

GENERAL VS. SPECIFIC NONVERBAL SENSITIVITY AND CLINICAL TRAINING

by
Ross Buck and Jay Lerman
University of Connecticut

ABSTRACT

General nonverbal sensitivity is defined as one's ability to decode accurately the nonverbal behavior of persons whom one does not know; specific nonverbal sensitivity is one's ability to decode a person with whom one has a specific relationship. Three undergraduate and four graduate speech clinicians judged the kinds of slides viewed by seven clients, including their own client, from videotapes of the clients' facial expressions and gestures to the slides. No difference was found between undergraduates and graduates in general nonverbal sensitivity, defined as their ability to decode a standardized test of nonverbal receiving ability and their ability to decode the clients of other clinicians. Graduate clinicians were superior to undergraduates in specific nonverbal sensitivity, defined as their ability to decode their own client.

The many varieties of clinical practice all involve working closely with people, and it has long been known that a clinician's ability to accurately "read" emotion information in others is a critical skill. This ability has gone under many names, although "empathy" is perhaps the broadest and most widely used. It would appear that a valid measure of such an ability would have many uses — in predicting success as a clinician, in evaluating the efficacy of training techniques and programs, etc. However, despite many attempts, there is at present no widely accepted measure of empathy of proven validity.

Recent research in nonverbal communication has suggested a new and potentially measurable way in which to conceptualize empathy: in terms of one's ability to make accurate assessments of another person via that person's nonverbal behavior. Recently, a number of tests of "nonverbal sensitivity" have been developed from research in nonverbal communication. These include Ekman's Brief Affect Recognition Test (BART: Ekman and Friesen, 1974), Rosenthal's Profile of Nonverbal Sensitivity (PONS: Rosenthal et. al., 1974; Hall et. al., 1978), Buck's Communication of Affect Receiving Ability Test (CARAT: Buck, 1976), Archer's Social Interpretations Task (SIT: Archer and Akert, 1977), and the Affective Sensitivity Test developed by Kagan and his colleagues (Campbell, Kagan, and Krathwohl, 1971; Danish and Kagan, 1971). These instruments have been constructed using a variety of techniques and points of view, but all employ visual representations of nonverbal behavior (photographs, film, or videotape) about which viewers make judgements whose accuracy can be assessed. Most of these instruments have shown at least moderate internal consistency and significant but generally weak relationships with variables presumed to be related to nonverbal sensitivity (i.e. gender, academic major, personality). Unfortunately, the instruments have not shown strong relationships with one another: Buck and Carroll (Note 1) found a +.02 correlation between CARAT and the long form of PONS; Klaiman (Note 2) found a significant but low correlation of +.16 between CARAT and the "face" score of the PONS short form; and Kagan (Note 3) reported that a revised form of the Affective Sensitivity Test did not correlate strongly with the original form. Also, these instruments have not always proved sensitive to those phenomena of greatest interest to the clinicians: i.e. most have not demonstrated differences between clinicians and non-clinicians, and have not shown relationships with clinical training or expertise. Hall et. al. (1978) for example report that the PONS scores of clinical psychologists are comparable to those of U.S. college students.

One of the potential problems with these measures is that they assess sensitivity to the nonverbal behavior of persons that the receiver has never met and has no relationship with. Such a sensitivity to the "generalized other" may be quite different from an individual's ability to decode the expressions of a person with whom he or she has an ongoing relationship. For example, it may be that clinicians develop a special sensitivity to their own clients, and that their ability to decode the expressions of their clients increases with clinical training without necessarily generalizing to other persons. Thus, "specific nonverbal sensitivity," defined as one's ability to accurately decode the nonverbal behavior of a person with whom one has some specific relationship, may differ in significant ways from "general nonverbal sensitivity," defined as one's ability to decode the nonverbal behavior of persons whom one does not know.

The present study was designed to compare the general and specific nonverbal receiving ability of undergraduate and graduate speech clinician trainees. The first part of the study measured general nonverbal receiving ability: the performance of undergraduate and graduate speech pathology students on the CARAT instrument was compared with the performance of liberal arts undergraduates in general. The second part of the study measured specific nonverbal receiving ability: it assessed the ability of graduate and undergraduate speech clinicians to accurately "decode" the nonverbal facial/gestural responses of seven young (3-5 year old) clients, including their own client. The receiving ability of the clinicians was compared to the ability of the client's own mother to decode his or her nonverbal expressions.

The study investigated three major hypotheses: (a) that there will be no relationship between general nonverbal sensitivity and clinical training, (b) that specific nonverbal sensitivity will be greater than general nonverbal sensitivity (i.e. that known persons will be decoded more readily than strangers), and (c) that specific nonverbal sensitivity will be related to clinical training.

METHOD — STUDY ONE

Nonverbal communication was measured in this study via a slide-viewing paradigm (Buck, 1978) in which a "sender" views and comments on a series of emotionally-loaded color slides while being videotaped by a hidden television camera. "Receivers," viewing the sender's facial expressions and gestures, attempt to guess what kind of slide the sender views on each trial. A number of studies have demonstrated the usefulness of this technique, both with undergraduates and preschool children as senders (Buck, Savin, Miller, and Caul, 1972; Buck, Miller, and Caul, 1974; Buck, 1975; 1977).

The CARAT test employs as "items" videotaped sequences showing the facial/gestural expressions of male and female undergraduates to four kinds of emotionally-loaded color slides: **Sexual** slides showing nude males and females; **Scenic** slides showing pleasant landscapes; **Unpleasant** slides showing persons with severe burns and facial injuries; and **Unusual** slides showing strange photographic effects (cf Buck, 1976). The 32 videotaped items are balanced with respect to sex of sender and type of slide. The test is designed for group administration, with standard instructions including examples of the slides shown to the senders being presented via videotape at the beginning. The task of the subject is to watch the sender's facial expressions and gestures during each 20-25 second sequence and attempt to guess what kind of slide the sender was viewing. The subject then indicates his/her answer on a prepared answer sheet in the 15 seconds between sequences. The resulting measure of nonverbal receiving ability is the percent of slides correctly identified (Chance = 25%).

The CARAT instrument was administered to 11 first year and 15 second year graduate clinical trainees in speech pathology. Their responses were compared with those of 44 liberal arts undergraduates and 8 undergraduates majoring in speech pathology. All subjects were female.

RESULTS AND DISCUSSION

The results of this study are presented in Table 1. There were no significant differences between the groups tested, and indeed the average scores were virtually identical. Thus the CARAT instrument, like other tests of "general nonverbal sensitivity," could not differentiate between speech clinicians and non-clinicians or between levels of clinical training.

Table 1.
CARAT Test Scores

Category	n	Percent correctly identified (Chance — 25%)
Liberal arts undergraduates	44	53.20%
Undergrad. speech pathology	8	53.91
First year grad. speech pathology	11	53.11
Second year grad. speech pathology	15	53.30

METHOD — STUDY TWO

Three female and four male clients at the University of Connecticut Speech Clinic, aged 52 to 87 months (Median = 70 months) were senders in the slide-viewing technique. They were brought to the laboratory by their mother, and stayed with a female undergraduate experimenter (E1). The mother was seated in another room in front of an 18" television monitor and given a rating form with 12 numbered rows and four columns labeled "familiar people," "unfamiliar people," "unpleasant," and "unusual." A second experimenter (E2) explained that the child would be shown a series of color slides while his/her facial expressions and gestures were being videotaped. E2 would turn on the videotape recorder (without audio) just before a slide was presented and the child would look at the slide for 15 seconds. The slide would then be removed and the recorder turned off, so that the image would disappear from the screen. At that point, the mother was asked to try to guess what kind of slide her child had seen. Four kinds of slides were to be presented: **Familiar People** slides showed a person known to the child — his or her clinician; **Unfamiliar People** slides showed persons unknown to the child; **Unpleasant** slides showed pictures found to be mildly unpleasant to children; **Unusual** slides showed strange photographic effects. The mother was shown examples of each type of slide, and her permission to continue with the experiment was again solicited. None of the mothers chose to discontinue the study. The mother was asked to place a mark in the column indicating what kind of slide she thought the child viewed on each trial.

While the mother received her instructions, the child was first asked about toys and games, and then was told that he or she would see some slides. The child sat facing a 12" x 12" back-lighted projection screen. A carousel slide projector was focused on the screen from across the room. The back-lighted arrangement allowed the use of normal room illumination. A total of 12 slides was presented, including three in each of the content categories. Two slide orderings were used according to a random schedule selected before the experiment. Slide presentation was controlled from the next room by E2: E1 simply turned on the projector and sat down beside the child facing the screen. When a slide was presented, E1 counted five seconds using a prominent clock as a guide. If the child had made no spontaneous verbal

response by this time, E1 said "Who's that?" or "What's that?" depending upon the content of the slide. E1 did not initiate any other interaction with the child after the slide-viewing task had begun, although she responded to interaction initiated by the child in a friendly and natural way. While the slide was on, E1 kept her attention directed toward the slide and did not look at the child, to help keep the child's attention directed toward the slides. The child's facial and gestural expressions were recorded by a camera focused on the child through a one-way mirror. The mirror was covered with a partially closed curtain in the child's room. The child's responses were viewed (without audio) and judged by the mother and recorded for later viewing by the clinicians.

The videotapes of the seven children were viewed by seven clinicians in two group viewing sessions. The clinicians were seated facing two 18" television monitors which assured each an excellent view. They were given the same general instructions the mother had been given, and rated what kind of slide they thought the child viewed on similar prepared forms. The forms were collected after each viewing, although it was stressed that different slide orderings had been used with different children to discourage attempts to recall previous answers. In each case one of the children shown was the clinician's own client, but no specific mention was made of this fact. The study was presented as a simple continuation of Study One, but using clinic children rather than adults as senders.

Three of the clinicians who participated in this study were undergraduates, and four were graduate students. Two of the undergraduates and two of the graduates had boys as clients, the rest had girls. The data of greatest interest were (a) whether the graduate and undergraduate clinicians differed in general nonverbal sensitivity — i.e. whether they showed comparable accuracy while decoding the clients of other clinicians; (b) whether specific nonverbal sensitivity was greater than general nonverbal sensitivity — i.e. whether a given client was decoded more accurately by his/her own clinician than by clinicians not familiar with that particular client — and (c) whether the difference in specific nonverbal sensitivity varied with clinical training — i.e. whether the graduate clinicians were relatively better at decoding their own client than were the undergraduate clinicians. The mothers' decoding scores and the average group decoding scores serve as reference points in this regard, allowing comparisons between graduate and undergraduate clinicians in cases where their client's sending accuracy might differ — these decoding scores can be assumed to reflect, albeit imperfectly, baseline measures of the child's sending accuracy.

RESULTS

The results of study two revealed no significant difference between graduate and undergraduate clinicians in decoding the clients of other clinicians: the graduate clinicians were correct 42.8% of the time, the undergraduates were correct 41.8% of the time. The mother viewing her own child was correct an average of 50.6% of the time: this is slightly higher than the 42.3% averaged by all of the clinicians rating the clients of others ($p = .086$ by Randomization Test).

Table 2.

The percent of time that the child's mother, the child's own clinician and other clinicians correctly identify the content of the picture being seen by the child. (Chance = 25%).

Client	Own Mother	Own Clinician	Other Clinicians
Clients seen by undergraduate clinicians			
1	67%	33%	38%
2	33	25	28
3	75	33	47
Average	58.3%	30.6%	36.8%
Clients seen by graduate clinicians			
1	42	50	53
2	36	67	53
3	58	58	45
4	42	50	33
Average	44.7%	56.3%	46.4%

There was evidence that the graduate clinicians were superior to the undergraduate clinicians in rating their own clients. The data for this analysis are presented in Table 2. Due to the small numbers, the data were converted to frequency form and Fisher Exact Tests were performed (Siegel, 1956). The analysis revealed that the graduate clinicians consistently decoded as accurately as, or more accurately than, the child's mother ($p = .029$ by Fisher Exact Test). The graduate clinicians consistently decoded their own client more accurately than they decoded the clients of other clinicians, while undergraduate clinicians were consistently less accurate with their own clients ($p = .05$, Fisher Exact Test). There was a tendency which did not attain statistical significance for graduate clinicians to decode their own client more accurately than did other clinicians, while undergraduates did more poorly with their own client than did other clinicians ($p = .114$, Fisher Exact Test).

GENERAL DISCUSSION

There was no evidence that clinical training is related to general nonverbal sensitivity in either study one or study two: Study one showed no differences between undergraduate, first year and second year graduate clinicians, and undergraduate nonclinicians on the CARAT instrument. Study two showed no difference between graduate and undergraduate clinicians in the decoding of the clients of other clinicians. However, study two showed suggestive differences between graduate and undergraduate clinicians in their ability to decode their own clients. The pattern of results shown in Table 2 was not entirely expected. It was hypothesized that specific nonverbal sensitivity would be higher than general nonverbal sensitivity in both undergraduate and graduate clinicians, with the latter showing a greater difference. Instead, it was found that, whereas specific sensitivity appeared to be greater than general sensitivity among graduates, it was **lower** than general sensitivity among undergraduates. Perhaps attempting to decode their own client produced anxiety among the latter, resulting in poorer decoding scores. Nevertheless, the results support the suggestion that specific nonverbal sensitivity is different in important respects from general nonverbal sensitivity, and that clinical training may increase an individual's ability to "read" his or her own client without affecting sensitivity to people in general.

The small number of client-clinician pairs involved in this study is, of course, a major albeit unavoidable problem. Other limitations include the fact that only female clinicians were employed, that the clients were children, and that the study involved speech clinicians only. Further studies in other kinds of therapy settings, with different kinds of more numerous clinicians and clients are clearly necessary in order to fully explore the implications of the difference between specific and general nonverbal sensitivity.

ACKNOWLEDGEMENTS

The authors wish to thank Sandra Ulrich, Director of the University of Connecticut Speech Clinic, and Betty Liles for their co-operation during this experiment. Request for reprints should be addressed to Ross Buck, Communication Research Program U-85, University of Connecticut, Stous, CT. 06268.

REFERENCE NOTES

1. Buck, R. and Carroll, J. CARAT, and PONS: Correlates of two tests of nonverbal sensitivity. Unpublished paper, 1974.
2. Klaiman, S., Selected perceptual, cognitive, personality and socialization variables as predictors of nonverbal sensitivity. Unpublished doctoral dissertation, University of Ottawa, 1979.
3. Kagan, N. I., Affective sensitivity test: Validity and reliability. Paper presented at the meeting of the American Psychological Association, San Francisco, 1978.

REFERENCES

- Archer, D. and Akert, R.M., Words and everything else: Verbal and nonverbal cues in social interpretation. **Journal of Personality and Social Psychology**, 35, 443-449, (1977).
- Buck, R., Nonverbal communication of affect in children. **Journal of Personality and Social Psychology**, 31, 644-653, (1975).
- Buck, R., A test of nonverbal receiving ability: Preliminary studies. **Human Communication Research**, 2, 162-171, (1976).
- Buck, R. W., Nonverbal communication of affect in preschool children: Relationships with personality and skin conductance. **Journal of Personality and Social Psychology**, 35, 225-236, (1977).
- Buck, R., The slide-viewing technique for measuring nonverbal sending accuracy: A guide for replication. **Catalog of Selected Documents in Psychology**, 8, p. 62, (1978).
- Buck, R. W., Miller, R.E., and Caul, W. F., Sex, personality and physiological variables in the communication of emotion via facial expression. **Journal of Personality and Social Psychology**, 30, 587-596, (1974).
- Buck, R., Savin, V. J., Miller, R. E., and Caul, W. F., Nonverbal communication of affect in humans. **Journal of Personality and Social Psychology**, 23, 362-371, (1972).
- Campbell, R. J., Kagan, N., and Krathwohl, D. R., The development and validation of a scale to measure affective sensitivity (empathy). **Journal of Counseling Psychology**, 18, 407-412, (1971).
- Danish, S. J., and Kagan, N., Measurement of affective sensitivity: Toward a valid measure of interpersonal perception. **Journal of Counseling Psychology**, 18, 51-54, (1971).

BUCK, LERMAN: SENSITIVITY AND CLINICAL TRAINING

- Ekman, P., and Friesen, W. V., Nonverbal behavior and psychopathology. In R. J. Friedman and H. M. Katz (Eds.) **The Psychology of Depression: Contemporary Theory and Research**. New York: Wiley, 203-232, (1974).
- Hall, J., Rosenthal, R., Archer, D., DiMatteo, M. R., and Rogers, P., Profile of nonverbal sensitivity. In P. McReynolds (Ed.) **Advances in Psychological Assessment**. Vol. 4, San Francisco: Jossey-Bass, (1978).
- Rosenthal, R., Archer, D., DiMatteo, M. R., Koivumaki, J., and Rogers, P., The language without words. **Psychology Today**, 8, 64-68, (1974).
- Siegel, S., **Nonparametric Statistics for the Behavioral Sciences**. New York: McGraw-Hill, (1956).