-effect relationship of "double-bind" messages to schizophrenia exists. On the other hand, the effect of "redundancy" (i. e., agreement of the repetition of a message within or between channels) tends to reinforce an understanding, particularly if negative. Mehrabian and Ferris use the following exemplar, "Pushing a child away while turning away from him is assumed to communicate a more negative attitude toward the child than only pushing him away or only turning away from him."
Prejudging is another factor that no doubt complicates classroom messages. Saral finds prejudging linked to the maintenance of the same bias and reports "...equivocal signs will be distorted in such a manner as to confirm the first impression." \(^45\)

It must further be assumed that teaching/learning occurs within a cultural context equally complex in makeup. The apparent ease of cross-cultural nonverbal understanding is bolstered by the work of Saral, \(^46\) Ekman, \(^47\) and Boucher and Ekman \(^48\) who find pan-cultural generality of facial expression in their studies. These include at least six emotions, even to the pre-literate isolated peoples of New Guinea. \(^49\) Moreover, personal warmth, though defined in somewhat diverse manners, has been found to have a positive effect on scores on intelligence test performance of both Eskimo and Indian adolescents just as it had previously been found in the case of American adolescents. \(^50\) Parenthetically, it may be noted that experimenter warmth correlates positively with subject verbalization. \(^51\)

But subtleties of cultural understanding must at some point intrude into the classroom. What denotes positiveness in one culture may not in another; what denotes warmth in one culture may be suspect in another—witness the use of diverse "warmth" indicators in the
kleinfeld study cited above. SaraL attempts to clear
the haze by affirming, "It is the referential (denotative)
meanings of facial expression that are more subject to
cultural variations depending upon what emotions are
appropriate or permissable in various social situations."

On the other hand, not all cultural variations are
dismissed with such ease. They pervade the research
literature. Women's nonverbal behavior tends to be more
relaxed and more submissive in style than the nonverbal
behavior of men, according to Saine. Of what import
is such a finding to teacher nonverbal communication?
(in structured environments? in "free play?" in disciplinary
settings? on cafeteria duty?) Goldberg and Mayerberg find
even more cultural difference. Black second graders
perceive a neutral (female, white) teacher in the most
positive way whereas white second graders and sixth
graders of both races evaluate the positive (female, white)
teacher in the most positive way. In what way does the
educational community view that black second grader as
a result of his/her perception of neutrality as positive?
In what ways does the second grade teacher modify his/her
behavior in the presence of black students?

In addition, Duke tells us that in disciplinary
situations, the direct gaze of the North American teacher
may "put off" the Puerto Rican child whose "downcast"
eyes in return are signals of irresponsibility to the North American teacher. Also, there is general agreement among researchers in the field that students from lower socio-economic groups, from racial minorities or from foreign language-speaking homes tend to rely more heavily (for the message) on the nonverbal communication of teachers than do the verbal-relying students from higher socio-economic, racial majority, English-speaking backgrounds.

Yet, with the exception of Grant and Henning, who refuse to label any nonverbal behavior either as positive or negative, there is an assumption in the studies of teacher nonverbal communication, as evidenced in the construction of the instruments both in the field and in the laboratory, that particular teacher nonverbal behaviors constitute positives; other nonverbal behaviors wear negative labels. In several studies, a third set of behaviors are considered neutral or "pro forma." Moreover, this assumption is extended in that such positive/negative/neutral nonverbal behaviors are assumed to be wholly congruent, even in the affect condition, with positive/negative/neutral learning.

These assumptions are based at least to some degree on results obtained in research completed both in education and in other fields. However, nonverbal codes, as currently reported, are far from clear or finite. It
must be noted that segmentation of theories and models prevents easy systematization such as that reported above. Theorists and experimenters do not wholly agree regarding the nature of nonverbal symbolic activity or even that there is or is not nonverbal symbolic activity. This may be regarded as an advantage by one such as Kaplan who finds that because the nonverbal media are not "structurized," they are not therefore constrained by a system of symbols impoverished in meaning.

Some educators, like Grant, have followed the lead of Hall, Scherer and Birdwhistell, finding a code for all nonverbal behaviors relevant to the teacher. Their rationale, it seems, is based on such reasoning as follows:

The measurement of nonverbal meaning takes a number of steps. The first involves identification of nonverbal modalities. For each modality an exhaustive list of variations (or forms) has to be constructed. Furthermore, an exhaustive list of all human nonverbal modalities must be attempted.

Such methodology, commendable in its concern for objectivity was used by Grant in a nursery school setting. The result: a breaking of every motion into subdivisions. Eyelid movement, for example, was found to be made up of seven separate motions.

Such infinitesimality is not useful either to the purposes of our discussion here or to the practical needs
of the classroom teacher. Rather, it is necessary that one be mindful of the research basic to those studies which "glue," with some reason, positive, negative and neutral identifications on nonverbal behaviors. (See Leathers, Appendix A for a chart of current recognized systems and their general area of impact.)

Some generally recognized positive/negative/neutral nonverbal behavior research findings do exist. "Head cues typically communicate affect quality..." and carry information about emotion. When the head is leaning forward or is more "immediate," the perceiver infers a more positive attitude on the part of the other. Eye contact, excepting the prolonged "gaze" or "stare" (often perceived as a sign of hostility or aggressiveness) is found to be contributory to a positive and extroverted attitude.

Seals and Kaufman's research on teachers using "still" and "active" nonverbal conditions indicates that instructors who are nonverbally expressive and "active" tend to elicit more positive attitudes than those who are "still." They relate these results, in turn, to the work of Mehrabian and Williams. Correlation is positive "...between the degree of liking and the quantity of intended persuasiveness on the part of the sender." Seals and Kaufman conclude, "For instructors,
this can mean that the more one is involved nonverbally in teaching, the greater the rewards in terms of student attitudes toward learning.\textsuperscript{66}

In a field setting, Breed and Colaiuta found that "visual contact with the instructor increases attentiveness, which in turn makes for better grades."\textsuperscript{67} Breed also experimented with four degrees of eye contact as variables, finding that the lecturer's gaze (as opposed to excluded gaze or no gaze) positively affected student perception and retention of subject matter.\textsuperscript{68}

Open gestures\textsuperscript{69} and relaxation\textsuperscript{70} tend to elicit positive attitudes in the perceiver while muscular tenseness, increased hand and finger movement indicate anxiety, a negatively-perceived emotion.

Body cues and posture tend to reveal information regarding intensity, according to Mehrabian\textsuperscript{71} and Ekman\textsuperscript{72} and may be regarded as symptomatic of "inner states" according to Victoria.\textsuperscript{73} A forward lean is often understood as positive, an indication of liking.\textsuperscript{74}

Those who like and are liked are found by Mehrabian to be close proxemically, (Problems occur when the feelings or the proxemics are not mutual!) while those who dislike and are disliked tend to be proxemically distant.\textsuperscript{75} In harmonious relationships,
Beier found close-sitting and touching of others; while in conflicting relationships, he found distant-sitting and touching of self.\textsuperscript{76} Sherman found that greater listening comprehension is gained when closer proximity between student and teacher is maintained.\textsuperscript{77} Kleck found those students sitting closest to the teacher were the most compliant.\textsuperscript{78} Sommer's study on classroom seating arrangements indicates that teachers working in conventional row seating environments interact with a smaller range of student than those teaching in classrooms less traditionally arranged. Seminar arrangements tend to reduce participation by those on either side of the instructor (perhaps due to loss of eye contact).\textsuperscript{79}

Regardless of the rather mixed findings above, the instruments now available for use for the observation of teacher nonverbal behavior tend to polarize positive/negative behaviors, often with a cursory seven or ten categories that are couched in nonspecific terms. None of the instruments and few of the studies explain how such positives and negatives interact with the teaching/learning process.

\textbf{QUESTIONS}

On the basis of the previous discussion and summation of research and within the purposes and
theoretical assumptions of this thesis, the following questions arise for consideration:

What are the methods currently available for observing and/or evaluating teacher nonverbal behavior?

In what way/ways do underlying assumptions and theoretical bases of these nonverbal studies yield strengths and weaknesses?

What, if any, are the relevant and/or practical uses of each of these instruments? What, if any, are the drawbacks in their use?

In what ways may these instruments and/or their methodologies be improved?

What development of and/or refinement in an instrument or model is possible at this time?

In what direction should future research be guided? What new research on these instruments is necessary and/or feasible?

How may knowledge resultant from previous, current, and future nonverbal research be made available and useful to teachers?
in the elementary, secondary, and college classrooms and to teachers in training?

What are the financial, legal, and ethical considerations associated with the application of such instruments and studies?
CHAPTER II

MAJOR INSTRUMENTS

In order to evaluate the strengths and weaknesses of the instruments currently available in the field of teacher nonverbal behavior, it is first necessary to treat the background from which such instruments arose. Several instruments, called interaction analysis of verbal behavior tools, came into use in the 1950's and 1960's. The most popular of these were the Withall system that measured seven categories of teacher verbal behavior and the Flanders system of interaction analysis with ten categories. The Flanders system, presumably a means of objectively quantifying verbal behavior in the classroom, may be used in "live" situations by an observer or in self-evaluative situations. Tape or cassette recordings are commonly used in the latter instance.

Flanders breaks verbal behavior into ten categories; each of these in turn fits under the general headings of "Teacher talk" (either direct or indirect influence) or "Student talk." (See Appendix B for Summary of Categories for Interaction Analysis.) Every
three seconds, in steady tempo, the evaluator jots down the number of the interaction just observed. If small group, silent work, play, or seminar discussion takes place, it is necessary for the evaluator to cease observation until "recordable" activities resume.

After observation is completed, the sequence of recorded categories may be summarized in the form of a ten-by-ten matrix, with percentages of teacher talk to student talk and of direct teacher influence to indirect teacher influence then readily available.

Still in use, the Flanders system tends to have the following inaccuracies: three second time intervals do not allow for the variability of duration of human behavior; the ten categories do not cover the richness and nuance of all verbal behaviors; judges may be trained in or naive to the instrument's use and thus capable of differing judgments; judgment of behaviors according to the ten categories depends at least in part on the subjective faculties; skipping of "unrecordable" classroom segments skews the results obtainable; one-channel dynamics only are recordable; meta-communicative, paralinguistic, proxemic and kinesic behavior are not recordable.

While the former five intrinsic inaccuracies of
the Flandres system have been largely neglected, the latter two, dealing with the nonverbal dynamics of the classroom, have attracted criticism and have led to innovation. Specific development has come in the drawing up of Flandres-like systems for the categorization of nonverbal classroom behavior.

In responding to the overwhelming influence of the verbal "message" in educational research, Galloway states,

Nonverbal behaviors...were assumed to be consistent with verbal behaviors, and nonverbal interaction was believed to correspond with verbal interaction. In other words, a valid sampling of verbal behavior was presumed to be an adequate sampling of nonverbal influence. Such an assumption had little or no support from behavioral scientists in anthropology, and psychology, but educators found it useful.80

Of course, Galloway's opinion is: "...nonverbal messages may be more significant to pupils than teacher verbalizations when they (sic, pupils) attempt to ascertain the teacher's true feelings and attitudes toward them."81 The pupil, moreover, "...continually checks the consistency and congruence between the nonverbal cues and verbal remarks expressed by the teacher."82 "...Overlooked, perhaps is the inference that pupils may learn more about feelings and attitudes from nonverbal behavior than they do from verbal language."83 (capitalization mine)
Concerns such as these expressed by Galloway led him to construct an early nonverbal evaluative instrument. It may be used alone or in combination with the Flanders scale (as reported in Appendices F and G).

GALLOWAY-1962
"OBSERVATIONAL PROCEDURES FOR DETERMINING TEACHER NONVERBAL COMMUNICATION"

Fully aware of much of the "challenge of nonverbal research," Galloway lists the following problems: the difficulty of devising units of measurability for nonverbal behavior, the "elusiveless" and "ephemerality" of nonverbal behaviors, the laboriousness and complexity of compiling data, the difficulty of reaching adequate measures of reliability and validity, the "corrupting influence of cultural difference."\(^\text{84}\) Even if proper data collection, analyzation and codification could be attained, Galloway nevertheless asserts that he does not want to draw up formulae for teacher mimicry or plastic models of teacher nonverbal behavior. Yet teachers, newly aware of the nonverbal field, want to know a precise routine of the correct behaviors. With a dynamic though difficult-to-implement perspective, Galloway reveals:

Exact prescriptions of what every teacher should do seems (sic, seem) too static and stereotyped. I don't wish to create artificial manners and maneuvers. My view minimizes technical training and maximizes self-
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If possible, I would want every teacher and adult to be a student of his own nonverbal activity...  

Some of the above has been stated since his thesis, but his writing, even in his thesis, conveys a concern for the complexity of nonverbal research and for the difficulty of instrument development. The Galloway instrument is, in fact, not alone, but joined to a descriptive observational procedure (that is completed by trained judges and educational "experts") and a student-completed adjectival continuum. (See Appendices C, D, and E respectively.) At no time does Galloway suggest anything but the interdependability of the descriptive and the category methods.

In Galloway's work, nonverbal behavior is defined as having three facets: facial expression, gestures and body movement, and vocal intonation and inflection. Although this definition is broadened implicitly in later writings to include "space," "travel," "time," and "dress," (thus incorporating the proxemic and artifactual systems) it is originally limited to the above three facets as stated in the "Observational Procedures" set forth in 1962.

Here, then is a limitation of definition that is not made more clear or more precise by the thesis.
Gestures and body movements are lumped together without any distinguishing characteristics, except fleeting references to research completed by anthropologists, sociologists, and psychologists. Cues are neither made particular nor objectively described in any of the three evaluative procedures. For example, cues are subjectively and inferentially treated:

He maintains eye contact, indicates patience and attention, suggests a readiness to listen or an attempt at trying to understand. A pose or stance of alertness, readiness, or willingness to have pupils talk.

While there is obvious concern for useability and practicability of the categories, and of the instructions for the judges who are to write observation episodes, it is difficult indeed to determine how either the widely and subjectively defined categories or the immensity of description to be achieved by the observers agrees with current research such as that of Mehrabian and Birdwhistell. Such specifics as "forward lean" of the body or "relaxation" are not even touched on here.

Moreover, the instrument, like the Flanders system before it, categorizes teacher behavior on the basis of "encouraging" or "inhibiting" (with the "pro forma" category as neutral). Such a dichotomy reflects neither the nuance of nonverbal behavior/nor the shading of meaning available in cues. To reduce most behavior to
the terms of "encouraging" or "inhibiting" is to limit the potentiality of nonverbal expression. For example, incongruency between vocalic and kinesic channels or between kinesic and proxemic channels are not capable of being recorded in this system. Thus, overall congruency of the nonverbal system is wrongly assumed. Even so, incongruency between the verbal and nonverbal can be reflected when Galloway's and Flanders' categories are used simultaneously.

Also, no real correlation of the "encouraging" cues with positive learning or of the "inhibiting" cues with negative learning is accomplished by Galloway. Other researchers such as Breed, Kleinfeld, and Sherman do accomplish similar correlations later.

Some problems are evident in the matter of observer training, both with Group "A," the categorizing judges (previously mentioned on page 30), and Group "B," the episodal writers, who are instructed to make "inferences" regarding "nuances" and "inflections." Group "B" judges labored under cumbersome instructions to:

1. At the beginning of each observation, describe the total situation that directly confronts the observer.
2. Report the contextual situation of the teacher's behavior.
3. Continue to focus upon the behavior of the teacher.
4. Describe the "how" of everything the
5. Describe the "how" of everything done by any pupil who communicates with the teacher.
6. Describe communicative acts as fully as possible.
7. Put inferences in parentheses, not in descriptions.
8. Write (sic, describe) an executed behavior in a simple sentence, not in an elaborate, complex sentence.

Even if taken in shorthand, such a descriptive observation would be a large order!

Nevertheless, reliability is established for Group "A" judges who were rehearsed in the categories, who were checked for interjudge consistency, and who participated during the study in making categories more meaningful. Problems in category definition arose especially in regard to behaviors termed "idiosyncratic and unique to the teacher."

Six teachers in contextual classroom settings are observed by individuals from the teams alternately coding or writing from behind the one-way screen of an observational booth. Such methodology presumably cuts down the effects of observer intrusion into classroom behavior. In later writings, with the common availability of video tape for research, Galloway recommends its use. The length of observation was standardized; however, no unit for individual categorizing was prescribed.

"Natural segments" of unfolding events were to be used
as divisions by Team "A." Again, the contamination of inference into experimental objectivity regarding the occurrence of those segments and the lack of standardized instruction present present problems.

Although observation was carried on in a "contextual" setting, and although Galloway pays lip service to cultural, racial, and socio-economic differences, neither the categories, the specifics for observational episode writing, nor the overall instructions take such differences into account. The artifactual system and the environment (whether constant or varying from observation to observation) are not considered by the categories.

It is, then, with the foregoing problems, that Galloway's results are not surprising. His data did not overwhelmingly favor any one of the three methods—category observations, descriptive episodes or expert judgments—though the first two appeared promising.

The writer and reader are left, consequently, with a rather inconclusive result: the immense difficulty of devising observational procedures and instruments for evaluating teacher nonverbal communication. Galloway does not suggest that his categories for evaluating teacher nonverbal behavior be used by themselves as an "end-all" or an authoritative measurement. Paramount
to his outlook is the long difficult road toward the development of viable research in the area.

VICTORIA-1970

"OBSERVATIONAL PROCEDURES FOR THE IDENTIFICATION OF NONVERBAL BEHAVIOR OF STUDENT-TEACHERS OF ART"

Victoria's development of observational procedures for teacher nonverbal communication are grounded on a wide base: his own experience as an art teacher, his thorough familiarity with the Withall and Flanders scales and his knowledge of Galloway's expanded instrument.

Resisting the labelling of schooling as a wholly cognitive experience, Victoria relies on the development of "affective education" and looks toward the "...creative use of emotions, feelings and ideas." He goes on to assume that communication (both verbal and nonverbal) "determines" the process of education. All of this is bolstered by the argument (as supported by the work of Leathers) that the nonverbal, which Victoria never defines, expresses emotions and feelings. In his rather garbled and circuitous way, Victoria expresses himself on the inherent value of the nonverbal:

Qualitative nonverbal communication utilizes feelings, emotions, attitudes in the expression of ideas, and these are significant factors in the interpersonal communication of students and teachers.
He agrees with Galloway that the nonverbal may be the most important factor for students (all students) in determining the meaning of teacher-generated messages.  

Although he never quite conveys how the symbol-making process operates, Victoria sees nonverbal communication as a thoroughly symbolic one. He goes so far as to call the nonverbal an "analogic codification." Thus, he indicates that the nonverbal can be codified, measured, and interpreted according to specific meanings. All in all, his thesis is an attempt to probe the importance of that presumed analogic codification by the use of scientific procedures and compilation of data.

At each level, from the pilot study to the development of the typology to the gathering of results, there is concern for the evidence of reliability and validity of the observation techniques.

In the evaluation process, a two-in-one instrument, composed of a typology of nonverbal behavior, (termed "gestural behavior categories") and a continuum of terms categorizing qualities (which are rated as "neutral," "supportive" or "unsupportive") is used. (See Appendices H, I, J.) Here, we are confronted by a "double-ness" of assumption. First, (although factor analysis is reported) certain gestures are placed in the "interactive" and "spatial" referents while others are placed in the
"image reflective referents." The former are subheadings of "Transactional Nonverbal Behavior;" the latter are subheadings of "Non-Transactional Nonverbal Behaviors." The question of exactly how these operate is never addressed nor is the complete lack of listing of other behaviors ever explained. Second, while supported by some research, the fact that the "terms descriptive of qualities" are divided into "supportive," "neutral" and "unsupportive," fails to take into account some important distinctions: What range of feelings possible in the classroom is missing from this "continua" of only seven vague terms? What are the correlates in terms of teaching/learning gains or losses from the use of "unsupportive" behaviors? For example, how is "inattention" to negative student behaviors to be rated? Are the "unsupportives" always to be labelled as negatives in the classroom and thus squeezed from teaching dynamics altogether?

Finally, one must note that Victoria explicitly refers to the typology and the "terms descriptive of qualities" as "simultaneous" evaluative measures. How this is to be achieved (certainly not on the basis of Appendices H and K) is unclear. In fact, listings done later such as those in Appendix J (essentially a repeat of page 117 of his thesis) are as accurate as
Victoria gets in regard to their use. He links them by proximity of reference but not by relationship in such quotes as the following:

...we developed a typology of gestural behaviors and terms descriptive of qualities evoked by that behavior. We found that these behaviors could be described and measured within the context of teaching-learning situations by categorizing the behaviors and the qualities evoked by them.\textsuperscript{99}

The only apparent link between the typology and the qualitative terms is that judges wrote "...terms descriptive of qualities characteristic of the behavior viewed."\textsuperscript{100} Here, a circularity of reasoning is evident. One infers from a gesture its qualitative characteristic; in the guise of objectively measuring, one categorizes behaviors according to their inferentially-based qualitative terms.

Problems with the lack of specificity of the instrument and its allowance for interpretation arise in the conclusions and recommendations section where Victoria advocates, (as did Flanders, who suggested forty hours training) more than the sixteen hours training completed in this study.\textsuperscript{101} It is questionable as to how such intensive instrument usage training could be implemented in school systems at large or by teachers interested in the self evaluation that French recommends.\textsuperscript{102}

Difficulties owing to the lack of mutually
exclusive categories arise also:

... it is believed that further investigation of the gestural behaviors categorized as Body Motion is warranted to ascertain whether certain of these behaviors should be subsumed under the Body Posture category. 103

Regardless of these problems of conception, Victoria affords much that bears study. His "kernel" idea that specific subject areas merit study as to their possible correlation with nonverbal behavior-stimuli is a fascinating one. That one could reach validity and reliability in studies to determine the correlates on nonverbal behavior/supportive climate/teaching objectives needs some further investigation.

Too, the precise methodology employed by Victoria substantiates his claims for "some degree of content validity and reliability" 104 and of effective instrumentation as judged by data. 105 Among his methods worthy of consideration are the following:

random selection of student-teacher-participants, random selection of student-teacher-participants for the pilot study, random selection of student-teacher-participants for the instrument categorization, use of trained judges experienced in art education, use of video taping techniques, use of six five-minute tapes randomly sampled from a one hundred-twenty minute class, timing
of segments by a three-minute tone device, use of contextual teaching/learning situations, teaching of comparable subjects in observed classes, evaluation completed in task, demonstration, and evaluation contexts.

Possible questions as to methodology may arise in that: at no time was the context of the verbal taken into account in the observations; study was not undertaken as to the intrusiveness of the camera; investigation as to the placement of the camera was not done; comparability as to place, environment and time of day of the observations was not offered; disadvantages of taping all segments in one block of time were not examined; ground rules as to re-playing of the video tapes and re-coding were not established; no cultural, racial or socio-economic variables were introduced; no study of artifactual system influence was mentioned.

Although Victoria proves his instrument to be valid, he may nevertheless pose more questions than he has answered. Of value to the development of teacher nonverbal behavior instrumentation are: a concern for scientific objective data, a predilection for the qualitative emotional-feeling aspects of the nonverbal, the solid base of research completed in a contextual realistic setting, a perception of the "gap" between teachers and students that may be at least partly
nonverbal in nature. That Victoria offers a procedure, albeit in need of redefining and refining, is a significant contribution, perhaps to all teachers.

LOVE AND RODERICK-1971
"DEVELOPMENT AND FIELD TESTING OF AN AWARENESS UNIT"

Love and Roderick develop an instrument to record, but not evaluate nonverbal behavior using some of the same background as Galloway and Victoria. Love and Roderick, however, alter methods and rationale greatly. They base their instrument on the Flanders verbal instrument and matrix for the end purpose of completing an awareness unit, designed to make teachers more conscious of the nonverbal cues they employ and to introduce more nonverbal behaviors into the teacher's possible repertoire. The unit was completed successfully.

Only a short article reporting the development of the instrument and the field testing of the unit is available. As a result, some of the methodology involved in the setting up of the instrument is either not included or is nonexistent.

First, nonverbal behaviors were identified that are "...exhibited by a majority of teachers regardless of grade level and subject area," and are "...singular in meaning in our culture rather than related to any
individual style or personality." Just how these
criteria are met is not known in terms of Love and
Roderick's explanation. Particularly in the case of the
latter criterion, substantial investigation would be
necessitated to gain validity and reliability.

Further, this instrument, designed to record
nonverbal behavior, also falls into a system originally
designed for the evaluation of verbal behavior. Although
the original Flanders categories are paralleled or
eliminated or added to, nevertheless, adherence to an
originally verbal framework is maintained. (See
Appendices L, M.) As with other studies, the assumption
is that both the verbal and the nonverbal partake of the
same structure, a questionable basis for objective
measurement indeed.

Unlike other studies, with the exception of
Grant and Hennings and Civikly, the Love-Roderick system
assigns no positive or negative attributes to any
nonverbal behavior. There is, they explain, no
"...inherently 'good' or 'bad' except as it relates
to the goals of the individual teacher in a given
situation." In this respect, Love and Roderick
escape the evaluation-without-scientific-grounding so
perilous to other studies.
Morganstern, it must be noted, attaches positive and negative exemplars of each category (See Appendix N) in the Love-Roderick system, this according to the Gagne theory that positive and negative values must be assigned. However, Love-Roderick sources cited by Morganstern included no such positive or negative exemplars.

As one peruses the Love-Roderick instrument, (See Appendices L, M) however, one notes the use of subjectives (e.g., "deviant" in category 7) and the merging of and possible misplacing of behaviors. Why, for example, is "extends arm forward" placed in category #6 and "thrusts arm forward" placed in category #8? In addition, many possible teacher nonverbal behaviors, as Love and Roderick themselves point out, are not included. The fact that no vocalic, no artifactual, no environmental, and few proxemic nonverbal cues are included seems vastly limiting to the scope of the instrument.

Few other specifications as to the application of the instrument are given, except as it was used in the single field study with University of Maryland male and female, experienced and inexperienced teachers of elementary and secondary levels. Although students were not present, except that other teachers acted as "students,"
the researchers do not preclude the use of their instrument in "live" situations. When tallying nonverbal behaviors, on the basis of slides and video tapes, time slots of unspecified lengths are used; while tallying in "live" or practise situations, natural behavioral events, comparable to those of Galloway are employed.

This system is an event one. Each time a nonverbal behavior occurs, it is tallied once, regardless of the length of time it takes to complete. When the observation is complete, there is a record of the pattern of teacher nonverbal behavior, but not the sequence of that behavior.109

As to training of observers, the choice of subjects, the standardization of time, place, content taught, the introduction of carefully controlled cultural, racial or socio-economic variables, the context of the verbal system110 or any other scientific or quasi-scientific procedures, the development of the Love-Roderick instrument is lacking.

In doing their succinct study and developing their simplistic categories, Love and Roderick have no doubt developed an informal means of heightening the nonverbal awareness of teachers. It should, however, be used with the caution that it was never intended as an evaluative instrument. As such, it lacks the scientific data, the coherence of a thoroughgoing methodology and
the exact observation necessary to evaluative measures.

CHEFFERS-1973

"AN INSTRUMENT DESIGNED TO EXPAND THE FLANDERS SYSTEM OF INTERACTION ANALYSIS" - (CAFIAS)

Drawing on a wide range of educational publications and journals and on several simplifications of statistical methods books, Cheffers founds his system completely on prevalent educational methodology and theory, taking little of recent communications experimentation into account. Visiting Withall, Amidon, Flanders, Galloway, Bruner and Mosston in his literature search, he bypasses Mehrabian, Birdwhistell, E. T. Hall, Schefflen, Knapp, Ekman, and Sommer. Thus, largely bound by educational assumptions, he develops CAFIAS, Cheffers Adaptation of the Flanders Analysis System. (See Appendices O, P.) CAFIAS is an apt title, indeed, for it drops onto the verbal FIAS (Flanders Interaction Analysis System) a "nonverbal" application. CAFIAS is measured against the FIAS. The primary statistical method employed is a comparison of validity and reliability of the two instruments. Both use the three-second time sequence for at least twenty consecutive minutes (for four hundred tallies) of a class and so resultant matrices from FIAS and CAFIAS are presumably comparable. Such an extension of the verbal scale and the accompanying
assumption that the nonverbal system operates in largely similar ways to the verbal brings the advantage of simplicity and with it evident problems.

In fact, Cheffers widens the philosophical field beyond any used so far. No longer is the subject observed simply the teacher, the subject is now a three-role "diversification of teaching agency." (See Appendix Q.) Included are the class teacher (coded "."), (See Appendix O.) the other students (coded "S"), and the environment (coded "E"). Cheffers explains:

A philosophic change in the nature of precisely who is doing the teaching represented a major departure from the Flanders philosophy. The writer hypothesized that the sum total of all experiences which brought (sic, brings) about a relatively permanent change in a learner, overt or not, constituted (sic, constitutes) the teacher. If learning had occurred, (sic, occurs) then teaching had taken (sic, takes) place.

Notable here is the fact that of the five major instruments studied in this chapter, Cheffers is the sole one either to take other students into account or to define "learning." His philosophy is not borne out by his methodology, for he never studies his tripartite "agency" from the point of view of one single student. Nor does he institute a procedure in which "learning" gains, at least by students, are measured. Again, in Cheffers' system, "learning" is not in any way correlated with the
instrument's categories.

At the same time, the CAFIAS accomplishes a range of dynamics untouched by the FIAS categories. First, Cheffers omits, without comment, the "direct" and "indirect" influence categories present in FIAS along with their positive/negative implications. The assumption is not made that all "criticism" is harsh and negative; Cheffers allows for same in category "seven," indicating "hard" criticism and the "seven-two," indicating "soft" criticism. Though the distinction is subjective, at least the dynamic is included.

Second, the scale is designed to include nonverbals, coded adjacent to verbals in their "teen" equivalents. Note that congruent nonverbals to verbal "two" (See Appendix 0.) are coded as "twelve." Although this forces an equalizing of the verbal and nonverbal, it does allow for simple codification of both systems simultaneously. Further, as Cheffers points out, the scale could be extended, after proper study and experimentation, to the prefixes "two," "three," etc. In his verbal-alongside-nonverbal coding, Cheffers does not instruct for easy determination of incongruencies, double-binds, redundancy and so on. This researcher believes that such coding could be accomplished using a more refined and delicate "offshoot" of Cheffers' measuring instrument.
Too, in the nonverbal coding, Cheffers has distinguished between "facial" and "postural" systems, one of the few instruments to do so. "Bleeding" into these systems, however, is the vocalic in categories "12," "13," "15," "17," "18," and "19" and the proxemic in "12," "13," "14," and "19."

Cheffers' instrument also incorporates student response in his new "eine" and "eineteen" categories (See Appendix 0.) as well as student initiative in his "nine" and "nineteen" categories. Likewise, CAFIAS coding may be done in diversified class structures, unlike the FIAS (and others) which is used only in whole class instruction. For this, Cheffers adds the coding of "W," indicating whole class; "P," indicating part class or small group instruction; and "I," indicating "not influencing" instruction. (i.e., the teacher works apart from students, etc.)

Cheffers employs a sixty-by-sixty matrix as opposed to the ten-by-ten matrix of FIAS, making it possible to include all FIAS ratios and to add the following:

1. Percentage verbal-nonverbal interaction.
2. Percentage of class structure. Time spent as a whole (sic, ) in parts and/or without teacher influence.
3. ...percentage of teacher agency
variety and similarly (sic, similarity) to the verbal matrix.
Percentages of student teaching, environmental teaching and
teaching by the classroom teacher...

Missing altogether from Cheffers is provision
for cultural, racial, socio-economic variables or
provision for bodily and artifactual systems. Regardless
of inclusion, problems remain in his treatment of the
verbal, vocalic, facial, kinesic, proxemic, and environment-
al systems.

When one considers the provisions of his
instrument, one notes an odd "roundup" of kinesic,
proxemic and vocalic cues in each category. There seems
to be, for example, in category sixteen no distinction
made between:

- **Face:** Points with head, beckons with head, yells at
- **Posture:** Points finger, blows whistle, holds body erect while barking commands, push (sic, pushes) a child through a movement, push (sic, pushes) a child in a given direction.

What the differences are among any of the above cues is unclear. Why are "beckon[ing] with the head" and "yell[ing] at" joined in this category? Why could they not be at opposite ends of the spectrum just as easily?

Fascinating additions to methodology include:
fourteen-week observer-training sessions, use of
"expert" teachers for teaching observer-training sessions,\textsuperscript{121} two experimental groups,\textsuperscript{122} team coding and single coding,\textsuperscript{123} dual camera use—one focused on teacher-subject, one on student-subjects, split screening with simultaneous timing of teacher video-tape and student video-tape,\textsuperscript{124} results from six separate codings conducted on the same tape, a Physical Activity Questionnaire (PAQ) which distinguishes between the FIAS and CAFIAS,\textsuperscript{125} "blind" interpretations made solely on information received from either the FIAS or CAFIAS matrix, and control group interpretations from actual viewing circumstances.\textsuperscript{126} The final three procedures allowed for a "testing" of the FIAS and CAFIAS by means of administering the PAQ to the two "blind" interpreter experimental groups and to the control group. CAFIAS interpreters scored higher than FIAS interpreters.\textsuperscript{127}

Problems arise in the methodology in regard to camera position and coder recording instructions, and their nonadherence to Cheffers' philosophical diagram reproduced in Appendix Q. Although the classes taped were physical activity classes, Cheffers makes no mention of the camera's mobility nor of the dynamics of "panning," "zooming," and so on. It cannot be determined from the information given the degree to which the camera intrudes into experimental objectivity here. The split screening technique may have allowed for the indexing of a congruency
category, but none is supplied by the instruments. Split screening techniques were not validated; it is not certain whether one or the other side of the screen dominated coder attention during any or all of the tallying.

Although objectivity is supposedly provided for by Dr. Amidon and the investigator, who each acted as "expert" teachers to the training-observers, nevertheless one questions whether having the same person construct the instrument, teach both its use as well as the use of the instrument against which it is to be compared constitutes "blind" experimentation.

Finally, this researcher questions whether the higher scoring of the "blind" coders using one instrument against those using another instrument is a test of either instrument's capacity to interpret behavior, verbal or nonverbal. Could those scores not indicate the intelligence, clairvoyance, or adaptation of related knowledge on the part of the observers and questionnaire respondents? Could the scores indicate the SUPERIOR LACK of accuracy of the CAFIAS?

Cheffers has, however, provided a system using new techniques. It is an advancement in that sense alone. It is, more than that, a feasible and efficient instrument for coder use. The multiple coding system used by Cheffers to hold the verbal and nonverbal in combination
could perhaps be refined and extended to other systems. With more experimentation in the communications field and with greater development of technical resources, full implementation of multiple coding may become available.

CIVIKLY-1973

"TEACHER NONVERBAL COMMUNICATION CODING SYSTEM" (TNVCC)

With a firm background in communications and nonverbal research techniques, Civikly embarked on a two-stage research project in teacher nonverbal behavior. One, experimental in design, employed three separate thirty-minute video-tapes of a trained teacher-actor delivering identical lectures from the a.) stationary, b.) physically active, and c.) incongruent (i.e., verbal and nonverbal channels were contradictory) conditions. Lectures dealt with Kuhnian theory. A twenty item multiple choice post test following the lecture measured cognitive achievement and a subjective test indicated affective responses. Primary hypotheses were not supported in this stage of research.

Unrelated to the above is the second stage, descriptive in approach. Since this stage develops and validates a coding system for teacher nonverbal communication, The Teacher Nonverbal Communication Coding System
(TNVCC), it is the focus here. Like Love-Roderick, civikly makes no assumption that nonverbal behaviors are either positive or negative. Behaviors are simply listed beside a matrix for coding. (See Appendices R-I and R-II.) Since behaviors are linked to nothing but an overall heading, one makes no conclusion about the effect of teacher nonverbal communication provided on the basis of the form. The matrix does, however, provide ratios for: frequency of one nonverbal behavior to another, frequency of one subheading of nonverbal behavior to another, frequency of personal acts to instrumental acts, and unspecified acts to specified acts. Civikly does not investigate these ratios. 128

As Civikly mentions, there is no provision for the dimensions of eye contact, proxemics, or touch. 129 Further, verbal, artifactual and environmental influences and cultural, racial, or socio-economic contexts do not appear. However, the "others" category does provide for "write-ins" of any unlisted teacher behaviors. (See Appendix R-I.)

As in some of the earlier studies, the use of "natural behavior segments" evokes questions regarding coder objectivity. Civikly does add some useful methodology, however. A sequential record is constructed in the process of coding. Coders number the first
behavior as "1" in the appropriate block (instead of checking the block), "2" for the second behavior and so on. Simultaneous acts are "repeats" of the number, as in:

- walks across room 2
- waves arm 2
- shrugs shoulders 2

or closely-occurring behaviors are coded by like prefixes and sequential suffixes as in:

- walks across room 2-1
- waves arms 2-2
- shrugs shoulders 2-3

An extended behavior is coded by an encircled number as in:

- paces 3

Such systematization provides for examination of behavior sequences, behavior clusters, and long-term behaviors. Along with the ratios mentioned previously, these could provide a teacher with some idea of how predominant specific behaviors are, how lacking others are, and how patterned still others are. This could be accomplished, of course, without evaluative labelling.

Other than the above, there is little new or exciting in the TNVCC. Four trained observers, working in teams of two, coded four five-minute long video-tapes of four college lectures using Civikly's instrument. Details of training, coding, lecture conditions and coding
conditions are barely discussed in her thesis.

After coding is completed, however, Civikly adds a new step. Coders, upon completing the matrix, answer the "Semantic Differential." (See Appendix S.) Civikly reports that not only is the coding system valid, but also that the completed matrices and semantic differential are "consistent."\textsuperscript{131}

In this, Civikly supplies another approach to teacher nonverbal communication. It is one that is no doubt more compatible with the work of Birdwhistell and Hall than the earlier studies. The TNVCC specifies behaviors and reveals a great deal about the frequency, clustering, duration, and relative placement of these behaviors in the lesson. With refinement, such an instrument might include a greater range of behaviors and systems. With continued research, it may be possible to let these behaviors be evaluative in nature. When and if research determines more about verbal/nonverbal interactivity and student/teacher dynamics, an expanded TNVCC may be capable of considering such influences also.\textsuperscript{132}

Of the five instruments covered in this chapter, the TNVCC is perhaps the most scientifically objective one. It is, at the same time, the least evaluative one.

In use, it must be borne in mind that none of these
five instruments is intended by its constructor to be an "end-all" in the study of teacher nonverbal communications. Each was designed as a step in a struggle toward an essential end. And that end has more to do with the heightening of human awareness than any mere compilation of categories or completing of matrices could ever suggest.
CHAPTER III
MINOR INSTRUMENTS

In addition to the measuring techniques covered in Chapter II, there are a number of smaller studies that are scantily reported, sometimes without the inclusion of evaluative instruments. In some cases, these deal with "fuzzed-together" verbal/nonverbal behaviors, as in Medley and Mitzel. In others they involve nonverbal behavior alone, such as with Grant and Hennings. Most do add a new perspective, an interesting innovation in methodology or another facet in instrumentation. Most do not provide sufficient information to merit an extensive critique, however. Researchers may find in them serendipitous clues.

MEDLEY AND MITZEL-1958
"OBSERVATION AND SCHEDULE RECORD" (OScAR)

In an attempt to reach unbiased, objective and interpretable results, Medley and Mitzel devise OScAR, a verbal/nonverbal evaluative scale. The experimenters show the fallacy of early scales and contend that the evaluative rater actually intervenes with his own subjectivity.
between the teacher's behavior and the teacher's "score." Subjectivity, they go on, is a condition produced by instrumentation. 133

In order to prevent such an intervention, Medley and Mitzel set up an evaluative technique composed of two parts. The first part involves an observer who lists teacher and pupil cues. Forty-four "activity" behaviors such as "teacher laughs" or "teacher works with individual pupil" are included. A similar procedure is followed for "materials" behaviors and "subject" behaviors. The second part involves the clerical task of assigning weights to the already-recorded teacher and pupil behaviors. The latter must be completed by someone other than the initial observer. 134 Separation of the two procedures gives reliability.

Medley and Mitzel find the advantages in a bi-fold technique to be: the shorter time needed for observer-training, increased capacity and variety for instrument categories, greater statistical reliability between initial observers who record at separate class sessions. 135

Although OSCAR is used to measure verbal content and social structure, it may also be used to measure "socio-emotional climate," according to Galloway. 136 Items in OSCAR's "Signs Section" do tend to indicate
classroom climate. Categories indicating "pupil moves freely" or "teacher shows affection for pupil" are socially-oriented ones. Such ratings as "manifest teacher hostility" do incorporate nonverbal responses.

Despite the subjective ratings above, Medley and Mitzel have provided a crucial step toward scientific objectivity in evaluating teacher nonverbal behavior. The unique two-phase-listing-and-weight-assigning observational procedure that they advocated in OSCAR is yet to be developed.

PERKINS-1964

"A PROCEDURE FOR ASSESSING THE CLASSROOM BEHAVIOR OF STUDENTS AND TEACHERS"

Perkins adds several innovations to classroom behavior assessment that better teacher and student observation. (See Appendix T.) Again, his procedure covers both verbal and nonverbal behavior. Fifteen student behaviors and seventeen teacher behaviors make up categories for observation. The similarities of teacher categories one through ten to the Flanders system are obvious. (Compare Appendices T and B.) It is true that more behaviors are incorporated by Perkins' instrument than by those of Flanders or Love-Roderick, yet here the nonverbal and verbal merge into one indistinguishable blend.
Two significant developments in methodology are notable, however. First, use of television cameras mounted in the classroom wall and operated by remote control eliminate the need for both observer presence and "fixed" camera stations. Second, a Bales-Gerbrands recorder, "...an electrically powered machine that moves tape (paper on which categorizations are recorded) at a constant speed" enables the "...duration of each behavioral response to be accurately measured." Simultaneous recording of teacher and student categories by this means permits "pattern and sequence analysis."

Using this methodology in his study, Perkins shows differences between achiever and underachiever social contacts and involvement in learning activity. Here, he makes an attempt at an application to measurable "learning" and "interpersonal gains."

Some further research employing more strict definitions of "verbal," "nonverbal," and "behavior" might be accomplished using a dual measuring technique, remote control television cameras, a timed-tape instrument or a "learning" variable.

SCHUSLER-1971
"TEACHER AND PUPIL COMMUNICATION, NONVERBAL" (TAPCO-N)

The Teacher and Pupil Communication, Nonverbal
examines generalized feeling of a pupil toward his teacher and that teacher's estimates of his pupils' (i.e., teacher-directed) feelings. Pupils indicated responses to nonverbally presented "stick figure teachers" on a chart of adjectival dichotomies (e.g., "friendly" or "unfriendly") and teachers projected their pupils' responses in turn. A perception discrepancy scale (PDS) emerged from the comparison of the two scores. The Edwards Personal Preference Schedule (taken by teachers) scores were correlated with PDS with varying results.

Despite methodological problems, such as the "either-or" set up of the adjectival dichotomies chart, there are major contributions here. Schusler considers the range of interpersonal needs and priorities; he takes into account a "Laing-ian-like" perspectives issue; he confronts the problem of relationship-building in the classroom. Schusler's is a modest beginning to measuring actual classroom experience.

Koch, acting as consultant in systems' analysis, contends that observing nonverbal communication in classrooms contributes to assessment of a school's social system. Raw data regarding teacher behavior is gathered by an informal observer having no technical equipment. Although
interesting in anecdote, Koch's system (See Appendix U.) can hardly be termed objective. Note the use of evaluative phrases in the instrument such as "aloof, bored, disinterest" in the "Molar Impression" category. Such an entry calls for subjective judgment on the observer's part.

Informal and easily completed, this instrument would perhaps be of limited use to the expert in nonverbal communications who is fully aware of the complexity of classroom behavior. On the other hand, its lack of validation and its oversimplification are too symptomatic of the subjective and inaccurate tendencies so prevalent in teacher evaluation. Dangerous in the tenure/jobs market arena, such an instrument could too easily be employed to Machiavellian ends.

On the other hand, Koch's consideration of student-initiated activity, student input, and the like are unusual in that they make possible inferences as to student self-actualization in the classroom.

GRANT AND HENNINGS-1971
"CATEGORIES OF INSTRUCTIONAL MOTIONS"

In their renowned book, The Teacher Moves, Grant and Hennings provide a bare three categories of instruction for use in teacher nonverbal measurement. (See Appendix
v.) "Conducting," "acting," and "wielding" are defined and subdivided, but never associated with evaluative criteria nor with a methodological system.

Rather than a feasible category system, Grant and Hennings provide a philosophical approach. Every teacher, they contend, has his/her own unique nonverbal style; it is neither positive nor negative in itself. Each teacher can likewise learn to self-evaluate, add to his/her nonverbal repertoire, and produce "...sequences of motions that add to rather than detract from his verbal teaching." 142

With this as philosophy, it is not surprising that Grant and Hennings posit that nonverbal behavior can be evaluated solely within the frame of its context. At the same time, they give the field no means, except by vague allusions to the difficulty of contextual research, 143 of accomplishing measurement within contextual settings.

PARKER AND FRENCH-1971

"THE STUDENT BEHAVIOR INDEX" (SBI)

After considering the development of instruments for measuring teacher behavior, Parker and French assume a new stance, seeing a need now to study student verbal and nonverbal behavior. 144 (See Appendix W.) Although obviously based on the Flanders scale (Compare Appendices W and B.) and partaking of its misperceptions and miscon-
ceptions (as discussed in Chapter II,) it is nevertheless a development that bears mention. Again the student is incorporated, as with Perkins, into the dynamics of classroom behavior. Again pattern analysis and sequence analysis are possible using the SBI.

Moreover, because of its similarities to Flanders Interaction Analysis and French and Galloway's IDER, the student Behavior Index can be employed in multi-dimensional classroom analysis. All three approaches use ten categories; all use ten-by-ten matrices; all use similar time lapse techniques; all use similar methodological set-ups.

A possible development of student and teacher nonverbal categories added to the FIAS, IDER, and SBI, perhaps similar to that of Cheffers, may be feasible at this time. For those already committed to Flanders, multi-dimensional analysis may fill a gap.

French and Parker emphasize the importance of "self-directive" behaviors and the need to develop students' self-generating behaviors saying:

> We have made some frightening assumptions about student behavior. We consider a student well-behaved if he is quiet. Silence becomes the first distinguishing mark of a successful pupil.145

French and Galloway's expansion of the Flanders system.
Here, category "two" ("Self-Initiated Nonverbal Behavior") brings to bear the issue of student self-actualization upon classroom behavior.

Although limited in scope, the innovations and perspectives offered by these researchers, when added to those of Chapter II, offer a scattered-paradigmatic view of the field. No one standard dominates. The "crisis" necessary for an emergent scientific revolution prevails.\textsuperscript{146}
CHAPTER IV
PROBLEMS IN CURRENT STUDIES

Problems encountered with measures of teacher nonverbal behavior obviously run throughout the scanty number of studies available. As expressed previously, such difficulties take many forms and appear in recurring instances. No doubt they are manifestations of difficulty accompanying any field's beginning research. There may also be a conflict of paradigms prior to an advanced consensus of hypotheses and agreement as to proper methodological procedures.

At the same time, much remains that needs pursuit both in depth and in breadth in the study of teacher nonverbal communications. In this chapter, a review will be made of those problems symptomatic of the quasi-nonverbal and wholly nonverbal measures and evaluative procedures. The review will include the difficulties of theoretical conception, definition of terms, instrumentation, methodological procedures, and applicability of outcomes.
NOTES ON PRESENT USE OF NONVERBAL MEASURES

At the present time, there is no reason to think that evaluative measures of teacher nonverbal behavior are used in significant instances. Although reports indicate the Verbal Interaction Analysis is used both at the university level and at the school district level,\textsuperscript{147} there are no wide reports of the same for Nonverbal Interaction Analysis. Rather, there is some advocacy for the use of nonverbal evaluative measures at this time and insistence upon the importance of the nonverbal in the classroom by those such as Galloway, Victoria, and Cheffers.\textsuperscript{148}

Part of this may be due to the lack of service given by the communications field to the field of education. Perhaps there is consequent oversimplification of and misconception about nonverbal phenomena and how they operate. Civikly, with Medley and Mitzel, rise from the communications field to meet relevant problems in education. Most of the other researchers are educators investigating nonverbal communications for clues capable of solving classroom problems.

Other than those recent graduates and teachers presently training or updating skills in "enlightened" departments of education, there are few teachers who
have studied the field beyond a cursory glance at Julius Fast and the "glosses" available in current periodicals of education.

For teachers who seek training, there is little available. Few education-communication courses are presently offered. The literature available is at best difficult-to-compile, ill-defined, and contradictory. Often it is so technical as to be unmanageable for the classroom teacher untutored in statistics and experimental procedures. Teachers who make the effort may find that they are bogged down in the "bits and pieces" of laboratory research not useful to them in their rich, complicated and demanding world of human interaction.

If one puts himself/herself in the "shoes" of the teacher, who is pressured from all sides, who must meet conflicting demands, who is expected to get "results," and who is so often on the defensive, one may readily recognize that the teacher is not likely to "play scholar" in the communications field.

Yet the "translator" of scholarly material regarding nonverbal phenomena hardly appears to address the teacher's needs; when he does, the material is so brief and unspecific that it provides somewhat superficial and non-informative material.
And the teacher and the student in their human dynamics interact in a society that itself is impoverished:

In modern urban society, unfortunately, people have allowed the foundations for their extravertual systems to become unused and dulled, but it is possible for them to regain the use of their senses and to enter into a richer interaction with the environment and with other human beings. One price mankind may pay for his technologies is the dulling of sensual abilities, including kinesic, tactile, and proxemic capacities. Because we don't perceive well, we shut ourselves off from our environment, from other creatures and ultimately from other human beings. But there are already signs of modern man's unwillingness to live partially aware of the signals that other creatures send out, in a world where sensual awareness is dulled and stunted.

PROBLEMS IN INSTRUMENTATION

Arising from the analyses in Chapters Two and Three of this thesis are several fairly characteristic problems of instrumentation. The fact that many of the nonverbal measures are based on earlier categories forces them into nonverbal assumptions. Further, many of the instruments, even the multi-dimensional ones, assume that the verbal and nonverbal are equally-weighted across all categories. Comparison with communications research calls such equality into question.
Definition of terms constitutes a major stumbling block, also. Some writers such as Galloway and Cheffers define behaviors in such a way as to make them overlapping. Others, such as Victoria, define categories in such complex terms as to make them somewhat unintelligible.

Moreover, behaviors are in some instances listed in subjective terms. The presumably objective method is thereby undercut. Evaluative rating of "direct" or "indirect influence" or of "positive" or "negative" behaviors is, as discussed earlier, not wholly supported by valid and reliable data.

Even continuum ratings, as in Galloway and Civikly, are based on highly subjective terms. Although more variation of attitudes toward behaviors can presumably be reflected, there is still the question of whether judges (or students) accurately deal with gradations of dichotomies. In fact, when measuring by continuum, one may well be reflecting individual perception rather than the "observed" behavior.

Several of the multi-dimensional measures show deference to the verbal system. Among them are Cheffers' CAFIAS, Galloway's adaptation of his system of Flanders, Medley and Mitzel's OSCAR, and Perkins' instrument. Victoria, Civikly, and Love-Roderick refer to the importance of verbal interaction but do not attempt to
include it in their measures.

These instruments are intended by their makers to structure limited assessments of classroom behavior. When used properly, they may provide indications of teacher nonverbal behavior. But gross categories in them are not capable of accurately representing the richness and complexity of nonverbal experience.

Rarely do the writers provide succinct understandable "directions-for-use." Should well-meaning school officials or administrators "stumble" upon such instruments and use them improperly, teachers could be alienated from their use.

Beyond all this is the issue of the various measures' appropriateness to the following uses:

- teacher self-evaluation
- student and teacher mutual evaluation
- administrative evaluation of teachers
- study materials for use in teacher training
  and/or education courses
- current research being completed in the laboratory and in the field

It would seem obvious that few, if any, of the evaluative measures could simultaneously meet all these demands.
Student and teacher mutual evaluation would require practicality and easy understandability such as Perkins' instrument provides, while current research would require measuring capacities for complex behaviors such as Hall's notation system might offer.

PROBLEMS IN METHODOLOGY

The methodology employed in these studies raises an equally perplexing problem. Should a macroscopic evaluation which would give some imprecise indication of teacher behavior and its possible effect on students be done? The derivatives of the Flanders scale do give such a global view with inherent ease of measurement, but they end with murky non-specific results. Or should microscopic evaluation which would give particular data as to teacher-student interaction be initiated? This "brand" of measure, as Civikly's tends to do, gives specific, sharp results that are somewhat difficult to generalize.

With a qualitative measure such as Galloway's, we are left with no quantitative proof and few provisions for "blind" experimentation. When strictly quantitative judging is done, as with Civikly, we are left with no decision as to qualitative effects.

Central to methodological problems is the omission
of the student from most measures either in categorization or in feedback. The Perkins and Parker-French instruments provide for student incorporation into the communication model and run counter to the early trend.

Since teacher behaviors are measured by many of the instruments as isolated phenomena, most behaviors, whether coded by a time slot of three or five seconds, or by a "natural segment," are measured in exclusion of other surrounding behaviors. The tendency to omit study of "cluster" or "sequence" behaviors could lead to an over-simple cause-effect explanation of complex behaviors. Another major reduction of instrument capability occurs in that few are able to deal with incongruent simultaneous behaviors and/or words, and that few are even capable of measuring redundant behaviors and/or words. None has been used to these ends.

Neither is the variability of context taken into account in many of the methods used in these studies. Little is provided in regard to age, sex, race, culture, and socio-economic contexts against which these measures are made. In some cases, the actual environment of class size, lighting, window size and placement, decoration, and furniture arrangement, all so inherent to the nonverbal, not even taken into consideration. Classroom contexts are not held constant by methodological stipulations; yet
they are not considered variables in the experiment either. In addition, no provision is made for intentionality as a contextual influence in any of the studies examined herein.

Most experiments make use of limited subjects, limited samples, and few studies of reliability and validity. Parts of the instruments, training of judges, judges' coding, etc. are not always tested for reliability and validity.

With such problems as above prevalent in the conception, construction and methodological procedures of teacher nonverbal measures, it must be admitted that this still-young field is struggling. The enormous potential of the nonverbal in the classroom, tapped only at scattered sources, may be fully discovered by a future instrument.

GENERAL RECOMMENDATIONS

Much in the way of general changes and additions needs to be suggested at this time. At the university level, inclusion of nonverbal theory courses in the education curricula, of communications courses for teachers, or even of general communications courses may stimulate greater awareness. Also, the institution of awareness-raising in-service programs at local and university levels may help develop a greater tendency toward
nonverbal self-evaluation. Television courses, videotape units and cassette lessons might be helpful in accomplishing the same. Also feasible are the introduction of video nonverbal self-analysis techniques and appropriate measures that could be employed with a "buddy" system format. Using cassettes and the same approach, a team could provide feedback as to vocalic phenomena.

More than that, the professions associated with creating certain aspects of the nonverbal environmental world need to be made aware that they are doing so. City planners, architects and school boards engaged in setting up schools and their environs should be made aware of the components of space, color, light, texture, material, and so on as they affect communicative potential. Some investigation as to furniture, accessories, clothing, cosmetics and hair style as related to nonverbal dynamics should be instituted.

Finally, some incorporation right into the classroom of communications units could be made exciting and viable in both the secondary and elementary schools. Strother and French both advocate such units and this author herself considers units taught at the high school level quite provocative and successful.152
In addition, some investigation as to the development of teachers' models may be undertaken. It is possible that sample video-tapes could be made which demonstrate and provide commentary on interacting in:

- nonverbally "noisy" environments
- meager feedback situations
- double bind circumstances
- redundancy circumstances
- spiralling reciprocal events
- meta-communicative events

The emphasis in such a "model" would have to be toward the recognition of and the dealing with such situations rather than on rote, pre-packaged behaviors.

Known techniques of manipulating the environment for positive interactive influence should be collected. This could cover the effects of seating arrangements, pictorial influence, light and color influence and so on.

In order to deliver such materials to the working teacher, a vehicle such as a pamphlet series, a tape-slide unit or units, video-tape unit or units or programmed packets is needed. In addition to the above, a work designed specifically for teachers could overview the consensus of studies conducted in the nonverbal field to date. Most of all, such a work might concentrate
on introducing useful easy-to-remember guidelines for nonverbal interaction such as:

1. The most accurate communication occurs when verbal and nonverbal symbols are consistent.

2. The visual communication system conveys substantially more affective information but less overall information—less factual information, and less information about personal traits other than emotional or interpersonal ones—than verbal or vocal communication.

3. When different communication systems interact in the congruent state, nonverbal communication systems represent the dominant source of meaning.

4. The facial-vocal combination of conveying emotional messages is more accurate than the vocal, gestural or gestural-vocal modes.

5. The nonverbal systems of communication seem to be far more effective than the verbal in building empathy, respect, and a sense that the communicator is genuine.

6. When communication cues are transmitted simultaneously, the different channels acting together have a compensatory and additive effect.
CHAPTER V

FUTURE STUDIES IN CLASSROOM NONVERBAL COMMUNICATION

On the basis of the preceding analysis and evaluation, and congruent with the general recommendations set forth in Chapter Four, specific recommendations may be made as to:

Instrumentation
Methodology
Future Research

Although certain of the recommendations may not be feasible at the present time for lack of financial resources, most of the research tools and methods cited herein are currently available. All in all, these recommendations are made with the following assumption:

...researchers are seeking communication rules concerning types and contexts of communication behavior. They are less concerned with the meaning attached to a particular behavior by a judge or a group of judges.156

RECOMMENDATIONS FOR INSTRUMENTATION

Limited recommendations for the creation of an improved instrument for classroom nonverbal evaluation

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may be posited tentatively at this time. The following recommendations are made with insistence that careful step-by-step tests of validity and reliability be established.

What is conceived of by this researcher and what has been suggested by Cheffers and been initiated by Perkins and Parker-French is the construction of a multi-dimensional instrument. This would be composed of several smaller instruments, each of them capable of measuring a component in the classroom communication process. "Sub-instruments" measuring individual student nonverbal and verbal behavior, teacher verbal and nonverbal behavior, environment, school context and community environment would be included.157

Investigation as to the feasibility of studying the vocalic, proxemic, kinesic, artifactual and environmental systems in separate categories or even separate "sub-instruments" needs to be made. Overlapping of and duplication of these systems among categories as done in CAFIAS or in Love-Roderick's instrument are not recommended. Thus, if it proved feasible to create "sub-instruments" for each system, as many as twelve "sub-instruments" would make up the "master" instrument.*

Modalities in each would provide for contextual study. For example, questions about a student's age, *Twelve possibilities are mentioned in this paragraph and in the paragraph above.
race, sex, prior schooling, cultural and socio-economic background would be posed. Similar questions would be relevant to the other "sub-instruments" in order to achieve thoroughly contextual study. Incorporation of subject/participant observation should be made to provide for intentionality/inference/perception input. Extensive study of the weighting and interactive dimensions of each of these instruments would need to be accomplished. Validity and reliability figures for mathematical ratios to be used in the assignment of weights would be required.

The setting up of "sub-instruments" in itself would prove advantageous. By the means of the multi-dimensional and parallel "sub-instruments," analyses, with established ratios, of incongruent, double-bind, and redundant "messages" could be made. Individual "sub-instrument" use, combination of "sub-instrument" use, and "master" instrument use would allow for hand categorizing and recording (by informal means) in financially limited situations. Teachers and/or students could "buddy" to accomplish categorization and "hand-toting." A particular teacher and individual student might use the system for informal mutual feedback. Informal use could be made of the "master" instrument or the "sub-instruments" in communications units or courses, particularly at the secondary school
and college levels.

In-service sessions of a half-day or a day's length could employ a "sub-instrument." If a series of meetings were scheduled, individual meetings could be devoted to the mastery of each "sub-instrument's" uses, finally culminating in the employment of and interpretation by the "master" instrument. Such a procedure would allow for a close look at each of the communications systems operating in the classroom as well as an overview of the broader communication process.

At the same time, study of a department's, school's, or possibly even district's communication process might be undertaken. "Spot" problems in communications could be evaluated, as long as completed in view of contextual qualifications. Advocacy of behavior alterations are envisioned as being from fully participatory sources. For example, in the aftermath of a school's riot, evaluation should be undertaken with all parties participating (i.e., school board, superintendent, administration, teacher and student). Otherwise, an outside impartial investigative or consulting team is advisable.

Feasibility as to the writing of a computer program for use in widespread studies should be undertaken in association with the above.
RECOMMENDATIONS FOR METHODOLOGICAL PROCEDURES

In addition to the former allusions to methodological procedures, the following need to be considered during the course of instrument-development.

"Blind" experimentation should be carried on. Validation studies must be conducted on all segments of instrumentation by application of criteria of already known reliability and validity.

Further determination of validity of those segments should be made by applying those segments to various samples of students, teachers, schools, districts, etc.

Possible objectives for classroom interaction, including learning of factual information, interpretative skills, subjective evaluation and interpersonal skills should be entered at some point as variables in experimentation.

Definition of units of measurement should be made, with the theoretical background of processive, sequential, and cluster acts incorporated in that definition.

Validation of questionnaires, continua, etc. of inference and intentionality should be accomplished. Use of attitudinal continua
may be considered here.

Questionnaires regarding age, sex, race, cultural, and socioeconomic backgrounds of participants should be carefully constructed.

In experimental procedures, constancy of setting should be used as a control, except when defined as a variable.

Multi-observer coding should be used to guard against individual bias.

Multi-occasion and random-occasion coding should be employed to guard against intrusion by factors of fatigue, hunger, etc.

Two stage coding is recommended:

a) Factual observation at tallying level should be accomplished.

b) Later inference at the evaluation level should be done (as valid and reliable experimentation indicates). The inferential or "...connotative approach to nonverbal communications should be grounded in the empirical finding that there are certain dominant 'dimensions' of meaning which best describe a behavior."
Use of multi-observational taping on simultaneous "bands" is recommended. Verbal, vocalic, kinesic, etc. would be held in separate "bands" of a comparative tape. (See Appendix X.)

Validation of judges' training techniques should be made. Drawing up a judges' training packet for use in informal settings might prove helpful.

Studying the degree of accuracy available in judges' ratings is advisable. Testing informal "global" analysis techniques against the instrument should be done. (See Appendix Y for a sample of Knapp's global technique.) Side-by-side use of this technique with the master instrument may prove useful in some situations.

Study of objective and non-intrusive video-taping techniques should be made. Possible are:

a) Hidden "porthole" cameras. (That subjects have knowledge of but no advance warning of monitoring times. This is done on the basis of research indicating that "forgetting" is a factor that normalizes subject behavior.)
b) Several fixed cameras employed. Close-ups of both "senders" and "receivers" would be video-taped simultaneously. 161

c) Use of split-screen techniques for viewing and coding "sender" and "receiver" simultaneously.

d) Use of uniform lens opening.

e) Use of constant camera angles.

f) Guidelines for video-tape playback and "fast-forward" techniques.

g) Use of computer to facilitate compilation of specific behaviors. Already available is the following:

The computer can be instructed to find the first frame in which a particular action occurs, to search for all similar events, and to record them, in succession, on a separate video tape. 162

"Process units" of behavior should be defined:

The principle is the same whether we are classifying verbal or nonverbal communication. We should separate one behavior from another only when we can clearly associate a separate meaning with each behavior. For example, observers who classify verbal behavior often use the sentence or even the work as their recording unit. Their observational focus tends to be too narrow. 163
Solving the quandry as to how to retain validity and reliability yet achieve the broad observational focus remains our dilemma.

FUTURE RESEARCH

Many of the former recommendations rest on research yet to be completed. Obviously, studies of teacher nonverbal behavior have been insufficient to answer all demanded of them. Now the pooling of available information and the further refinement of techniques for the observation and analysis of teacher nonverbal behavior constitute significant challenges to the field.

Among the challenges still to be met are:

The testing of whether non-classroom experiments are applicable to classroom situations. (For example, is psychiatric research applicable to the second-grade classroom?)

The discovery of how and why values get assigned to behaviors.

The study of complex cause-effect behavioral patterns and sequences.

The study as to perception and its influence on nonverbal communication.
The study of the correlation of self-esteem with perception.
The study of self-actualization and its causes and effects vis-a-vis nonverbal behavior.
The study of the influence of artifactual, cosmetic, dress, and body appearance on classroom behavior.
The study of architectural and decorative features on classroom nonverbal communication.
The study of class and school population as related to behavioral "modes."
The study of physiological influences on nonverbal behavior including metabolic, neural, digestive, etc. abnormalities. (Of particular mention here are the influences of diet and medication.)
The study of length of teacher experience as it affects or does not affect nonverbal behavior. (e.g., numbers of cues used, types of cues used, idiosyncracy of style, etc.)
The study of the range of teacher nonverbal communication appropriate to different age levels, or accomplishment levels
(i. e., "gifted" as opposed to the "learning handicapped.")

The determination of teacher nonverbal behavior appropriate to instructional "modes," (i. e., question-and-answer sessions, small group discussions, board work, quizzes, creative play, participation, "quiet" seat work, etc.)

The determination of whether particular behavioral "units" are more appropriate to one subject than another. (e. g., Are the behaviors effective in physical education workable in the math class?)

The determination of duration of retention and importance of students' perceptions of teacher nonverbal behavior.

The study of classroom nonverbal behaviors supportive of "cooperativeness."

The study of awareness-raising and nonverbal training and its correlation with learning, cooperativeness, etc.

The investigation as to how an instrument measuring nonverbal behavior may be used at graduate and post-graduate levels as preparation in such professions as business, banking, law, law enforcement, general medicine, dentistry, surgery, etc.
SOME FINAL NOTES

Central to the crisis-of-paradigm state that nonverbal communications occupies is the problem of theoretical conception at its core. Although the coexistence of such competing paradigms as Birdwhistell's notational system and Scheflen's anecdotal work stimulates discussion within the field, it nevertheless tends to disperse the theoretical view presented to those "outside" the field. If communications people are to view themselves as resource people, as "consultants" to other fields, they must provide an accurate understandable approach.

The conflict and vagueness of paradigms is evidenced by the instruments studied herein. Those such as Galloway, Victoria, Love-Roderick and Cheffers have grasped the impact of teacher-student nonverbal interactions, but have by no means turned out instruments that are both useable and accurate. Thus, from the inaccuracy and inadequacy of our own discipline rise the shortcomings of these very studies.

Even the views presented by this writer are undercut by philosophic concerns. Suppose teachers "know" all the "proper" nonverbal moves? What then? Suppose an instrument of adequate reliability and validity should be developed? Would it "answer all?" Can the multitude of variables influencing classroom interaction ever be "covered?" If the
perception of the "receiver" is taken into account, are we then dealing with an unmeasurable "'n' of one?" If an instrument were to provide for the intentionality of the "sender," what would be the results for nonverbal research?

These are more than passing problems. Although almost global expectations are entertained in this thesis, the final emphasis must be placed on general and "workable" trends. Along with the raising of teacher and student awareness should come the mutual "learning" of empathy, the development of metacommunicative skills, the understanding of needs, and the openness to human interaction. Before teachers "wrestle" with verbal or nonverbal instruments, they first need to be Rogerian, Bernian, and Jourardian.

Nevertheless, the authors reviewed in this thesis have, like modern "Johnny Appleseeds," scattered seed on fertile ground. It is both in further experimentation and in refinement of communication skills that trees will grow and flower. Perhaps then, all the communicators who have together provided sufficient awareness of nonverbal dynamics will give the teacher a "modern-day apple."


10 Ibid, p. 301.
FOOTNOTES (continued)


14 Victoria, "Development of a Typology...," p. 5.


20 Victoria, "Development of a Typology...," p. 130.

21 Ibid, p. 130.

22 Grant and Hennings, p. 6.


FOOTNOTES (continued)


26 Ibid, p. 64.
   See also Kehoe, pp. 184-185.


29 Leathers, p. 9.


31 Ibid, p. 4.

32 Ibid, p. 5.

33 Ibid, p. 5.

34 Ibid, p. 6.

35 Victoria, "A Language..." p. 300.

36 Leathers, p. 7.

37 Victoria, "Development of a Typology..." p. 5.


40 Galloway, "An Exploratory Study..." p. 40.
FOOTNOTES (continued)


45 Saral, p. 480.


47 Ekman, "The Universal Smile..." pp. 35-36.

48 Boucher and Ekman, p. 21.


52 Saral, p. 486.


58 Kaplan, p. 60.


61 Mehrabian, "Orientation Behaviors..." p. 324.


65 James M. Seals and Peter A. Kaufman, "Effects of Nonverbal Behavior on Student Attitudes in the College Classroom" (The Humanist Educator, Vol. 14, no. 2; Dec., 1975), p. 53.

66 Ibid, p. 53.
FOOTNOTES (continued)


69 Mehrabian and Friar, pp. 330-331.

70 Mehrabian, "Relationship of Attitude...," pp. 26-30.

71 Mehrabian, "Orientation Behaviors ...," p. 324.


73 Victoria, "Development of a Typology...," p. 22.

74 Mehrabian and Friar, pp. 330-331.

75 Mehrabian, Silent Messages, pp. 1-23.


77 Eugene Sherman, "Listening Comprehension as a Function of Proxemic Distance and Eye-Contact," (Graduate Research in Education and Related Disciplines, Vol. 7, No. 1; Fall, 1973), p. 46.


FOOTNOTES (continued)

81 Galloway, "An Exploratory Study...," p. 72.
82 Ibid, p. 40.
84 Galloway, "The Challenge of...," p. 313.
86 Galloway, "Teaching is Communicating...," p. 12.
87 Galloway, "An Exploratory Study...," p. 70.
88 Ibid, p. 76.
89 Ibid, p. 70.
90 Ibid, p. 70.
92 Galloway, "Teaching is Communicating...," p. 13.
93 Victoria, "A Language for...," p. 300.
94 Ibid, p. 300.
95 Victoria, "Development of a Typology...," pp. 4-5.
96 Victoria, "A Language for...," p. 301.
97 Victoria, "Development of a Typology...," p. 124.
98 Ibid, p. 117.
100 Victoria, "Development of a Typology...," p. 54.
FOOTNOTES (continued)

103 Victoria, "Development of a Typology...," p. 128.

104 Ibid, p. 73.

105 Ibid, p. 119.


108 Morganstern, pp. 16-17.

109 Love and Roderick, p. 296.

110 Ibid, p. 296.


112 Ibid, p. 44.


114 Ibid, p. 18.

115 Ibid, p. 22.


117 Ibid, pp. 22, 32.

118 Ibid, p. 41.

119 Ibid, p. 35.

120 Ibid, p. 46.

121 Ibid, p. 47.

122 Ibid, p. 43.
FOOTNOTES (continued)


124 Ibid, p. 49.
125 Ibid, pp. 51-53.
126 Ibid, p. 42.
127 Ibid, pp. 89-90.


129 Ibid, p. 111.
130 Ibid, p. 112.
131 Ibid, p. 54.
132 Ibid, p. 84.

135 Ibid, p. 87.
136 Galloway, "An Exploratory Study..." p. 58.
137 Medley and Mitzel, p. 87.

139 Ibid, p. 258.
140 Ibid, pp. 254-255.
FOOTNOTES (continued)


142 Grant and Hennings, p. 9.

143 Ibid, pp. 15-16.


146 Kuhn, pp. 84-85.


148 See Galloway, "An Exploratory Study...", p. 5.


153 See Leathers, p. 247.

155 Leathers, p. 236.
156 Knapp, Nonverbal Communication..., p. 185.
159 See Leathers, pp. 211-221 for a discussion on measurement.
160 See Knapp, Nonverbal Communication..., pp. 126-127.
161 See Leathers, pp. 201-203 for a discussion of camera techniques recommended for the study of nonverbal communication.
162 Knapp, Nonverbal Communication..., p. 196.
163 Leathers, p. 205.
164 See Knapp, Nonverbal Communication..., pp. 125-126.
ANNOTATED BIBLIOGRAPHY

BOOKS

   In this work, Flanders develops a system of categories for analysis of classroom verbal interaction; used by Galloway, Cheffers, Victoria and Love-Roderick.

   A guidebook primarily to nonverbal in classical literature and their meanings in the past, it is of some help to literature teachers making units on nonverbal communication. No scientific orientation.

   Readings by assorted experts, whether political, law, or communications leaders, treat fascinating aspects of nonverbal communication, interpersonal and intercultural. Good reading for teachers are the general articles by Davis, Krout, and Frank.

   Excellent annotated bibliography covering body motion from dance to the psychological interview. Some works on nonverbal behavior are included, but most concentrate on infant study, animal study, (especially the rhesus monkey) psychotherapy, dance, and labor relations. What is notable regarding teacher nonverbal communications is its absence from this bibliography.

   This compilation of early works, all of which are interrelated, touches on the nonverbal in some sections. Facial expression and vocalic stimuli are studied. Provides some background for those studying nonverbal communication.

Hennings and Grant describe a two-track observation procedure using both with "live" observers and with video-tape methods. Despite problematic use of the non-objective camera and vague categorization techniques, the book does work toward teacher awareness. It is not designed for the scientifically-minded.


Following a long section on animal communication, Hinde includes articles on human communication-in social settings, in cultural settings, in psychotherapeutic settings, etc. Another "expert" reference that is good for general reading, it is not educationally-oriented.


Three papers in a series are printed herein. Furst overviews the significant techniques of interaction analysis from Flanders on. Sandefur and Bressler concentrate on analysis of Flanders, Amidon and Hunter, Hughes, and the multidimensional systems of Spaullding, Honigman, Medley and Mitzel, Ryans, Openshaw and Cyphert. Johnston reports on conferences at four institutions. Supervisors were observed to determine use of interaction analysis and microteaching. All three papers concentrated on verbal analysis. Sandefur and Bressler make useful summaries of largely verbal categorization techniques.


Knapp's compilation and intertwining of all-important sources on nonverbal communication ranges from the influence of environment to the dynamics of paralanguage. Teachers might be interested in the lengthy section on body and
dressed as well as in one on environment as
communication.


Used as a definitional basis for this thesis, Kuhn's work is a classic in history of science.


A synthesis of major works in the nonverbal area, this book uses the systems approach to reveal functions of kinesics, proxemics, artifactual, etc. systems. An examination of problems of observation, classification, measurement and codification is necessary reading to all researchers in the field.


As its title suggests, this general work places component systems in the larger framework of human communication.


Mehrabian introduces the novice to his three-dimensional metaphor for nonverbal communications. A fascinating theory, it is skewed by its psychological assumptions.


This basic and renowned text, though filled with simplifications and stereotypical thinking about nonverbal communication, nevertheless bears perusal by those doing research. It is cited in many bibliographies.


Scheflen's classic in nonverbal behavior studies kinesics in a psychotherapeutic setting. Gestures and body positions are equated to personality dynamics. These anecdotal observations
ANOTATED BIBLIOGRAPHY (continued)

of idiosyncratic behavior are tantalizing but filled with assumptions of a non-scientific nature.


These "experts" on nonverbal behavior posit that cues complicate and maintain both positive and negative social orders. The authors include how behaviors interact with institutional and political controls and they examine how behaviors participate in the creation of deviancy. Although there are no exclusively "educational" chapters in the book, teachers may find some provoking "kernels" for thought, here.


Scherer presents an overview of American experimenters and supplies many of their codes. Included in the immense bibliography are: Ekman, Friesen, Leventhal, Macoby, Birdwhistell, Schefflen, Sommer, Jourard, Hall, Exline, etc. Not teacher-oriented, it is valuable to those seeking sources in the field. Available only in German.


Sommer finds teachers "fatalistic" regarding their environment and in need of "sensitizing" themselves to it. This study of six classrooms' seating arrangements, windows, and accoutrements is important to those teachers wishing to manipulate environment in order to alter participation.

UNPUBLISHED WORKS

ANOTATED BIBLIOGRAPHY (continued)

A study applying Flanders to the nonverbal behavior of teachers, this succeeds in that it produces an instrument of fairly high reliability and it fails in that it does not provide for the subtleties of nonverbal behavior.


Two-stage research is limited by vaguely defined categories of nonverbal behavior. Innovations and implications for future research are provocative.


Galloway applies the Flanders scale to nonverbal communication in the classroom and creates the classic work in the area.


Video-tapes of teachers from three camera positions are used as bases for student ratings of teachers on a subjective scale. Differing face, head, and body cues indicate positive, neutral, and negative affect styles. Despite unsupported assumptions, the study offers concerns that need to be addressed.


Middleman assigns negative, neutral, and positive interpretations to teacher behavior a' la Galloway. Many questionable assumptions are employed. Middleman does suggest the importance of cross-cultural research for the classroom.
ANNOTATED BIBLIOGRAPHY (continued)

Morganstern, Barry F. "Rationale and Training Guides for a Nonverbal Classification System." University of Missouri: unpublished paper, not dated.

Morganstern's "learner package" introduces the novice to the easy-to-handle Love-Roderick system. With a view to creating workable nonverbal models for teachers, he summarizes the literature somewhat shallowly. He tends to lead one to understand the nonverbal as a simple, easily codifiable system for classroom use.


Victoria studies the "neutral," "supportive," and "unsupportive" nonverbal activities of teachers using video-tapes. Victoria is cautious, scientifically "correct" in the study. Despite its difficult style, it is invaluable to the field of teacher nonverbal communications.

ARTICLES AND ABSTRACTS


Descriptive in nature and based on psychological assumptions, this article repeats traditional "truisms." "Happy" dyads result in sitting close, touching, looking; "conflicting" couples cross arms, look away, and self-touch. Although not central to classroom concerns, some of the ideas might be fruitful for classroom research.


Excellent methodological procedures' recommendations are especially relevant to the experimenter and/or reader of research in teacher nonverbal communication.
ANOTATED BIBLIOGRAPHY (continued)

Definitions and notations of proxemic transactions are listed and explained and placed within historical and literary reference.

Useful as a sample of the overgeneralized and inadequate material available on teacher nonverbal communication in educational journals.

An up-to-date experiment which indicates that different areas of the face express different emotions. Of interest to scholars in the field, but not immediately relevant to teachers' concerns.

Interested in the effects of certain nonverbal behaviors of teachers upon teaching effectiveness, Breed varies degree of lecturer eye contact with audience in four experiments. Essential reading for researchers.

The research here is based on Sommer and Schwebal and Cherlin's studies into classroom seating effects on behavior and scores. Here, classroom mobility is positively correlated with high exam scores. Excellent for the reader in teacher nonverbal communication.

This general article is designed for teachers. Examples of child-teacher interactions elucidate cultural and socio-economic differences in proxemics, kinesics and eye contact.


As cited earlier.


Here, early experimentation updates even earlier methods. Sketches and drawings of facial expressions are considered more "real" than those used previously. Results indicate that certain expressions are judged more accurately by one segment than by another. Not recommended except to those interested in history of methodology in nonverbal communication.


Decidedly "Laing-ian" in approach, this article does not even cover nonverbal behavior specifically.


This general treatment of nonverbal communication in the classroom makes some useful suggestions for further research.


This compilation of research differentiates as to the following: facial, proxemics, body language, gesture, visual contact and others. An excellent bibliography, especially on psychological research, makes it a handy reference tool.

Ekman's early pre-video-tape article insists on the observability of nonverbal phenomena. Its importance lies in the fact that early definitional and methodological problems are already evident here.


Ekman's review of four experiments employing Schlosberg's dimensions of emotion conveys information on head and body cues. Providing essential discussion for the researcher, the article reveals methodological limitations and problems.


Ekman offers another study here of Japanese, American and New Guineans to provide evidence as to the panculturality of facial expression. Bound by its story-telling and photo-displaying methodologies, it is nevertheless a tantalizing study for beginners.


In this report of their recent research, Ekman and Friesen "map the elements" of nonverbal behavior, showing interrelationships of behaviors, environment, verbal media, intentionality, feedback and so on. The complexity and variety of the nonverbal repertoire as well as its relationship to other systems comes clear.


A four-phase program, good for in-service programs, is presented here. Teachers develop awareness in communication problems by assessing student and teacher behavior, room arrangement, etc.
A "buddy" system of teachers who use video-tapes of each others' teaching is a most practical suggestion. French makes an excellent reference for those working to improve in-school problems from inside the system.


Early experimentation using sketches and photographs in facial expression judgment is reported here with commentary and theoretical problems. Outdated.


An overview of recent developments, Galloway covers French, Heger, Anderson et al., Love-Roderick and his own study. In his review of problems of definition, problems of experimental design, problems of cultural and sociological influence, Galloway proves invaluable.


As cited earlier.


A popularized-for-teachers version of his thesis.


A report of Galloway's other studies that attests to the paucity of teacher nonverbal literature available to journals.

Galloway repeats his categories for teacher nonverbal observation here.


This reply to Woolfolk and Woolfolk attacks methodology that employs verbal and nonverbal systems simultaneously, that uses a negative-to-negative hierarchy, and that assumes the equalization of the verbal and nonverbal. It is salient, succinct and critical.


Meant for teachers, this article looks for the heightening of sensitivity in classroom nonverbal understanding.


Galloway publishes another report summarizing his other studies here.


This brief popularization-for-teachers relays his instrument to the practising teacher. Influences of space, travel, time, and culture on nonverbals are made understandable but are not couched in scientific language.


This brief overview of research raises important questions as to the efficacy of assumptions and methodology. Important to anyone entering the field.
   A generalized not-too-pithy teacher-aimed article, this may be useful for awareness-heightening typical of the oversimplified instruction teachers are receiving.

   A fascinating experiment comparing white and black second and sixth graders' evaluations of nonverbal behaviors of teachers. Although questions concerning bias (one white female teacher lectured in the experiment) may arise, nevertheless the issues of culture vis-a-vis perception are key ones.

   This study, an ethological one, attempts to list all facial cues used in teaching both objectively and descriptively! For example, Grant breaks eyelid movement into seven separate motions. All of this was listed while observing nursery school teachers interacting with their students. Insufficient methodological procedures accompany the lists.

   Even this early and possibly outdated study indicates that training in observation of nonverbals improves sensitivity.

   Hall reviews his by-now renowned notational system for nonverbal behavior. Essential as background to the scholar of nonverbal research, it is referred to by many authors. Excellent when used with knowledge of its anthropological assumptions.
Hall, Edward T. "Proxemics." Current Anthropology. Vol. 9, no. 2-3; April-June, 1968; pp. 83-108. Hall's anthropologically-based proxemic notational system is reviewed with helpful charts showing "...interplay of distant and immediate receptors." Kinesthetics, thermal, olfactory, and visual details are covered. Essential to those investigating use of space in the classroom or elsewhere.

Halpin, Andrew W. "Muted Language." School Review. Vol. 68; Spring, 1960; pp. 85-104. This author recommends that school administrators examine their own nonverbal communication. Use of role-playing, training groups, group discussion and consulting are advised.


Harrison, Randall and Knapp, Mark L. "Nonverbal Communication Systems." Journal of Communication. Vol. 22; Dec., 1972; pp. 339-352. This critical article sheds light on problems of definition and assumption for those working in the nonverbal area. Aimed at the scholar, the article is necessary to any who hopes to accomplish significant research in the field.

Hennings, Dorothy Grant and Grant, Barbara M. "Nonverbal Teacher Activity in the Classroom." Education. Vol. 93; Sept., 1972; pp. 42-44. Desiring to stimulate the working teacher to self-analysis, Hennings and Grant define nonverbals in both personal and instructional modes. Directing the teacher to evaluate his own passive and active tendencies, they seek teacher awareness.
Hodge, R. Lewis. "Interpersonal Classroom Communication Through Eye Contact." Theory Into Practice. Vol. 10; Oct., 1971; pp. 264-267. A teacher-intended article, this gives worthwhile hints as to how to make eye contact work more effectively in the classroom setting. It is one of few sources to discuss nonverbal "discipline."

Hodge, R. Lewis. "Recording Classroom Nonverbal Behavior for Effective Teacher Evaluation." Contemporary Education. Vol. 44, no. 3; Spring, 1975; pp. 189-193. Hodge makes a plea for objectivity (i.e., reliable and valid scientific instrumentation) in evaluation of teacher nonverbal behavior here.


Kachur, Donald S. and Sweet, Bruce W. "Nonverbal Discipline." School and Community. Vol. 60; April, 1974; p. 31. This brief list of nonverbal behaviors that may be used as strategies for classroom discipline is the only source, other than Hodge, in the area.


Kehoe summarizes the results of a doctoral dissertation investigating the differences between male and female, counselor and non-counselor readings of non-word cues. Excellent source for those seeking rationale for studies into male/female nonverbal perception.


This study makes conclusions in two cases. First, teacher disapproval is verbally expressed consequent to pupil noise and blackboard use; second, teacher approval is nonverbally expressed consequent to task-related and pupil-participant activities in the classroom. All research is based on the assumption that positives and negatives are assignable to nonverbal behaviors.


Based on sociological assumptions, this work studies the interplay of group, role, and subgroup with proxemic and kinesic behavior. Such an approach might well shed light on teacher role vis-a-vis nonverbal communication.


This experiment indicates that subjects agreed more at four feet distance from the experimenter than they did at ten feet away from the experimenter. Implications to classroom seating and discipline are obvious.


An experiment which compared nonverbal interaction with the physically "stigmatized" and
the physically normal showed that interactants with the former evidenced inhibited motor activity and distorted less positive opinions. This is as yet an almost unbroached question in teacher nonverbal communications.


Results here, again indicating the positive influence of eye contact, (with a greater degree of eye contact indicating liking, a lesser degree of eye contact indicating disliking) suggest an experimental springboard for use in classroom nonverbal communication.


The finding that smiling, close (personal) distance and cooperative posture raised test scores above those resulting in the "cold" condition may provide further rationale for teacher nonverbal experimentation.


A top-of-the-research-skimming article, this exposes the reader to the scope of current research but misses important exceptions. Knapp makes concrete recommendations and lists practical means for studying and/or improving teacher nonverbal communication.


Koch instructs administrators, teachers, and consultants in giving support in classroom settings to the study of and the improvement of nonverbal communication.

This survey of nonverbal behavior in educational settings is intended to motivate teacher interest. Lacking in scientific detail, it is an informal and anecdotal article.


A chart-summary of Flanders and Galloway’s system is contained in this useful, succinct article.


This study using sound-motion pictures is one of the earliest that determines the efficiency of vocal and facial channels; face cues were found more efficient than vocal cues. Problems inherent to methodology involve judge selection, judge training, and use of camera.


Skimming the issues, this article makes enormous assumptions as to evaluating teacher nonverbal behavior.


Now famous, this article provides an instrument, coding system and guidelines for observation of teacher nonverbal behavior.


Problems arising from methodology in evaluating teacher nonverbal and/or verbal
behavior led to this article. An analysis of use of variance and correlational techniques for estimating reliability coefficients led to the conclusion that the former has three distinct advantages. Mandatory reading for the experimenter in the field.


Here, Medley and Mitzel summarize reasons for the innovation of OScAR, a technique for measuring classroom verbal and nonverbal behavior. This attempt at objective measurement constitutes a large contribution to the field.

According to Sandefur and Bressler, OScAR has been used in five adaptations since its original development.


This report of an experiment resulting in correlates of immediacy of head and body with inference of positive attitude may be groundwork for teacher nonverbal communication.


Results here show that liking is indicated by close distance, increased eye contact, and relaxation of the body. Mehrabian may provide some basis for such investigation in the classroom.


Research indicates that negative attitudes are conveyed by reclining, minimal eye contact and arms "akimbo" stance while positive attitudes are conveyed by leaning forward, medium eye contact,
and closeness. Low and high status are conveyed by discernable cues, also. Researchers in teacher nonverbal communication may find another area for study here.


Mehrabian and Ferris indicate that the facial carries more weight in message importance than the vocal, while the vocal is more important to message than the verbal.


Serious implications for teacher nonverbal behavior may be inherent in this study of attitude and posture, distance, and eye contact.


The indication found here that extroverts maintain eye contact for longer durations than do introverts may "gibe" with Mehrabian's findings. Examination of the issue in relation to teacher effectiveness may be merited.


This extension of Flanders and Galloway into multi-dimensional evaluation is mandatory for anyone using or developing a verbal or nonverbal scale.


Another mandatory source for those develop-

Obvious as to its possible importance to the study of teacher nonverbal behavior is this experiment in which subjects interacting with a "cold" experimenter (who looked around, leaned away and drummed his fingers) verbalized less than the "highly-verbalizing" subjects with a "warm" experimenter (who made eye contact, leaned forward, and smiled).


Immediately relevant to teacher nonverbal communication is this study varying "teacher approval," "disapproval," and "non-responsiveness." Excellent source.


This article reports on an eleven channel test (PONS) that measures sensitivity to nonverbal cues. Possibly useful (although statistical results are lacking here) are the conclusions that women, girls, and males in the mental health and education fields score high.


Anyone doing research on the nonverbal which resulted in statistical measurements might find this discussion of results helpful. In video-tape research, distributions were established for duration and frequency of nonverbal behaviors (which are found to be "consistently distributed in non-random ways.")

Saral provides a good discussion of the pros and cons of various methodology that has been used and of the contributions of researchers relative to their methods.


This easy-to-read outline covers the interactive and complex potentials of the verbal and nonverbal channels. Recommended for all novices.


This article is a "micro-mini" version of Scheflen's earlier work.


This parapsychological and quasi-scientific article combines an extrasensory perception interest with the nonverbal, particularly to Galloway's system. Not recommended, except as highly tentative coupling of disparate modes.


This experimentation into the "teachability" of nonverbal awareness in the classroom indicates that self-analysis and data-collating by teachers heightens nonverbal awareness. Recommended to all who wish to investigate the area.


Schusler reviews his doctoral dissertation.

Schusler investigates three instruments: a questionnaire regarding student feelings, a student response to teacher nonverbals, and a personal preference test. Although it presents a good case for instituting courses in nonverbal communication for teachers, it is notable also in its assumptions.


A skipping-and-skimming of nonverbal research precedes a description of an experiment varying "still" live lecture, "active" live lecture and "active" video-tape lecture modes. The results, finding that students favor the "active" live instructor over the others, tend to add credence to Ekman. Questions arise in regard to the authors' correlation of results to students' attitudes toward learning or toward liking or toward persuasiveness.

Sherman, Eugene. "Listening Comprehension as a Function of Proxemic Distance and Eye-Contact." Graduate Research in Education and Related Disciplines. City University of New York: Vol. 7, no. 1; Fall, 1973; pp. 5-33.

An interesting experiment varying the conditions of distance and eye contact concludes that decreasing space heightens listening comprehension. Because of experimental design weakness, the findings as to eye contact influence do not reach validity. Further experimentation as to the effects of eye contact on listening comprehension may be fruitful.


Silberman overviews a section of the Journal devoted to recent writings regarding class-
room behavior. His orientation is towards solving methods' problems.


Although not specifically defining nonverbal behavior, this article suggests the positive use of nonverbals in its emphasis on play. Important to researchers in nursery school settings.


Although none of the hypotheses was confirmed in this experiment, the attempt to correlate instruction in nonverbal communication with teacher competency and student achievement is a crucial one. Future research must take this study into account.

In the study, reproductions of a complete unit for children including goals, materials, lessons, and quizzes is the only one this researcher has uncovered.


This article provides a mixture of Victoria's philosophy and Victoria's thesis results. Although the questions raised formerly in this paper are attendant in the article, nevertheless, Victoria makes a good case for bettering teacher nonverbal communication.


An abstract of Victoria's thesis as discussed earlier.
ANNOTATED BIBLIOGRAPHY (continued)


In this article, the authors set up, in opposition to the "good-bad" dichotomy (used in facial-expression-judgment) a "bias of neutral." It could prove helpful for those seeking objective and scientific data in the area.


Important only as background to the non-verbal studies is this explanation of the Withall verbal evaluation system.


Disagreeing with Mehrabian's findings is this study which finds verbal more influential than nonverbal to high scores on vocabulary tests. Some questions as to methodology and assumption do arise, however.


Woolfolk and Woolfolk admit to problems in their own research in their reply to Galloway's critique. The dialogue between Galloway and the Woolfolks allows essential questions as to assumption and methodology to be raised.
APPENDIX A

OPERATING COMPONENTS OF INDIVIDUAL NONVERBAL COMMUNICATIONS SYSTEMS (and SUBSYSTEMS).*

<table>
<thead>
<tr>
<th>COMMUNICATION SYSTEM</th>
<th>DIMENSIONS OF MEANING</th>
<th>FUNCTIONS</th>
<th>CHANNEL (CAPACITY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facial</td>
<td>Evaluation</td>
<td>Displays emotions</td>
<td>Speed=5</td>
</tr>
<tr>
<td></td>
<td>Interest</td>
<td></td>
<td>Channel Separation=5</td>
</tr>
<tr>
<td></td>
<td>Intensity</td>
<td></td>
<td>Accuracy=4</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td></td>
<td>Emot. Information=5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fact. Information=2</td>
</tr>
<tr>
<td>Gestural</td>
<td>Activation</td>
<td>Controls interaction; signals intensity of emotion</td>
<td>Speed=5</td>
</tr>
<tr>
<td></td>
<td>Evaluation</td>
<td></td>
<td>Channel Separation=3</td>
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<td></td>
<td>Accuracy=4</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td></td>
<td>Emot. Information=4</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Fact. Information=3</td>
</tr>
<tr>
<td>Postural</td>
<td>Responsiveness</td>
<td>Some control of interaction; signals role expectations</td>
<td>Speed=2</td>
</tr>
<tr>
<td></td>
<td>Immediacy</td>
<td></td>
<td>Channel Separation=2</td>
</tr>
<tr>
<td></td>
<td>Agreement</td>
<td></td>
<td>Accuracy=2</td>
</tr>
<tr>
<td></td>
<td>Power or Status</td>
<td></td>
<td>Emot. Information=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fact. Information=1</td>
</tr>
</tbody>
</table>

APPENDIX A (continued)

<table>
<thead>
<tr>
<th>FEEDBACK (CORRECTIVE POTENTIAL)</th>
<th>BOUNDARIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEST OF COMMUNICATIVE BEHAVIOR WITHIN SYSTEMS</td>
<td></td>
</tr>
<tr>
<td>Physical: flexibility of facial and bodily musculature; acuity of eyesight at different distances, etc.</td>
<td>Facial Meaning Sensitivity Test</td>
</tr>
<tr>
<td>Leathers Nonverbal Feedback Rating Instrument</td>
<td></td>
</tr>
</tbody>
</table>

3. 
## APPENDIX A (continued)

<table>
<thead>
<tr>
<th>COMMUNICATION SYSTEM</th>
<th>DIMENSIONS OF MEANING</th>
<th>FUNCTIONS</th>
<th>CHANNEL (CAPACITY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proxemic (Interpersonal)</td>
<td>Domination, Approval, Extroversion, Self-Confidence</td>
<td>Signals degree of involvement</td>
<td>Speed=3, Channel Separation=2, Accuracy=3, Emot. Information=4, Fact. Information=1</td>
</tr>
<tr>
<td>Proxemic (Urban)</td>
<td></td>
<td>Determines perceptual distance; affects interaction</td>
<td>Speed=1, Channel Separation=5, Accuracy=3, Emot. Information=4, Fact. Information=2</td>
</tr>
<tr>
<td>Artifactual</td>
<td>Body Types: lazy, talkative, warm, mature, self-reliant, suspicious, etc. Clothing: fashionability, socialization, and formality</td>
<td>Shapes reflective image and social identity</td>
<td>Speed=1, Channel Separation=4, Accuracy=4, Emot. Information=4, Fact. Information=3</td>
</tr>
<tr>
<td>Vocalic</td>
<td>Aggressiveness, Potency, Introversion, Passionate</td>
<td>Shapes perceived personality characteristics; signals emotions</td>
<td>Speed=5, Channel Separation=2, Accuracy=3, Emot. Information=4, Fact. Information=1</td>
</tr>
</tbody>
</table>
## APPENDIX A (continued)

<table>
<thead>
<tr>
<th>FEEDBACK (CORRECTION POTENTIAL)</th>
<th>BOUNDARIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEST OF COMMUNICATIVE BEHAVIOR WITHIN SYSTEMS</td>
<td></td>
</tr>
</tbody>
</table>

4. Psychological: intimate, personal, social and public distance; turns, sheaths, personal space, and possession territory

Psychological and Physical: paths, edges, districts, etc.

2. Social: roles dictate clothing and acceptable types of social interaction

5. Physical: producibility and audibility of attributes of sound

Body Image Test

Vocalic Meaning Sensitivity Test
## APPENDIX A (continued)

<table>
<thead>
<tr>
<th>COMMUNICATION SYSTEM</th>
<th>DIMENSIONS OF MEANING</th>
<th>FUNCTIONS</th>
<th>CHANNEL (CAPACITY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tactile</td>
<td>Mothering</td>
<td>Warning and alert signals for primitive emotions</td>
<td>Speed=1, Channel Separation=2, Accuracy=3, Emot. Information=4, Fact. Information=1</td>
</tr>
<tr>
<td></td>
<td>Fearful</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Detached</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Playful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olfactory</td>
<td></td>
<td>Modification of reflective image; conveys emotions</td>
<td>Speed=1, Channel Separation=5, Accuracy=3, Emot. Information=4, Fact. Information=1</td>
</tr>
<tr>
<td>Telepathic</td>
<td></td>
<td>Transmission and reception of imagery</td>
<td>Speed=5, Channel Separation=1, Accuracy=1, Emot. Information=2, Fact. Information=1</td>
</tr>
<tr>
<td>FEEDBACK (CORRECTIVE POTENTIAL)</td>
<td>BOUNDARIES</td>
<td>TEST OF COMMUNICATIVE BEHAVIOR WITHIN SYSTEMS</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------</td>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>1. Physical: must be close enough to touch or be touched</td>
<td>Tactile Communication Index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Chemical: natural and artificial odors are difficult to control and manipulate</td>
<td>Olfactory Meaning Sensitivity Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Known</td>
<td>Extrasensory: energy source for signals is unknown</td>
<td>Telepathic Communication Test</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B
FLANDERS SYSTEM OF INTERACTION ANALYSIS*

1. Accepts feeling: accepts and clarifies the feeling tone of the students in a nonthreatening manner. Feelings may be positive or negative. Predicting and recal-
ing feelings are included.

2. Praises or encourages: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual, nodding head and saying "uh huh?" or "go on" are included.

3. Accepts or uses ideas of student: clarifying, building or developing ideas or suggestions by a student. As teacher brings more of his own ideas into play, shift to category five.

4. Asks questions: asking a question about content or procedure with the intent that a student answer.

5. Lectures: giving facts or opinions about content or procedure; expressing his own idea; asking rhetorical questions.

6. Gives directions: directions, commands, or orders with which a student is expected to comply.

7. Criticizes or justifies authority: statements, intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing extreme self-reference.

* Amidon and Flanders, The Role of the Teacher in the Classroom, p.
8. Student talk-response: talk by students in response to teacher. Teacher initiates the contact or solicits student statement.

9. Student talk-initiation: talk by students, which they initiate. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category.

10. Silence or confusion: pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the observer.
APPENDIX C

GALLOWAY'S CATEGORIES*

Encouraging Communication

1. Enthusiastic Support. A nonverbal expression implying enthusiastic support of a pupil's behavior, pupil interaction, or both. An expression that manifests enthusiastic approval, unusual warmth, or emotional support; being strongly pleased. An expression that exhibits strong encouragement to pupil. Examples of nonverbal determinants are as follows:

1. Facial expression. Any expression that implies support or approval of some behavior or interaction occurring in the classroom. Any facial expression that connotes enjoyment, pleasure, or satisfaction with the pupil, or the topic.

2. Action. Any movement or action that portrays enthusiastic approval and active acceptance in an approving way, e.g., a pat on the back, or a warm greeting of praise. An act that endorses approval of the pupil, and gives strong encouragement.

3. Vocal language. Any voice quality indicating pleasure or warm acceptance. The use of the voice through intonation or inflection suggests approval and support.

2. Helping. A responsive act that relates to modifications in the teacher's behavior which suggest a detection of expressed feelings, needs, urgencies, problems, etc., in the pupil. A communicative act that performs a function which helps a pupil or answers a need. An act that meets a pupil's request; a nurturant act. This act is the spontaneous reaction that the teacher manifests in the form of an actual response. It may be either intellectually supporting, or problem-centered. Examples of nonverbal determinants:

* Galloway, "An Exploratory Study..." Appendix A, pp. 146-149.
APPENDIX C (continued)

1. Facial expression. An expression that implies, "I understand," or "I know what you mean," which is followed up by some kind of appropriate action. An expression that is consistent and sensitive to the pupil's need. A facial expression that registers an acceptance and an understanding of a pupil's problem.

2. Action. A movement or action that is intended to help or perform a function for the pupil. The action of the teacher is consistent with the need expressed by the pupil. Any action that suggests understanding and assistance.

3. Vocal language. A vocal utterance that is acceptant and understanding. The voice may be tender, compassionate, or supportive; or it may be a laugh or vocalization that breaks the tension.

3. Receptivity. A nonverbal expression that implies a willingness to listen with patience and interest to pupil talk. By paying attention to the pupil, the teacher exhibits an interest in the pupil, and implicitly manifests approval, satisfaction, or encouragement. Such a nonverbal expression implies to the pupil that "lines of communication are open."

1. Facial expression. Maintains eye contact with pupil in a systematic fashion, exhibiting interest in pupil, pupil's talk, or both. Facial expression indicates patience and attention. Other expressions suggest a readiness to listen, or an attempt at trying to understand.

2. Action. The teacher's demeanor suggests attentiveness by the way the total body is presented and movements used. An expressional pose or stance that suggests alertness, readiness, or willingness to have pupils talk. Teacher may be paying attention to pupil talk, even though eye contact is not established. A moving gesture that indicates the pupil is on the "right track." A gesture that openly or subtly encourages the pupil to continue.

3. Vocal language. A vocal utterance or vocalization that augments pupil talk, or that encourages the pupil to continue. An utterance indicating "yes-yes" (um-hm), "go on," "okay," "all right," or
"I'm listening." Although in a sense, the utterance can be characterized as an interruption, it in no way interferes with the communication process; indeed, such a vocalization supplements, and encourages the pupil to continue.

4. Pro forma. A communicative act that is a matter of form, or for the sake of form. Thus, the nature of the act, whether it is a facial expression, action, or vocal language, conveys little or no encouraging or inhibiting communicative significance in the contextual situation; a routine act. When the pupil is involved in a consummatory act, or when it is inappropriate or unnecessary for the teacher to listen or to respond, pro forma applies.

5. Inattentive. A nonverbal expression that implies an unwillingness or inability to engage attentively in the communicative process, thus, indicating disinterest or impatience with pupil talk. By being inattentive or disinterested the teacher inhibits the flow of communication from pupils.

1. Facial expression. Avoids eye contact to the point of not maintaining attention; exhibits apparent disinterest, or impatience with pupil by showing an unwillingness to listen.

2. Action. An expressional pose or movement that indicates disinterest, boredom, or inattention. A demeanor suggesting slouchy or unalert posture. Body posture indicates "don't care attitude," or an ignoring of pupil talk. Postural stance indicates internal tension, preoccupation with something else, or apparently engrossed in own thought. Either a moving or completed hand gesture that suggests the teacher is blocking pupil talk, or terminating the discussion.

3. Vocal language. A vocal utterance that indicates impatience, or "I want you to stop talking."

6. Unresponsive. A communicative act that openly ignores a pupil's need, or that is insensitive to pupil's feeling; a tangential response. Display of egocentric behavior or a domination of communication situation by
interrupting or interfering in an active fashion with the ongoing process of communicating between pupils, or from pupil to teacher. An annoying, or abusive act; or a failure to respond when a response would ordinarily be expected by ignoring a question or request.

1. Facial expression. An expression that is troubled, unsure, or unenthused about the topic in question. An expression that threatens or cajoles pupils; a condescending expression; an unsympathetic expression; or an impatient expression. An obvious expression of denial of feeling of pupil, or noncompliance of a request.

2. Action. Any action that is unresponsive to or withdrawing from a request or expressed need on the part of the pupil. An action that manifests disaffection or unacceptance of feeling. A gesture that suggests tension or nervousness.

3. Vocal language. A vocalization that interferes with or interrupts ongoing process of communication between pupils, or from pupil to teacher. Such a vocalization, when it is an obvious interruption, appears unresponsive to the flow of communication and to the pupils.

7. Disapproval. An expression implying strong disapproval of a pupil's behavior or pupil interaction. An expression that indicates strong negative overtones, disparagement, or strong dissatisfaction.

1. Facial expression. The expression may be one of frowning, scowling, threatening glances. Derisive, sarcastic, or disdainful expression may occur. An expression that conveys displeasure, laughing at another, or that is scolding. An expression that "sneers at" or condemns.

2. Action. Any action that indicates physical attack or aggressiveness, e.g., a blow, slap, or pinch. Any act that censures or reprimands a pupil A pointed finger that pokes fun, belittles, or threatens pupils.
3. **Vocal language.** Any vocal tone that is hostile, cross, irritated, or antagonistic to pupil. The vocalization is one of disappointment, depreciation, or discouragement. An utterance suggesting unacceptance.
APPENDIX D

SAMPLE OF GALLOWAY'S OBSERVATION EPISODES*

The teacher is talking with the participant in the front of the room and the children are working at their desks. The room is very quiet. The teacher moves over to a table and begins looking through magazines. A boy walks over to T and asks something. T looks at him frowning, and goes, "Shhh." The boy looks somewhat disappointed but goes back to his seat without saying anything else.

The teacher marks a place in a magazine, looks around the room, picks up another magazine, and continues looking through it. A boy walks up with his paper in his hand. He shows it to T, asking something. T frowns irritably at him, saying, "This is to see how well you follow directions. (T hands paper back.) Go straight to your desk and start over. This time do some thinking." T's manner is reproachful. The boy took the paper, sighed, and returned to his desk.....

* Galloway, "An Exploratory Study....," Appendix B, p. 150.
APPENDIX E
GALLOWAY'S STUDENT CONTINUUM

On the next page are pairs of words. In each pair, one is the opposite of the other. There are five steps between the pairs of words as shown below.

Pleasant A B C D E Unpleasant

Consider the words Pleasant and Unpleasant. Here is what you are supposed to do. If you feel your teacher judges you as being pleasant most of the time, put an X in the "A" box. If you feel your teacher considers you to be unpleasant most of the time, place an X in the "E" box. If you feel your teacher considers you to be pleasant sometimes and unpleasant sometimes, mark the "C" box. If you feel your teacher considers you to be somewhat more pleasant than unpleasant, put an X in the "B" box. If your teacher considers you to be somewhat more unpleasant than pleasant, place an X in the box marked "D."

.....

* Galloway, "An Exploratory Study...," Appendix C, pp. 151-152.
## APPENDIX E (continued)

<table>
<thead>
<tr>
<th>NAME</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selfish</td>
<td></td>
<td></td>
<td>Unselfish</td>
</tr>
<tr>
<td>2.</td>
<td>Obedient</td>
<td></td>
<td></td>
<td>Disobedient</td>
</tr>
<tr>
<td>3.</td>
<td>Intelligent</td>
<td></td>
<td></td>
<td>Unintelligent</td>
</tr>
<tr>
<td>4.</td>
<td>Good</td>
<td></td>
<td></td>
<td>Bad</td>
</tr>
<tr>
<td>5.</td>
<td>Sad</td>
<td></td>
<td></td>
<td>Happy</td>
</tr>
<tr>
<td>6.</td>
<td>Clean</td>
<td></td>
<td></td>
<td>Dirty</td>
</tr>
<tr>
<td>7.</td>
<td>Cowardly</td>
<td></td>
<td></td>
<td>Brave</td>
</tr>
<tr>
<td>8.</td>
<td>Honest</td>
<td></td>
<td></td>
<td>Dishonest</td>
</tr>
<tr>
<td>9.</td>
<td>Calm</td>
<td></td>
<td></td>
<td>Nervous</td>
</tr>
<tr>
<td>10.</td>
<td>Unfair</td>
<td></td>
<td></td>
<td>Fair</td>
</tr>
<tr>
<td>11.</td>
<td>Kind</td>
<td></td>
<td></td>
<td>Cruel</td>
</tr>
<tr>
<td>12.</td>
<td>Unfriendly</td>
<td></td>
<td></td>
<td>Friendly</td>
</tr>
<tr>
<td>13.</td>
<td>Wise</td>
<td></td>
<td></td>
<td>Foolish</td>
</tr>
<tr>
<td>14.</td>
<td>Rude</td>
<td></td>
<td></td>
<td>Polite</td>
</tr>
<tr>
<td>15.</td>
<td>Alert</td>
<td></td>
<td></td>
<td>Lazy</td>
</tr>
<tr>
<td>16.</td>
<td>Passive</td>
<td></td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>17.</td>
<td>Reliable</td>
<td></td>
<td></td>
<td>Unreliable</td>
</tr>
<tr>
<td>18.</td>
<td>Nice</td>
<td></td>
<td></td>
<td>Awful</td>
</tr>
<tr>
<td>19.</td>
<td>Unpopular</td>
<td></td>
<td></td>
<td>Popular</td>
</tr>
<tr>
<td>20.</td>
<td>Curious</td>
<td></td>
<td></td>
<td>Indifferent</td>
</tr>
</tbody>
</table>
21. Careless |  |  |  |  | Careful
22. Childish |  |  |  |  | Mature
23. Attentive |  |  |  |  | Inattentive
24. Disorderly |  |  |  |  | Orderly
25. Respectful |  |  |  |  | Disrespectful
APPENDIX F

GALLOWAY'S LATER CATEGORIES FOR
NONVERBAL AND VERBAL OBSERVATION*

<table>
<thead>
<tr>
<th>Indirect-Direct (Verbal)</th>
<th>Encouraging-Restricting (Nonverbal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepts student feeling</td>
<td>Congruent-Incongruent</td>
</tr>
<tr>
<td>Praises or encourages</td>
<td>Implementing-Perfunctory</td>
</tr>
<tr>
<td>Uses student idea</td>
<td>Personal-Impersonal</td>
</tr>
<tr>
<td>Asks questions</td>
<td>Responsive-Unresponsive</td>
</tr>
<tr>
<td>Lectures—gives information</td>
<td>Involving-Dismissing</td>
</tr>
<tr>
<td>Gives direction</td>
<td>Firm-Harsh</td>
</tr>
<tr>
<td>Criticizes or justifies authority</td>
<td>Receptive-Inattentive</td>
</tr>
<tr>
<td>Student talk (response)</td>
<td>Receptive-Inattentive</td>
</tr>
<tr>
<td>Student talk (initiated)</td>
<td>Comforting-Distressing</td>
</tr>
<tr>
<td>Silence or confusion</td>
<td></td>
</tr>
</tbody>
</table>

Given an understanding of the rationale and background of this system, an observer can record in verbal and nonverbal categories. This system is designed to enable an observer to use the categories, time intervals, and ground rules of the original Flanders system while recording the nonverbal dimensions as well. By marking a slash (encouraging) or dash (restricting) to the right of recorded tallies, an observer can record both the verbal and nonverbal dimensions. A circle number is used to enclose the tally when teacher behavior is solely nonverbal.

A significant amount of data suggests that Interaction Analysis can be learned easily and used with reliability. Because of this and because the Flanders system focuses primarily upon verbal behavior, adding nonverbal dimensions has been successful. Combining verbal categories with relevant nonverbal dimensions affords a unique approach to a complete analysis of interaction in the classroom.

* Galloway, "Teaching is Communicating...," p. 16.
Summary of Categories for Interaction Analysis Using Nonverbal Categories

<table>
<thead>
<tr>
<th>Verbal (Flanders)</th>
<th>Nonverbal (Galloway)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACCEPTS FEELING</td>
<td>Encouraging 11.</td>
</tr>
<tr>
<td>2. PRAISES OR ENCOURAGES</td>
<td>2. CONGRUENT: nonverbal cues reinforce and further clarify the credibility of a verbal message. 12. INCONGRUENT: contradiction occurs between verbal and nonverbal cues.</td>
</tr>
<tr>
<td>3. ACCEPTS OR USES IDEAS OF STUDENT</td>
<td>3. IMPLEMENT: implementa-13. PERFUNCTORY: perfunctory use occurs when the teacher merely recognizes or acknowledges student's idea by automatically repeating or restating it.</td>
</tr>
</tbody>
</table>

## APPENDIX G (continued)

<table>
<thead>
<tr>
<th>Verbal (Flanders)</th>
<th>Nonverbal (Galloway)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Encouraging</strong></td>
<td><strong>Restricting</strong></td>
</tr>
<tr>
<td>5. LECTURES</td>
<td>5. RESPONSIVE: change in teacher's pace or direction of talk in response to student behavior, i.e., bored, disinterested, or inattentive.</td>
</tr>
<tr>
<td>Direct Influence</td>
<td>6. INVOLVE: students are involved in a clarification or maintenance of learning tasks.</td>
</tr>
<tr>
<td>6. GIVES DIRECTIONS</td>
<td>7. FIRM: criticisms which evaluate a situation cleanly and clarify expectations for the situation.</td>
</tr>
<tr>
<td>Indirect Influence</td>
<td>8. HARSH: criticisms which are hostile, severe, and often denote aggressive or defensive behavior.</td>
</tr>
<tr>
<td>Verbal (Flanders)</td>
<td>Nonverbal (Galloway)</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>8. STUDENT TALK-RESPONSE</strong></td>
<td><strong>RECEPTIVE:</strong> involves attitude of listening and interest, facial involvement, and eye contact.</td>
</tr>
<tr>
<td><strong>9. STUDENT TALK INITIATION</strong></td>
<td><strong>COMFORT:</strong> silences characterized by times of reflection, thought, or work.</td>
</tr>
</tbody>
</table>
### APPENDIX H

**VICTORIA'S CATEGORIES**

<table>
<thead>
<tr>
<th>A. EYE CONTACT</th>
<th>E. BODY MOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>Shifts Weight</td>
</tr>
<tr>
<td>Group</td>
<td>Shrugs Shoulders</td>
</tr>
<tr>
<td>Class</td>
<td>Bends from Waist</td>
</tr>
<tr>
<td>Board/Object</td>
<td>Turns from Waist</td>
</tr>
<tr>
<td>Avoiding</td>
<td>Walks to Student</td>
</tr>
<tr>
<td>Downcast</td>
<td>Walks to Group</td>
</tr>
<tr>
<td></td>
<td>Walks to Board/Object</td>
</tr>
<tr>
<td></td>
<td>Circulates</td>
</tr>
<tr>
<td></td>
<td>Paces</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. FACIAL MOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised Eyebrow/s</td>
</tr>
<tr>
<td>Grin</td>
</tr>
<tr>
<td>Slight Smile</td>
</tr>
<tr>
<td>Full Smile</td>
</tr>
<tr>
<td>Laugh</td>
</tr>
<tr>
<td>Frown</td>
</tr>
<tr>
<td>Grimace/Pursed Lips</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. HEAD MOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nod/s</td>
</tr>
<tr>
<td>Inclined</td>
</tr>
<tr>
<td>Turns Head to R or L</td>
</tr>
<tr>
<td>Turns &quot;NO&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. BODY POSTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stands</td>
</tr>
<tr>
<td>Sits</td>
</tr>
<tr>
<td>Leans</td>
</tr>
<tr>
<td>Slouches</td>
</tr>
<tr>
<td>Arm/s Folded</td>
</tr>
<tr>
<td>Hands Clasped</td>
</tr>
<tr>
<td>Hand/s on Hip/s</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F. ARM HAND FINGER MOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Arm Hand</td>
</tr>
<tr>
<td>Both Arms Hands</td>
</tr>
<tr>
<td>At Side of Body</td>
</tr>
<tr>
<td>In Front of Body</td>
</tr>
<tr>
<td>Across Body</td>
</tr>
<tr>
<td>Away from Body</td>
</tr>
<tr>
<td>Toward Body</td>
</tr>
<tr>
<td>R - L or L - R</td>
</tr>
<tr>
<td>Up and Down</td>
</tr>
<tr>
<td>Loop/s</td>
</tr>
<tr>
<td>Sweep/s</td>
</tr>
<tr>
<td>Palm/s Out from Body</td>
</tr>
<tr>
<td>Palm/s In to Body</td>
</tr>
<tr>
<td>Palm/s Down</td>
</tr>
<tr>
<td>Palm/s Up</td>
</tr>
<tr>
<td>Palm/s Vertical</td>
</tr>
<tr>
<td>Partial Fist</td>
</tr>
<tr>
<td>Closed Fist</td>
</tr>
<tr>
<td>All Fingers Extended</td>
</tr>
<tr>
<td>Index Finger Extended</td>
</tr>
<tr>
<td>Other Finger Position</td>
</tr>
</tbody>
</table>

* Victoria, "Development of a Typology...," Appendices B and C (abbreviated), pp. 142-145.
APPENDIX H (continued)

G. DIRECTED ARM, HAND, FINGER MOTION

One Arm Hand
Both Arms Hands
Pointing to Self
Pointing to Student
Pointing to Group/Class
Pointing to Board/Object
Touching Self
Touching Board/Object
Grasping/Holding Object
Manipulating Object
Writing/Dwg. on Board
APPENDIX I

VICTORIA'S DEFINITION OF TRANSACTIONAL AND NONTRANSACTIONAL NONVERBAL BEHAVIOR*

Analysis of all the data supported the formulation of a typology of nonverbal behavior of student teachers that would be related to transactional and non-transactional patterns of body motion and directional focus within contexts of teaching-learning situations. In this study, transactional gestural behaviors are those that may be either consciously or unconsciously used by the student teacher and are reflective of the student teacher's direct influence on others; non-transactional gestural behaviors are those that are not consciously controlled by the student teacher and are reflective of the student teacher's inner state and attitude towards others. Student teacher gestural behaviors that serve as interactive and spatial referents to others within contexts of art teaching-learning situations are classified as transactional behavior. Student teacher gestural behaviors that serve as image reflecting referents of the student teacher to others within contexts of art teaching-learning situations are classified as non-transactional.

The typology of nonverbal behavior of student teachers relative to contexts within art teaching-learning

*Victoria, "Development of a Typology...", pp. 41-42.
situations is as follows:

**Transactional Nonverbal Behavior**

(Interactive and Spatial Referents)

Eye Contact
Facial Motion
Body Motion
Arm-Hand-Finger Motion
Directed Arm-Hand-Finger Motion

**Non-Transactional Nonverbal Behavior**

(Image Reflecting Referents)

Head Motion
Body Posture
Directed Arm-Hand-Finger Motion

The category **Eye Contact** contains such signs of patterned body motion and directional focus as avoiding, downcast, or directed to individuals or objects. Signs such as grins, smiles, frowns, or grimaces are included in the category **Facial Motion**. The category **Head Motion** is characterized by affirmative or negative motions and inclined, up-turned, or down-turned positions. **Body Posture** includes such positional signs as standing, sitting, leaning, and also such postural characteristics as arm folded, hands on hips, or hands clasped. **Body Motion** signs are such movements as shifting weight, shrugging shoulders, pacing, and proximity of location in relation to individuals or objects and environmental
setting. The category, Arm-Hand-Finger Motion contains signs that are primarily positional and descriptive, that is, in front of the body, across the body, away from or toward the body and sweeps or loops. The Directed Arm-Hand-Finger Motion category contains primarily the same patterned motions and directional focus as that of Arm-Hand-Finger Motion, but they are distinctive in that they are characterized by pointing to self, others, or objects. Manipulating, grasping, and holding behaviors are also included in the Directed Arm-Hand-Finger category. The patterned motions and directional focus of these behaviors may be either transactional or non-transactional, and are, therefore, placed in both categories in the typology.
APPENDIX J

VICTORIA'S SEVEN CATEGORIES EVOKED BY TEACHER GESTURAL BEHAVIOR*

1. Enthusiastic
   Nonverbal behaviors that evoke qualities of unusual enthusiasm, warmth, encouragement, or emotional support for students or topic.

2. Receptive-Helpful
   Nonverbal behaviors that evoke qualities of attentiveness, patience, willingness to listen, acceptance or approval; a responsiveness to students or situations implying receptiveness of expressed feelings, needs or problems.

3. Clarifying-Directive
   Nonverbal behaviors that evoke qualities of clarification, elaboration, direction or guidance.

4. Neutral
   Nonverbal behaviors that evoke qualities of little or no supportive or unsupportive significance within contextual situations; routine acts.

5. Avoidance-Insecurity
   Nonverbal behaviors that evoke qualities of

*Victoria, "Development of a Typology...," pp. 44-45.
APPENDIX J (continued)

avoidance, insecurity, insensitivity, impatience, ignorance, or disruption to students, topic or situations.

6. **Inattentive**
Nonverbal behaviors that evoke qualities of inattentiveness, pre-occupation, apparent disinterest; an unwillingness or inability to engage students, topic or situations.

7. **Disapproval**
Nonverbal behaviors that evoke qualities of disapproval, dissatisfaction, disparagement or negative overtones to students, topic or situations.
APPENDIX K

VICTORIA'S GUIDELINES FOR JUDGES*

1. Eye Contact: Judge all eye positions that can be seen. Category is primarily one of focus. Use zero only when head is in a position where eye position, motion or focus cannot be discerned.

2. Facial Motion: Category includes position as well as motion. Includes all feature motions such as smiles, frowns, raised eye-brows, etc., as well as composite facial position or expression such as "passive," "perplexed," "sarcastic," "enthusiastic," etc.

3. Head Motion: All head positions as well as motions are judged.

4. Body Posture: Primarily a positional category and not a motion category.

5. Body Motion: Primarily a motion category. When no evidence of motion is discernable score zero.

6. Arm-Hand-Finger Motion: Category is one of position and motion.

7. Directed Arm-Hand-Finger Motion: Category is

* Victoria, "Development of a Typology...", pp.54-55.
one of position and motion, characterized by touching, pointing and manipulating behaviors.

8. Arm-Hand-Finger Motion and Directed Arm-Hand-Finger Motion are two distinct categories. When no evidence of the behaviors contained in either category are discernible, whether it be one or both arms-hands, score zero.

9. In judging qualities of nonverbal behavior in each category remember that only an intuitive judgment is to be made, i.e., no analysis.

10. Do not give the student teacher "benefit of the doubt," judge on first intuitive perception only.
APPENDIX L

LOVE-RODERICK'S NONVERBAL CATEGORIES

AND SAMPLE TEACHER BEHAVIORS*

1. Accepts Student Behavior
   Smiles, affirmatively shakes head, pats on the back, winks, places hand on shoulder or head.

2. Praises Student Behavior
   Places index finger and thumb together, claps, raises eyebrows and smiles, nods head affirmatively and smiles.

3. Displays Student Ideas
   Writes comments on board, puts students' work on bulletin board, holds up papers, provides for nonverbal student demonstration.

4. Show Interest in Student Behavior
   Establishes and maintains eye contact.

5. Moves to Facilitate Student-to-Student Interaction
   Physically moves into the position of group member, physically moves away from the group.

6. Gives Directions to Students
   Points with the hand, looks at specified area, employs pre-determined signal (such as raising hands for students to stand up), reinforces numerical aspects by showing that number of fingers, extends arms forward and beckons with the hands, points to student for answers.

7. Shows Authority Toward Students
   Frowns, stares, raises eyebrows, taps foot, rolls book on the desk, negatively shakes head, walks or looks away from the deviant, snaps fingers.

8. Focuses Students' Attention on Important Points
   Uses pointer, walks toward the person or object, taps on something, thrusts head forward, thrusts arm forward, employs a nonverbal movement with a verbal statement to give it emphasis.

9. Demonstrates and/or Illustrates
Performs a physical skill, manipulates materials and media, illustrates a verbal statement with a nonverbal action.

10. Ignores Student Behavior
Lacks nonverbal response when one is ordinarily expected.
APPENDIX M

LOVE-RODERICK TALLY SHEET
FOR NONVERBAL BEHAVIOR*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Accepts Student Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Praises Student Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Displays Student Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Shows Interest in Student Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Moves to Facilitate Student-to-Student Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Gives Directions to Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Shows Authority Towards Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Focuses Students' Attention on Important Points</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Demonstrates and/or Illustrates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Ignores Student Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX N

MORGANSTERN'S ADAPTATION OF LOVE-RODERICK WITH EVALUATIVE CLASSIFICATIONS ADDED****

CATEGORY NUMBER ONE:

ACCEPTS OR PRAISES STUDENT BEHAVIOR

DEFINITION:

Teacher behavior directed toward the student(s), that tends to enhance, reinforce, please or suggest positive feedback regarding a student behavior.

POSITIVE EXAMPLES OF CATEGORY ONE:

The teacher:

1) smiles (at student).

2) affirmatively shakes head and/or smiles.

3) pats student on the back (or other physical nonverbal gestures of acceptance such as placing hand on shoulder or head of student, or putting arm around student.)*

4) winks (observed as intentional or purposive, not an habitual or nervous twitch which will fall within the parameter of the personal moves category).**

5) places forefinger and thumb together (A-OK sign).

6) claps.

7) raises eyebrows and/or smiles (and other affirmative signals).***

* Added to the original category system for clarification of this category.
** Added to the original system
*** Added to the original system
**** Morganstern, "Rationale and Training...," pp.4-5.
NOTE:

Remember that the and/or rule applies here. That is to say, that any nonverbal behaviors specific to this category will be considered as positive examples whether they be exhibited independently or in combination.

For example, the seventh attribute listed in category one states: that the teacher "raises eyebrows and/or smiles." These two behaviors could occur and be listed separately if they occur independent of each other in time. Indeed, should the teacher smile, shake his head affirmatively, and clap (2, 1, 6) at the same time, you would code this as a single positive instance of category one.

NEGATIVE EXAMPLES:

Some teacher behaviors that do not conform to category one

The teacher:

1) negatively shakes his head.

2) frowns (at student).

3) presents "thumbs down sign" or "your out" signal. sic, you're

4) turns away from the student when positive feedback is expected.

REMEMBER:

An inappropriate or contradictory combination of behaviors such as, the teacher smiles and shakes his head negatively will not be considered a positive instance of this category. However, the determination of any contradiction may have to be based on the verbal context in which it occurs. This rule will apply to each of the nine categories coded.
## APPENDIX O

### CHEFFERS' CATEGORIES*

Coding Symbols
Teacher (.), Environment (E), Student (S)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Verbal</th>
<th>Nonverbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-12**</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Praises, commands, jokes encourages.</td>
<td>Face: Smiles, nods with smile, (energetic) winks, laughs.</td>
<td></td>
</tr>
<tr>
<td>Posture: Claps hands, pats on shoulder, places hand on head of student, rings student's hand, embraces joyfully, laughs to encourage, catches in gymnastics, helps child over obstacles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-13</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Accepts, clarifies, uses and develops suggestions and feelings by the learner.</td>
<td>Face: Nods without smiling, tilts head in empathetic reflection, sighs empathetically.</td>
<td></td>
</tr>
</tbody>
</table>

* Cheffers, "Validation of an Instrument...," pp. 34-38.

** No category 1-11 appears in Cheffers' system.
Relevant Behaviours

<table>
<thead>
<tr>
<th>Categories</th>
<th>Verbal</th>
<th>Nonverbal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ask questions requiring student answer.</td>
<td>Posture: Shake [sic, shakes] hands, embrace [sic, embraces] sympathetically, place [sic, places] hand on shoulder, puts arm around shoulder of [sic, of] waist, catches an implement thrown by student, accepts facilities, teacher playing game with students as one member of team.</td>
</tr>
<tr>
<td>4-14</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Face: wrinkles brow, opens mouth, turns head with quizzical look.</td>
<td>Posture: places hands in air, waves finger to and fro anticipating answer, stares awaiting answer, scratches head, cups hand to ear, stands still half turned towards person, awaits answer.</td>
</tr>
<tr>
<td>Categories</td>
<td>Verbal</td>
<td>Nonverbal</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>5-15</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Gives facts, opinions, expresses ideas or asks rhetorical questions.</td>
<td>Face: Whispers words inaudibly, sings or whistles.</td>
<td>Posture: gesticulates, draws, writes, demonstrates activities, paints.</td>
</tr>
<tr>
<td>6-16</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Gives directions or orders.</td>
<td>Face: Points with head, beckons with head, yells at.</td>
<td>Posture: Points finger, blows whistle, holds body erect while barking commands, push [sic, pushes] a child through a movement, push [sic, pushes] a child in a given direction.</td>
</tr>
<tr>
<td>Categories</td>
<td>Verbal</td>
<td>Nonverbal</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>-----------</td>
</tr>
<tr>
<td>7-17</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Criticizes, expresses anger or distrust, sarcastic or extreme self reference.</td>
<td>Face: Grimaces, growls, frowns, drops head, throws head back in derisive laughter, rolls eyes, bites, spits, butts [butts] with head, shakes head. Posture: Hits, pushes away, pinches, grapples with, pushes hands at student, drops hands in disgust, bangs table, damages equipment, throws things down.</td>
<td></td>
</tr>
<tr>
<td>8-18</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Student response which is entirely predictable such as obedience to orders and responses not requiring thinking beyond the comprehension phase of knowledge (after Bloom).</td>
<td>Face: Poker face response, nod, [sic, nod] shake, [sic, shakes] gives small grunts, quick smile. Posture: moves [sic, Move] mechanically to questions or directions, responds to any action with minimal nervous activity, robot like. [sic, robot-like]</td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX O (continued)

### Relevant Behaviours

<table>
<thead>
<tr>
<th>Categories</th>
<th>Verbal</th>
<th>Nonverbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eine (8(h))</td>
<td>Eine (8(h))</td>
<td>Eineteen (18(t))</td>
</tr>
<tr>
<td>Predictable student responses which required some measure of evaluation and synthesis from student but must remain within the province of predictability. The initial behaviour was in response to teacher initiation.</td>
<td>Face: A &quot;What's [sic, What's] more [sic, Sir]&quot; look, eyes sparkling.</td>
<td>Posture: Add movements to those given or expected, tries to show some arrangement which requires additional thinking, e.g., works on gymnastic routine, dribbles basketball, all game playing.</td>
</tr>
<tr>
<td>Eineteen (18(t))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupil initiated talk which is purely the result of their own initiative and which could not be predicted.</td>
<td>Face: Interrupting sounds, gasps, sighs.</td>
<td>Posture: Puts hands up to ask questions, gets up and walks around without provocation, begins creative movement education, makes up own games, makes up own movements, shows initiative in supportive movement, intro-</td>
</tr>
</tbody>
</table>
APPENDIX O (continued)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Verbal</th>
<th>Nonverbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

Stands for confusion, chaos, disorder, noise, much noise.

Face: silence, [sic, Silence] children sitting doing nothing noiselessly awaiting teacher just prior to teacher entry, etc.
APPENDIX P

CHEFFERS' GROUND RULES*

1. Whenever the structure of the class moved to part (coded P), a decision had to be made as to what part of the class interaction was to be coded. It was decided that the observers could code any part of the lesson they so desired using CAFIAS, but in the absence of such direction the observers would follow the teacher and code his interaction with either the individual students or groups with whom he was working. Nevertheless, if another student or some part of the environment was doing the teaching, then this could be coded by CAFIAS. On most occasions, for purposes of inter-observer reliability, it was necessary to establish the specific categorization route prior to the lesson.

2. Whenever the teacher was talking and demonstrating at the same time, necessitating simultaneous [sic, simultaneous] coding, the observer coded the verbal symbol and encircled it. This was encoded into the matrix in both verbal and nonverbal cells.

APPENDIX P (continued)

3. In order to clarify the use of 6, CAFIAS adopted the following recommendation. When directions were being given, only the executive part of the command was coded as a 6; the information giving section of the statement was coded then as a 5, e.g.:

"Group 6 will assemble the mats in the far corner, in star formation." -5

"Right boys! Go!" -6

This ground rule was consistent with Flanders' recommendation that a direction should be followed by an immediate physical movement that is observable, and in response, a teacher directed command.

4. The differentiation between encouraging 7's and 17's.*

* Cheffers does not go on to clarify this in his ground rules.
APPENDIX Q

CHEFFERS' MODEL SHOWING CAFIAS
DIVERSIFICATION OF TEACHING AGENCY*

<table>
<thead>
<tr>
<th>CLASS TEACHER</th>
<th>ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>AS</td>
</tr>
<tr>
<td>TEACHER</td>
<td>TEACHER</td>
</tr>
</tbody>
</table>

* Cheffers, "Validation of an Instrument...," p. 18.
APPENDIX R-I

CIVIKLY'S TEACHER NONVERBAL COMMUNICATION CODING SYSTEM*

<table>
<thead>
<tr>
<th>Body Motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>walks across the room</td>
</tr>
<tr>
<td>shuffles</td>
</tr>
<tr>
<td>moves around class</td>
</tr>
<tr>
<td>moves from desk to board</td>
</tr>
<tr>
<td>sways back &amp; forth</td>
</tr>
<tr>
<td>on heels &amp; toes</td>
</tr>
<tr>
<td>sways from side to side</td>
</tr>
<tr>
<td>steps back</td>
</tr>
<tr>
<td>shrugs shoulders</td>
</tr>
<tr>
<td>nods at class</td>
</tr>
<tr>
<td>shakes head (horizontal)</td>
</tr>
<tr>
<td>moves head to one side</td>
</tr>
<tr>
<td>taps feet</td>
</tr>
<tr>
<td>shakes legs</td>
</tr>
<tr>
<td>waves arms</td>
</tr>
<tr>
<td>folds arms across chest</td>
</tr>
<tr>
<td>has arms behind back</td>
</tr>
<tr>
<td>puts both hands on hips</td>
</tr>
<tr>
<td>puts one hand on hip</td>
</tr>
<tr>
<td>others:</td>
</tr>
</tbody>
</table>

* Civikly, "A Description and Experimental...," pp. 115-118.
<table>
<thead>
<tr>
<th>Posture-Position</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>sits at desk</td>
<td></td>
</tr>
<tr>
<td>sits on desk</td>
<td></td>
</tr>
<tr>
<td>sits on stool</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX R-I (continued)

(Graph Excluded)

**Posture-Position**
sits on floor
stands at attention
stands at front-center of class
leans against board
leans against desk (lecturn)
leans forward over desk, toward class
others

**Hand Gestures**
points with finger, hand, stick, chalk, book, microphone
claps hands
snaps fingers
rubs desk
folds hands (clasp)
makes "OK" sign
makes numeric signs ("1", "2", etc.)
steeppling
holds heads (in hands)
makes large gestures
makes "form" gestures (molding in air)
makes "direction" gestures
cuts air with choppy hand motions
makes hand circles
beckons students
extends open palms to class

Facial Expression
smiles
frowns
wrinkles brows
raises brows
squints
stares
winks
widens eyes
looks down at notes
wrinkles nose
pouts
smacks lips
yawns
other:

Vocal Expression
speaks in monotone
varies volume
varies stress
APPENDIX R-I (continued)

(GRAPH EXCLUDED)

varies rate
pauses
uses silence
"uh", "um", "hum", "ok", etc.
laughs
coughs
giggles
clicks tongue
sighs
moans
whines
clears throat
whispers
shouts
others:

Personal Acts
adjusts tie
adjusts collar
adjusts glasses
adjusts jacket, blouse, shirt
tucks in blouse, shirt
places hands in pocket
plays with jewelry
pushes hair back
scratches head, face, mustache, nose, ear, neck, leg, chin
chews gum
others:
APPENDIX R-II

CIVIKLY'S DEFINITION OF CATEGORIES
FOR TNVCC IN APPENDIX R-I *

1. Body Motion

Includes general body movements, such as movements of the whole body, limbs, head, feet, and legs.
E.g. walking in front of the classroom

2. Posture and Position

Posture: This is to be used when observing stabilized body movements, those which have become stationary for a period of time, whether it be sitting, standing, or leaning against a support.

Position: the degree and general angle to which the teacher's shoulders and legs are turned in the direction of, rather than away from, the "students".

3. Hand Gesture

This category includes motions with the hands and fingers, and to a lesser degree, the arm. Some examples of hand gestures are: pointing, tapping the desk, opening the palms, cutting the air with choppy hand motions. It does NOT include the "personal acts" described below.

4. Facial Expression

Included in this category are movements of the eyes, nose, and mouth, or a combination of those. Some examples are: squinting, wrinkling the nose, and smiling.

5. Vocal Expression

This deals with HOW the teacher says something, not the actual content. Included here are intonation patterns, general changes in volume, rate, stress, pitch, and such vocal behaviors as shouting, laughing, coughing, sighing, and whispering.

* Civikly, "A Description and Experimental...," pp. 110-111.
6. Personal Acts

This category incorporates acts not directly related to teaching behavior, motions of a part of the body in contact with another part, either directly or mediated by an instrument, e.g., tapping an arm or leg with a finger or pen. These acts generally involve use of the hands, and may have become so-called personal habits or "mannerisms" of the instructor. Some personal acts include "preening" behaviors as adjusting clothes, scratching, and pushing one's hair back.
APPENDIX S

CIVIKLY'S SEMANTIC DIFFERENTIAL*

What are the general characteristics of this teacher's nonverbal classroom behavior?

A. Activity level: Consider the number of nonverbal clues this teacher generates. Rate this teacher on the following scale:

very active ___________________________ not active

B. Speed of Motion: Does the teacher tend to move rapidly or slowly? Indicate your perception of the speed of his motions:

slow ___________________________ rapid

C. Size of Motion: Does the teacher tend to make such large motions as broad gestures of the hand, or does he make small motions?

small ___________________________ large

D. Personal Motions: Plot the teacher's use of personal motions (acts):

many personal acts __________ few personal acts

E. Verbal-Nonverbal Orientation: Consider the nonverbal activity and the verbal activity that this teacher exhibits. Plot his orientation:

verbal ___________________________ nonverbal

F. Clarity of Communication: Does the teacher's nonverbal behaviors effectively communicate what you think he is intending to communicate?

motion communicates __________ motion does not communicate what is intended

what is intended

* Civikly, "A Description and Experimental...," p. 120.
### APPENDIX T

**PERKINS' STUDENT AND TEACHER CATEGORIES***

<table>
<thead>
<tr>
<th>Student Categories</th>
<th>Teacher Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>LISWAT Interest in ongoing work:</td>
<td>1. Does not accept student's idea, corrects it: rejection or correction of student's response.</td>
</tr>
<tr>
<td>work: listening and watching-passive.</td>
<td>2. Praises or encourages student or behavior: enthusiastic acceptance of student's response.</td>
</tr>
<tr>
<td>REWR Reading or Writing: working in assigned area-active.</td>
<td>2A. Listens to, helps, supports, nurtures student: accepting, helping response; also listening to recitation.</td>
</tr>
<tr>
<td>HIAC High activity or involvement: reciting or using large muscles-positive feeling.</td>
<td>3. Accepts or uses student's answer or idea.</td>
</tr>
<tr>
<td>WOA Intent on work in another curricular area: school activity not assigned to be done right then.</td>
<td>4. Asks questions about content (what? where? when?): wants to find out whether student knows and understands material.</td>
</tr>
<tr>
<td>WNA Intent on work of nonacademic type: preparing for work assignment, cleaning out desk, etc.</td>
<td>4A. Asks questions that stimulate thinking (why? how?): encourages student to seek explanations, to reason, to solve problems.</td>
</tr>
<tr>
<td>SWP Social, work-oriented-PEER: discussing some aspect of schoolwork with classmate.</td>
<td>5. Lectures, gives facts or opinions about content: gives information in discussion, recitation, or committee meeting.</td>
</tr>
<tr>
<td>SWT Social, work-oriented-TEACHER: discussing some phase or work with teacher.</td>
<td>6. Gives directions, commands, or orders with which student is expected to comply.</td>
</tr>
<tr>
<td>SF Social, friendly: talking to peer on subject unrelated to schoolwork.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Categories</th>
<th>Teacher Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDL (Withdrawal) detached, out of contact with people, ideas, classroom situation; day-dreaming</td>
<td>7. Criticizes or justifies authority: disapproves of conduct or work of student or group of students.*</td>
</tr>
<tr>
<td></td>
<td>10. Is not participating in class activities: is giving test or is out of room-class silent or in confusion.</td>
</tr>
<tr>
<td>DISC (Large-group discussion)</td>
<td>LDR (Leader-director) teacher initiative-active: conducts recitation or discussion, an issue or evaluates an oral report.</td>
</tr>
<tr>
<td>REC (Class recitation)</td>
<td>REC (Resource person-student-centered, lesser role than leader: helps group or committee, brings material, suggests).</td>
</tr>
<tr>
<td>IND (Individual work or project: student is working alone on task that is not a common assignment.)</td>
<td>SUPV (Supervisor-teacher initiative, passive, role during seatwork: circulates to observe and help).</td>
</tr>
<tr>
<td>SEAT (Seat work, reading or writing, common assignment.)</td>
<td>SOC (Socialization agent: points to and reinforces social expectancies and rules; criticizes behavior).</td>
</tr>
<tr>
<td>GRP (Small-group or committee work: student is part of group or committee working on assignment.)</td>
<td>EVL (Evaluator: listens and gives mark for oral report, individual or group; asks, &quot;How many did you get right?&quot;)</td>
</tr>
<tr>
<td>REP (Oral reports-individual or group: student is orally reporting on book, current events, or research.)</td>
<td></td>
</tr>
</tbody>
</table>

* Categories 8 and 9 omitted in original
<table>
<thead>
<tr>
<th>Eye-contact</th>
<th>Facial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met students' gazes</td>
<td>Quickly flashed smile</td>
</tr>
<tr>
<td>Avoided eye contact</td>
<td>Thin-lipped painful smile</td>
</tr>
<tr>
<td>Walking and Gait</td>
<td>Student Behavior</td>
</tr>
<tr>
<td>Vagrant, peripatetic, restless</td>
<td>Black students clustered in peripheral</td>
</tr>
<tr>
<td>moving about</td>
<td>groups</td>
</tr>
<tr>
<td>Voice</td>
<td>Black students seem free of tension</td>
</tr>
<tr>
<td>Shows anger</td>
<td>Students seek attention by talking out</td>
</tr>
<tr>
<td>Choking</td>
<td></td>
</tr>
<tr>
<td>Uses filler-talk</td>
<td>Teacher Dress</td>
</tr>
<tr>
<td>Grunts</td>
<td>Appropriate</td>
</tr>
<tr>
<td>Interrupts students</td>
<td>Ostentatious</td>
</tr>
<tr>
<td>Too loud</td>
<td>Over-dressed</td>
</tr>
<tr>
<td>Overtalkative</td>
<td>Neat</td>
</tr>
<tr>
<td>Repetition of words</td>
<td>Dirty</td>
</tr>
<tr>
<td>Too soft to hear well</td>
<td>Colors match</td>
</tr>
<tr>
<td>Sniffs</td>
<td></td>
</tr>
<tr>
<td>Shriileness</td>
<td></td>
</tr>
<tr>
<td>Tremulous</td>
<td></td>
</tr>
<tr>
<td>Words spaced out</td>
<td>Proximity</td>
</tr>
<tr>
<td>Too high pitch</td>
<td>Stood close to students</td>
</tr>
<tr>
<td>Nasal</td>
<td>Approached middle distance</td>
</tr>
<tr>
<td>Scratchy</td>
<td>Stayed as far as possible</td>
</tr>
<tr>
<td>Dialect (Southern)</td>
<td>Leaned over students' work</td>
</tr>
<tr>
<td>Good clear voice</td>
<td></td>
</tr>
<tr>
<td>Mispronunciations</td>
<td>Territoriality Shown **</td>
</tr>
<tr>
<td>Oil=oll</td>
<td></td>
</tr>
<tr>
<td>Senator=sinater</td>
<td></td>
</tr>
<tr>
<td>tar=tor</td>
<td></td>
</tr>
<tr>
<td>Bites lip</td>
<td></td>
</tr>
<tr>
<td>Blinks</td>
<td></td>
</tr>
<tr>
<td>Frowns</td>
<td></td>
</tr>
<tr>
<td>Furtive glances</td>
<td></td>
</tr>
<tr>
<td>Glares</td>
<td></td>
</tr>
<tr>
<td>Excessive mouth movements</td>
<td></td>
</tr>
<tr>
<td>Raises eyebrows</td>
<td></td>
</tr>
<tr>
<td>Stares</td>
<td></td>
</tr>
<tr>
<td>Tears flow easily</td>
<td></td>
</tr>
<tr>
<td>Grins</td>
<td></td>
</tr>
<tr>
<td>Smiles</td>
<td></td>
</tr>
</tbody>
</table>


** No subheadings appear for this category in the original.
APPENDIX U (continued)

Molar Impression
Shows empathy or sympathy
Forceful personality
Frustrated air
Positive learning situation, student eager, interested
Negative learning situation: students turned off
Neutral learning situation: if you want to learn, ok; if not, it's your business
Teacher lectures, little student discussion
Negative use of time
Noisy room, teacher ignoring

Hands
Clasped
In pockets
Fists
Juxtapositional
Preening
Restless
Stroking face
Touching face
Tapping, drumming
Toying with objects
Tremor
Scratching body
Immobile hands
Touch jewelry

Teacher Sitting
Sits while teaching
Immobile
Relaxed
Rigid, tense

Use of Nonverbal
Used a lot
Used moderate amounts
Used little or none
Gave directions verbally
Gave directions nonverbally
Sarcastic verbally
Sarcastic nonverbally
Gave verbal reinforcement
Gave nonverbal reinforcement
Gave little reinforcement

Quasi-Courtship Used *
Quasi-Courtship Disclaimers *

* No subheadings appear in the original.
GRANT AND HENNINGS' CATEGORIES OF INSTRUCTIONAL MOTIONS*

1.0 Conducting

A teacher physically conducts a class by involving one, some, or all of his students in the lesson. In conducting he uses motions that enable him to control student participation and obtain attending behavior.

1.1 Controlling Participation. Physical motions control participation by focusing attention on materials, objects, persons, or even symbolic representations. These motions also indicate who the participants should be, when they should participate, and for how long; in a sense they halt or exclude interaction, elicit a physical response, rate a response, or answer the verbal or non-verbal inquiries of students. In addition, the motions regulate the flow, speed, and intensity of the verbal interaction. Examples, taken from actual classroom performances, are:

- moving the head to survey the group
- pointing to a child to begin
- turning to focus on a child
- pointing the microphone from a tape recorder at a child to indicate begin
- using index finger to connect one child's remarks to another child's
- leaning forward toward a child
- cocking head in a questioning way
- cupping hand behind ear
- shrugging shoulders
- raising hand to communicate "Would you raise your hand when you want to speak?"

1.2 Obtaining Attending Behavior. Obtaining attending behavior is another aspect of the conducting act. Motions that obtain attending behavior usually occur prior to the launching of a lesson or during a transitional period within the lesson. They tend to vary from teacher to teacher; but in essence, they are all used for the same purpose—to acquire a spreading stillness or period of

* Grant and Hennings, The Teacher Moves, pp. 11-15.
tranquility when every eye is focused on the teacher. Such motions are also used to gain the attention of a child who is misbehaving or a group of children who are not conforming to the established behavior pattern. Some examples are:

- clapping hands to gain the attention of the group
- tapping bell
- playing a note on the piano
- placing finger to lips
- holding up hand toward child to indicate: stop misbehaving
- clicking the light switch
- touching child on shoulder
- walking toward front of the room and standing still
- holding up hand to class group: quiet down
- pushing down start button for recording purposes: please be quiet because we are recording

That conducting motions can occur in repetitive patterns is evident. A cycle may get under way with the tapping of a bell to obtain attending behavior. The tap may be followed by surveying, pointing, nodding motions. Such a sequence can be repeated over and over again during a lesson.

2.0 Acting

A teacher uses bodily motion to amplify and clarify meanings he is trying to communicate. These motions emphasize or illustrate; in combination they also enable a teacher to make meanings more clear by the complete acting out of words, concepts, or objects, as in role playing and pantomime.

2.1 Emphasizing. To emphasize a word or group of words a teacher may move his hand as he says the important words. He may swing his head to give emphasis to a word as when he says "No!" to a child. Sometimes he may move his entire torso, as when he moves his body to emphasize the rhythmic flow of language. And sometimes he may gesture with a microphone, chalk, or pointer to emphasize one aspect of the lesson. Some examples are:
moving finger up and down as he speaks
giving head a sharp jerk
moving hand as he says word

2.2 Illustrating. To illustrate a teacher may use
his hands to describe non-verbally some word, concept, or
object under consideration. For instance, a teacher may
move his hand in a circular pattern to describe what is
meant by a spiral; he may point to indicate a direction
in which the class should walk. Examples of illustrating
are:

- showing the movement of the wind
- showing the size or shape of an object
- indicating what time it is
- counting the number on his fingers
- illustrating concepts such as "to go away from"
  and "to go up"
- referring to someone who has previously spoken

2.3 Role Playing or Pantomiming. In a third type
of acting, role playing or pantomiming, the teacher actually
pretends to be an object, an animal, or a character. In
this respect his entire body gets into the act. Examples
of possible role playing motions are:

- taking on the role of an announcer
- imitating a tiger
- pretending to be a wilting daisy or a flat tire
- hopping like the bunny in the story
- playing dead

Although acting motions aid in the communicating
of meanings in the classroom, they also serve as interest-
provoking devices; and because they do engender interest,
they may enable a teacher to maintain student attention
after attention has been gained through conducting motions.
As a result of this dual function, acting motions serve a
valuable purpose in the classroom.

3.0 Wielding

The teacher interacts with objects, materials, or
parts of the room by using wielding motions.
APPENDIX V (continued)

3.1 Direct Wielding. A teacher may wield directly by touching, handling, or maneuvering "things" in the class. He wields directly when he is:

- picking up book, pen, pencil, poster, etc.
- flipping pages in book
- placing cover on the back of felt pen
- adjusting shades in the classroom
- placing globe on floor
- holding down rewind button on tape recorder
- placing book in lap
- using eraser to erase board
- writing words for his own use on paper while sitting at desk
- writing sentences on board to be used later in the lesson as an exercise or assignment

3.2 Indirect Wielding. A teacher may wield indirectly by surveying, scanning, looking at, or reading things in the classroom environment; in this instance, the teacher does not come into direct bodily contact with the materials, but rather makes motions as he brings his eyes to a point where they can focus on some written or concrete material. A teacher wields indirectly when he is:

- surveying or scanning books on shelf
- standing in front of bookshelf looking for a particular book
- looking down at book to read sentence
- dropping head toward book to check answer
- leaning over books on shelf to select book
- glancing at clock to check time
- looking down at watch to check time

3.3 Instrumental Wielding. The teacher also wields when he makes motions that enable him to interact with the physical environment of the classroom. These motions involve movement toward objects, materials, or part of the room. Because these motions are instrumental to the actual maneuvering of objects or materials, they can be called instrumental wieldings; a teacher wields instrumentally when he is:

- walking back to desk
- walking over to bookshelf
- turning to write an assignment on easel or board
APPENDIX V (continued)

for use later on in the lesson
walking over to tape recorder to turn off the machine

All wielding motions are not necessarily carried through to a logical, intended end. For instance, a teacher may begin to walk toward the tape recorder in a motion that would be classified as "instrumental to wielding" but never get to complete the action and turn on the recorder. Some other classroom event or a simple change of mind may interfere with the completion of the task. All wieldings, therefore, are not productive in terms of carrying the teaching step by step to an end point; some wieldings might even be considered abortive.

Just because a teacher's body comes into contact with an object does not mean that his motion involves a wielding act. A teacher often comes into physical contact with objects in the environment when he is conducting, especially when he is controlling participation. When he touches the chalkboard just beneath a word written there, he may be focusing attention on that particular word; and thus it is a conducting act he is performing rather than a wielding act.
**APPENDIX W**

**FRENCH AND PARKER'S**

**STUDENT BEHAVIOR INDEX**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SELF-DIRECTIVE</strong></td>
<td>1. DIRECTS TALK TO THE TEACHER. Raises hand to speak and/or speaks to teacher without prompting. The student may ask questions, request permission, relate personal experience or share his own ideas.</td>
</tr>
<tr>
<td></td>
<td>2. MAKES SELF-INITIATED NONVERBAL BEHAVIOR. Walks around the room, sharpens pencil, obtains materials or performs other self-directed activities. Writes, draws, reads or moves independently.</td>
</tr>
<tr>
<td></td>
<td>3. DIRECTS TALK TO PEERS. Begins conversation with classmates without teacher direction. Student may ask peer for help or materials, share information or relate thoughts and experiences.</td>
</tr>
<tr>
<td></td>
<td>4. RESPONDS TO PEERS. Makes a verbal or nonverbal response to classmate-initiated conversation. Student may listen and/or comply with the talk.</td>
</tr>
<tr>
<td><strong>STUDENT BEHAVIOR</strong></td>
<td>5. WORKS READING AND WRITTEN ASSIGNMENTS. Completes assignments of the teacher by reading, writing or other nonverbal behavior required to satisfy requirements.</td>
</tr>
<tr>
<td></td>
<td>6. MAKES VERBAL REPLY TO TEACHER. Answers a question, reads aloud or exhibits other verbal behavior in response to teacher direction or question. (If student makes an unsolicited comment after teacher talk use Category 1.)</td>
</tr>
<tr>
<td></td>
<td>7. LISTENS-FOLLOWS DIRECTIONS IN NONVERBAL BEHAVIOR. Gives physical attention, moves or takes a physical position in response to teacher direction. Response may be getting out books, moving a chair or getting in line.</td>
</tr>
</tbody>
</table>

* Parker and French, "A Description of Student...," p. 280.
<table>
<thead>
<tr>
<th>TEACHER BEHAVIOR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8. LECTURES, GIVES DIRECTIONS, CRITICIZES, JUSTIFIES AUTHORITY OR Restricts BEHAVIOR NONVERBALLY. Talk by the teacher in the act of instructing or intending to change or control student behavior. Facial expressions, gestures and other nonverbal behaviors that restrict student behaviors are also included.</td>
<td><strong>DIRECT</strong></td>
</tr>
<tr>
<td>9. ACCEPTS FEELINGS AND IDEAS, PRAISES, ASKS QUESTIONS OR ENCOURAGES BEHAVIORS NONVERBALLY. Talk and nonverbal cues by the teacher which accepts, uses or encourages a greater degree/variety of student behaviors.</td>
<td><strong>INDIRECT</strong></td>
</tr>
<tr>
<td>10. CONFUSION AND MISCELLANEOUS. Periods of activity in which verbal communication cannot be understood or nonverbal behavior does not fit other categories.</td>
<td></td>
</tr>
</tbody>
</table>

* Parker and French, "A Description of Student...", p. 280.
APPENDIX X
SCHERER'S VERBAL/NONVERBAL TRANSCRIPTION MODEL*

\[
\begin{array}{cc}
\text{(Sq-)} & \text{(-Sq)} \\
\uparrow & \uparrow \\
\downarrow & \downarrow \\
M-M. & M-hm.
\end{array}
\]

\[
\text{\(2\text{f}+y\text{i}h\text{z}\)} \quad \text{1 2 2\#}
\]

Four years.

\[
\begin{array}{cc}
\text{Sq-} & \text{-Sq} \\
\uparrow & \uparrow \\
Q & Q
\end{array}
\]

\[
\text{\(2\text{ay}+\text{f}+\text{nk}\)} \quad \text{\(2\text{hi}y+z+\text{kr\=n}i+k+\text{æ}+\text{l}k\=s\)} \quad \text{\(2\text{h}\=l\=k\)}
\]

I think he's a chronic alcoholic.

\[
\begin{array}{cc}
\text{(O-)} & \text{(-O)} \\
\uparrow & \uparrow \\
Q & Q
\end{array}
\]

\[
\text{\(2\text{in}+\text{now}\)} \quad \text{\(2\text{v}+\text{emb}\)}
\]

...in November

And,

APPENDIX Y

KNAPP'S GLOBAL ANALYSIS CATEGORIES*

GLOBAL ANALYSIS: INITIAL PHASE
(Recording First Impressions)

The Environment. Are there any environmental stimuli likely to affect this interaction? Is the temperature going to be a factor? How about the number of other people around the two interactants? How will these other people influence what the two interactants may do— even if they do not say anything? Will the colors and general decor influence this interaction? How much space is available between and around the communicators? What architectural factors may influence what happens? Chairs (soft-hard)? Tables? Walls? Desks? Out of all the available places in the immediate environment, why might the interactants have chosen the exact place they did? Does it seem like a familiar environment for both parties? Do they appear to feel "at home"? What behavior can be expected in this environment?

The Participants. Will the sex of the participants likely affect the interaction? How? Will age have any influence on what happens? How about the status or authority relationships involved? How do the participants look? Is attractiveness going to be a factor? Will hair style or body size affect the interaction? How? What is the role of dress in this interaction? Does the participants' dress meet expectations for the environment, their roles and mutual expectations? Can any odors be detected? Are the participants aware of them? Are there any differences in education, occupation, or socioeconomic status which may affect the communication behavior? How? Does race or cultural background play any major part in interpersonal behavior in this situation? Will artifacts such as lipstick, glasses, etc., affect participant reactions to any significant degree? What is the relationship of these two participants to one another? Do they have any previous experience with each other which will likely be influential here? Do they seem to like each other? Why? Do the participants enter this transaction with compatible goals or purposes? What information do the participants bring to this

subject on this occasion?

As an observer, you must recognize that some of these initial observations and hypotheses may change as the interaction progresses—a woman may remove her glasses; a man may take off his ring; or attitudes may not be as similar as predicted. Observers should be prepared to note such changes.

GLOBAL ANALYSIS: INTERACTION PHASE
(Recording Ongoing Verbal-Nonverbal Responses)

Touching Behavior. Is there any physical contact at all? If so, does it seem to be deliberate or accidental? Does this action seem to be motivated by some specific purpose—e.g., reinforcing a point? If there is no contact, why? Did the situation call for contact or no contact? Was contact made only at special times during the interaction? How frequent was the contact? How long did it last? Who initiated the contact? What was the apparent effect on the person being touched?

Facial Expressions. Do either or both communicators have a relatively consistent facial expression in this situation? Are they generally communicating one attitude or emotion with their facial expressions? Were there gross changes at certain points in the conversation? What might have accounted for such gross facial changes—verbal or nonverbal behavior? Were there times when one person's facial expression elicited a similar expression from the other person? Did you see any "micromomentary" or fleeting facial expressions which suggested attitudes contrary to those being expressed verbally? At what points did you notice expressions which would generally be described as frowning or sad, smiling and happy, angry, anxious, impatient, bored, puzzled, serious, or surprised? Did the facial expressions differ in intensity at various points in the transaction? Did the facial expressions seem "genuine"? If so, why? If not, why not?

Eye Behavior. Is there generally a lot of visual contact or not very much? Why? Does one person look away more than the other? Why? Do one or both participants seem
to stare or extend eye contact beyond "normal" limits? Is there a pattern to the places a person looks when he does not look at the other person? If so, can you explain why this pattern may occur? Is there any excessive blinking by one or both parties? At what points is eye contact most evident? Not evident? What effect does eye contact or lack of it seem to have on the other participant?

Posture-Position. Do both participants assume the same posture? Why? Are both standing? Sitting? If one is standing and one is sitting, how does this relate to their respective roles in this situation? Does the assumed posture seem to be relaxed or tense? Does this change during the course of the interaction? If so, why? Are one or both participants leaning back? Leaning forward? What does this suggest? Are the participants facing head-on? At an acute angle? At an obtuse angle? Side by side? Have they arranged their bodies to block others from entering their conversation? What is the relative distance used for communicating-close, medium, far? Do leg and arm positions communicate impenetrability or coldness? Do leg positions suggest inclusion? Are one person's changes in posture matched by the other person? How long do the participants maintain a given posture? Why do they change?

Vocal Behavior. Are both participants using the appropriate level of loudness for the situation? Does one person have an unusually soft or loud voice? What is the effect on the other person? Is talking rate a factor in this situation? How? Are there times when you perceive an incongruity between vocal cues and verbal statements? What is the effect on the other participant? Do one or both participants have fairly deep voices? Fairly high voices? Are there periods of silence beyond normal pauses? Why? Do vocal cues such as laughing or groaning play a significant part? What about a quivering or quaking voice during periods of nervousness? Does vocal quality such as hoarseness seem to affect the total impression of one or both of the participants? Are there excessive nonfluencies? With what effect?

Physical Movement. What were the significant movements in the event? Did head nodding play a major part? How? How about hand gestures? Did one participant seem to be moving in on the other while the other moved back? Was
there generally a lot of movement or not too much? Why? Did hand or finger movements play a part? How? Did hand or foot cues suggest clues to deception? How about foot tapping? Were there major changes in posture? How frequent were they? Did you observe any cues for terminating the conversation—e.g., a participant looking at his watch, making motions to get up or move out the door, taking a deep breath, frequently looking around and out the window, etc.?