

VALIDITY OF THE PRCA AS AN INDEX OF ORAL COMMUNICATION APPREHENSION

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This paper reviews the research which has employed the PRCA to measure the construct of oral communication apprehension. It is concluded that the PRCA is a reliable and valid measure of that construct.

IN 1970 I reported the development of a self-report measure of oral communication apprehension called the Personal Report of Communication Apprehension (PRCA).¹ Oral communication apprehension is defined as "an individual's level of fear or anxiety associated with either real or anticipated (oral) communication with another person or persons."² The original report included evidence for the reliability of the PRCA, but little evidence for validity (other than face validity) was present. Since that time the PRCA has been employed in numerous studies with many, varied samples.³ High reliability has been observed consistently; yet, the validity of the PRCA has not been demonstrated systematically. The purpose of this paper, therefore, is to examine the claim for validity of the PRCA in light of the results of these studies.

It has been argued by many that the best way to find out how someone feels about something is simply to ask the person. The current wide use of self-report attitude scales and personality

measures suggests the broad acceptance of this view. However, there are two instances when this straightforward approach will yield invalid data. The first is when the individual is not aware of her or his own feelings. The second is when the individual is not motivated to give an accurate report. In the present case, if the subject is told that communication apprehension is a bad thing, the subject who is apprehensive may falsify responses to the measure to indicate low apprehension. On the other hand, there are instances where people who are not apprehensives will falsify high scores. I have observed two such instances.

At Pennsylvania State University special classes were instituted for highly apprehensive students. Word spread that these classes were much less demanding than the regular required course. A substantial number of phony reticents began appearing in the classes. At Illinois State University an extensive program of systematic desensitization was implemented to help students overcome communication apprehension. The program was highly successful and very well received by the students.⁴ Although the mean and variance of apprehension scores had remained stable for five semesters (almost 10,000 students), the semester after large-

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¹ James C. McCroskey, "Measures of Communication-Bound Anxiety," *Speech Monographs*, 37 (1970), 269-277.

² James C. McCroskey, "Oral Communication Apprehension: A Summary of Recent Theory and Research," *Human Communication Research*, 4 (1977), 78-96.

³ For a summary of this research, see McCroskey, "Oral Communication Apprehension: A Summary of Recent Theory and Research."

⁴ James C. McCroskey, "The Implementation of a Large Scale Program of Systematic Desensitization for Communication Apprehension," *Speech Teacher*, 21 (1972), 255-264.

scale implementation of the treatment program the proportion of supposedly highly apprehensive students increased from 20 percent to 68 percent.

The validity of a self-report measure depends on the context in which it is administered, but it also depends on the value of the responses given when they are not falsified or influenced by the measurement context. Empirical validity estimates, therefore, may be reduced by either of these factors. If lack of validity is observed empirically, the cause of this must be determined subjectively. However, if validity can be demonstrated empirically in a given case (or better, several cases), such results indicate that neither element leading to invalidity was present in that case. More importantly, the result indicates that the measure should also provide valid results in future applications if care is taken to avoid demand characteristics that could lead to falsification of self-reports.

CONFIRMATION OF THEORETICAL PREDICTIONS

Probably the best indicator of the validity of a measure is the degree to which it can produce empirical results that are consistent with predictions based upon theory relating to the construct which the measure purports to tap. Theory related to oral communication apprehension is not yet fully developed; however, five major theoretical propositions concerning oral communication apprehension have been set forth⁵ and substantial research has been completed employing the PRCA to test these theoretical propositions. I will consider each of these propositions and the related research.

⁵ James C. McCroskey, "The Effects of Communication Apprehension on Nonverbal Behavior," *Communication Quarterly*, 24 (1976), 39-44.

Proposition 1. People vary in the degree to which they are apprehensive about oral communication with other people. This proposition represents an underlying assumption concerning the distribution of oral communication apprehension in the population. As suggested in the proposition, oral communication apprehension can vary from individual to individual and be on a continuum from extremely high to extremely low. This assumption has been supported in every report of research which has employed the PRCA, as well as in many unpublished studies. In the original report of the development of the PRCA, it was indicated that subjects' scores on the PRCA formed an approximately normal distribution employing the full potential range of scores.⁶ In that study, all of the subjects involved were college students. Subsequently, Moore has found a similar distribution among senior citizens.⁷ In over twenty studies with college student subjects, I have observed similar distributions. In addition, in one study involving 202 elementary and secondary teachers, and another study involving 384 elementary and secondary teachers, similar distributions were observed. In a recently concluded study involving 211 Federal employees in the Baltimore-Washington area, a similar distribution was observed. It is clear from these studies, then, that the PRCA does produce scores for oral communication apprehension that are in line with what would be theoretically expected.

In addition, it should be noted that in all of the writings concerning communication apprehension there is an implied assumption that this construct repre-

⁶ James C. McCroskey, "Measures of Communication-Bound Anxiety."

⁷ David L. Moore, "The Effects of Systematic Desensitization on Communication Apprehension in an Aged Population," M.S. thesis Illinois State 1972.

sents a trait of an individual, as opposed to a state condition. That is, a person who is a high oral communication apprehensive on one day would be expected to be a high oral communication apprehensive the next day, and the next week, as well. The test-retest reliability of the PRCA reported in the original article concerning its development is supportive of this underlying assumption. This assumption is supported even more strongly, because of the longer time-intervals involved, by several studies investigating treatment programs for people with high levels of communication apprehension to be discussed later. In these studies specific treatment procedures have resulted in lower PRCA scores, but control group subjects' PRCA scores have not changed significantly over substantial periods of time.

It should be stressed, however, that personality-type traits, such as communication apprehension, are not the same as physical traits such as eye color. While most physical traits are permanent, or at least require long periods of time for natural change to occur (such as hair color), personality-type traits can change over time as a result of environmental impact. Thus, if a person's level of communication apprehension was measured to be substantially higher (or lower) over a five-year period, this would not necessarily indicate a lack of validity for the measure. However, such change (without treatment intervention) over a two-month period would indicate a lack of validity. The key here is the idea that communication apprehension is conceived of as a *relatively* permanent, personality-type trait. The research to date supports that conception and suggests that the PRCA provides an appropriate measure of that relatively permanent trait.

Proposition 2. People with high oral communication apprehension seek to

avoid oral communication. This is probably the most central proposition in the theory relating to oral communication apprehension. It has long been known that people seek to avoid situations which cause them anxiety. Thus, it would be expected that people who are apprehensive about oral communication would try to avoid circumstances which would require them to communicate orally. Research employing the PRCA has consistently supported this proposition. McCroskey and Leppard found that high communication apprehensives chose housing accommodations (whether they be dorm rooms, trailers, or houses in a suburban area) that were in areas that had been identified through previous research as requiring less interaction than other housing areas. An opposite pattern was found for low communication apprehensives.⁸ In a study of seating position in a small group setting, Weiner found a similar pattern. High communication apprehensives selected seats that had been identified through previous research as requiring less interaction than other seats while low communication apprehensives selected in an opposite manner.⁹ Daly and McCroskey found that high communication apprehensives indicated a clear preference for occupations that had low oral communication demands while low oral communication apprehensives indicated a strong preference for occupations which would require high communication involvement.¹⁰ In all of these studies the

⁸ James C. McCroskey and Thomas Leppard, "The Effects of Communication Apprehension on Nonverbal Behavior," paper presented at the Eastern Communication Association, New York, 1975.

⁹ Allen N. Weiner, "Machiavellianism as a Predictor of Group Interaction and Cohesion," M.A. thesis West Virginia 1973.

¹⁰ John A. Daly and James C. McCroskey, "Occupational Desirability and Choice as a Function of Communication Apprehension," *Journal of Counseling Psychology*, 22 (1975), 309-313.

hypotheses based on this general proposition were supported.

In research that was a follow-up of the Daly and McCroskey study, a hypothesis was tested that provides an expansion of this proposition. It was hypothesized that people in occupations requiring a great deal of oral communication would be differentially satisfied with their employment based upon their level of oral communication apprehension. As hypothesized, it was found that high communication apprehensives among elementary and secondary teachers and among Federal civil service employees were less satisfied with their positions than were low oral communication apprehensives.¹¹

A similar line of thought led McCroskey and Andersen to hypothesize that students with high communication apprehension would prefer large lecture classes over small classes which permit (or require) extensive participation on the part of the student, while the preference pattern for students with lower communication apprehension would be reversed. Their results confirmed the hypothesis.¹² In another study of student behavior in the instructional environment, Scott, Yates, and Wheelless found that in a modified personalized system of instruction (PSI) the students with high communication apprehension were significantly less likely to seek the assistance of available tutors than were students with lower levels of communication apprehension.¹³ In still another

study of student behavior, McCroskey and Sheahan found that while students with low levels of communication apprehension chose seats in the front and center of a classroom with traditional, straight-row seating for 25 students, the students with high communication apprehension avoided those seats and instead chose seats on the periphery of the room, on the sides and in the back. The front and center area, of course, is the most accessible to the teacher and the place where a person is more likely to be called upon to participate.¹⁴ An extension of this research replicated the previous findings concerning classroom seating and also found that in semi-circular and modular seating arrangements the students with high communication apprehension avoided the seats in areas that would be likely to induce high interaction requirements.¹⁵

McCroskey and Sheahan have also investigated the social behavior of college students with regard to their level of communication apprehension. As hypothesized, they found that students with high communication apprehension as compared to those with lower communication apprehension were less likely to accept a blind date, interacted less with peer strangers, and were more likely to engage in exclusive (steady) dating.¹⁶ The latter finding was predicted on the basis that, for a person with high com-

Lawrence R. Wheelless, "An Exploratory Investigation of the Effects of Communication Apprehension in Alternate Systems of Instruction," paper presented at the International Communication Association, Chicago, 1975.

¹⁴ James C. McCroskey and Michael E. Sheahan, "Seating Position and Participation: An Alternative Theoretical Explanation," paper presented at the International Communication Association, Portland, Oregon, 1976.

¹⁵ James C. McCroskey and Rod W. McVetta, "Classroom Seating Arrangements: Instructional Communication Theory Versus Student Preferences," *Communication Education*, 27 (1978), 99-111.

¹⁶ James C. McCroskey and Michael E. Sheahan, "Communication Apprehension Social Preference, and Social Behavior in a College Environment," *Communication Quarterly*, in press.

¹¹ Raymond L. Falcione, James C. McCroskey, and John A. Daly, "Job Satisfaction as a Function of Employees' Communication Apprehension, Self-Esteem, and Perceptions of Their Immediate Supervisor," in *Communication Yearbook 1*, ed. Brent D. Ruben (New Brunswick, N.J.: Transaction, Inc., 1977), pp. 363-374.

¹² James C. McCroskey and Janis F. Andersen, "The Relationship Between Communication Apprehension and Academic Achievement Among College Students," *Human Communication Research*, 3 (1976), 73-81.

¹³ Michael D. Scott, Michael P. Yates, and

munication apprehension, it would be difficult to engage in the normal courtship behaviors leading to dates with a variety of persons, and, consequently, steady dating would be an attractive alternative to the option of interacting with a significant number of other people in order to secure dating partners. In an extension of this research McCroskey and Kretzschmar found that college graduates with high communication apprehension are more likely to marry immediately upon graduation than are graduates with lower communication apprehension.¹⁷ This effect was hypothesized on the basis of the presumed difficulty for the person with high communication apprehension to engage in courtship behaviors and the attractive alternative of marrying the person with whom the person had been dating steadily in college.

It is clear from this series of studies that the PRCA is able to predict communication avoidance behaviors that would be expected on the basis of the theory underlying the construct of communication apprehension. This provides a strong indication of predictive validity of the instrument.

Proposition 3. People with high oral communication apprehension engage in less oral communication than do less orally apprehensive people. One method of avoiding oral communication, as indicated above, is to withdraw from situations which require oral communication by modifying one's life style. However, most people are forced into situations where oral communication is expected, even though they may prefer otherwise. Under such circumstances the theory underlying the construct of oral communi-

¹⁷ James C. McCroskey and Monika M. Kretzschmar, "Communication Apprehension and Marital Relationships of College Graduates: An Exploratory Investigation," paper presented at the Eastern Communication Association, New York, 1977.

cation apprehension would predict that these people would engage in less verbal activity. In short, the person can withdraw while still being present by remaining silent as much as possible. Six studies have specifically investigated this proposition. All six have produced essentially the same results: High oral communication apprehensives engage in less oral communication behavior than do low oral communication apprehensives.¹⁸ In addition, Hamilton found that high oral communication apprehensives engage in less self-disclosure than do low oral communication apprehensives, as would be expected.¹⁹ Similar results subsequently were obtained in two studies.²⁰ These studies once again provide strong support for the predictive validity of the PRCA in confirming the presence of hypothesized behaviors of high and low oral communication apprehensives.

Proposition 4. When people with high oral communication apprehension do communicate, their oral communication

¹⁸ Judith A. Wells and William B. Lashbrook, "A Study of the Effects of Systematic Desensitization of the Communicative Anxiety of Individuals in Small Groups," paper presented at the Speech Communication Association, New Orleans, 1970; Gail A. Sorensen and James C. McCroskey, "The Prediction of Interaction Behavior in Small Groups: Zero History Versus Intact Groups," *CM*, 44 (1977), 73-80; Paul R. Hamilton, "The Effect of Risk Proneness on Small Group Interaction, Communication Apprehension, and Self-Disclosure," M.S. thesis Illinois State 1972; Weiner; Raymond J. Fenton and Tim S. Hopf, "Some Effects of Communication Inhibition on Small Groups: Participation, Member Satisfaction, Perceived Effectiveness, Credibility, and Leadership," paper presented at the Speech Communication Association, San Francisco, 1976; and Frederic D. Glogower, "A Component Analysis of Cognitive Restructuring as Applied to the Reduction of Communication Apprehension," diss. West Virginia 1977.

¹⁹ Hamilton.

²⁰ James C. McCroskey and Virginia P. Richmond, "Communication Apprehension as a Predictor of Self-Disclosure," *Communication Quarterly*, 25 (1977), 40-43; and Lawrence R. Wheelless, Kathryn Nesser, and James C. McCroskey, "Relationships Among Self-Disclosure, Disclosiveness, and Communication Apprehension," paper presented at the Western Speech Communication Association, San Francisco, 1976.

behaviors differ from those of people who are less apprehensive. While the range of differences that might occur as a result of differing levels of oral communication apprehension is extremely large, only a few such differences have been empirically examined. Wells and Lashbrook²¹ and Weiner²² have observed that the comments of high communication apprehensives in a small group setting are much less relevant to the topic under discussion than are the comments of individuals with lower oral communication apprehension. In addition, as would be expected, Sorensen and McCroskey found that high oral communication apprehensives exhibited more tension in a small group interaction than did people with less oral communication apprehension.²³ In recent studies Powers found that high communication apprehensives included more rhetorical interrogatives (i.e., you know?, you see?, okay?) in their interaction with other people than did low apprehensives,²⁴ and Jablin and Sussman found that high communication apprehensive members of brainstorming groups were lower producers of original ideas than were the less apprehensive members of the groups.²⁵ Although considerably more research concerning this particular proposition is needed, the studies which have investigated the proposition and employed the PRCA have all been supportive. These results again provide support for a claim of predictive validity for the PRCA.

Proposition 5. As a result of their oral communication behavior, high oral com-

munication apprehensives are perceived less positively by others than are less apprehensive people. This proposition assumes that proposition 4 is correct, and that the differences specified in proposition 4 will be perceived negatively by other communicators in the same environment. Research applying the PRCA has been supportive of this proposition. Quiggins found that high oral communication apprehensives were perceived as both less credible and less interpersonally attractive than were low communication apprehensives, both by other high apprehensives and other low apprehensives.²⁶ Similar results have been observed in subsequent studies by McCroskey, Daly, Richmond, and Cox;²⁷ McCroskey and Richmond;²⁸ Fenton and Hopf;²⁹ Wissmiller and Merker;³⁰ and Richmond.³¹ Wenzlaff found that the perceived leadership ability of high communication apprehensives in a small group setting was substantially lower than that of individuals with lower communication apprehension.³² In a study

²⁶ James G. Quiggins, "The Effects of High and Low Communication Apprehension on Small Group Member Credibility, Interpersonal Attraction, and Interaction," paper presented at the Speech Communication Association, Chicago, 1972.

²⁷ James C. McCroskey, John A. Daly, Virginia P. Richmond, and Barbara G. Cox, "The Effects of Communication Apprehension on Interpersonal Attraction," *Human Communication Research*, 2 (1975), 51-65.

²⁸ James C. McCroskey, and Virginia P. Richmond, "The Effects of Communication Apprehension on the Perception of Peers," *Western Speech Communication*, 40 (1976), 14-21.

²⁹ Fenton and Hopf.

³⁰ Andrew P. Wissmiller and George E. Merker, "Communication Apprehension, Social Distance, and Interpersonal Judgments in Small Groups," paper presented at the Speech Communication Association, San Francisco, 1976.

³¹ Virginia P. Richmond, "An Investigation of the Relationship Between Trait and State Communication Apprehension and Interpersonal Perceptions During Initial and Later Acquaintance Stages of Dyadic Linkages," diss. Nebraska 1977.

³² Velma J. Wenzlaff, "The Prediction of Leadership: A Consideration of Selected Communication Variables," M.S. thesis Illinois State 1971.

²¹ Wells and Lashbrook.

²² Weiner.

²³ Sorensen and McCroskey.

²⁴ William G. Powers, "The Rhetorical Interrogative: Anxiety or Control?" *Human Communication Research*, 4 (1977), 44-47.

²⁵ Frederick M. Jablin and Lyle Sussman, "An Exploration of Communication and Productivity in Real Brainstorming Groups," *Human Communication Research*, in press.

employing seventh grade students, Hurt and Joseph found that high communication apprehensives were less likely to be turned to as opinion leaders or to be selected as friends than were low communication apprehensives.³³ Similar results have been observed for senior high school students³⁴ and college students.³⁵ Communication apprehension has also been found to generate negative perceptions about a person's probable success in the academic world³⁶ and the business world.³⁷

In summary, the theoretical propositions underlying the construct of oral communication apprehension have been consistently supported in research employing the PRCA to predict specific behaviors. These results taken together provide a strong indication of the predictive validity of this instrument.

CORRELATES OF THE PRCA

The extensive case history research of Phillips which led to the formulation of

³³ H. Thomas Hurt and Kathryn Joseph, "The Impact of Communication Apprehension in the Process of Social Change," paper presented at the Eastern Communication Association, New York, 1975.

³⁴ H. Thomas Hurt, Raymond Preiss, and Bren Davis, "The Effects of Communication Apprehension of Middle-school children on Sociometric Choice, Affective and Cognitive Learning," paper presented at the International Communication Association, Portland, Oregon, 1976.

³⁵ McCroskey and Richmond, "The Effects of Communication Apprehension on the Perception of Peers," and Hal R. Witteman, "The Relationship of Communication Apprehension to Opinion Leadership and Innovativeness," M.A. thesis West Virginia 1976.

³⁶ James C. McCroskey and John A. Daly, "Teachers' Expectations of the Communication Apprehensive Child in the Elementary School," *Human Communication Research*, 3 (1976), 67-72.

³⁷ Virginia P. Richmond, "Communication Apprehension and Success in the Job Applicant Screening Process," paper presented at the International Communication Association, Berlin, West Germany, 1977; and John A. Daly and Steven Leth, "Communication Apprehension and the Personnel Selection Decision," paper presented at the International Communication Association, Portland, Oregon, 1976.

the communication apprehension construct suggests a substantial range of personality variables that should be associated with oral communication apprehension. A number of studies have been reported which have investigated the relationship between the PRCA and measures of these other variables. The theoretical construct of communication apprehension would suggest a moderate association between oral communication apprehension and other personality characteristics. To the extent that the PRCA is found to be moderately correlated with these other variables, therefore, there is an indication of construct validity for the measure. If a theoretically related variable is found to be uncorrelated, or if another variable is found to be extremely highly correlated with the PRCA, there would be reason to suspect the validity of the instrument. We will examine several constructs that should be related to oral communication apprehension below.

Introversion. While there have been numerous distinctions made between people who are extroverted and those who are introverted in the psychological literature, one of the distinctions that is commonly made is that the extrovert tends to seek social contact with other people while the introvert tends to withdraw from such contact. Since such contacts involve communication, specifically oral communication, a moderate degree of association between communication apprehension and introversion should be expected. However, a high association should not be expected since many of the characteristics of introverts are not theoretically characteristics of high oral communication apprehensives. Huntley administered the PRCA and the Eysenck measure of extroversion to 96 college students. He observed a significant $-.36$ correlation between extroversion and

communication apprehension,³⁸ in the range that should be expected.

Self-esteem and self-acceptance. In the case studies of Phillips it was frequently observed that high communication apprehensive individuals also evidenced a lack of self-esteem and self-acceptance. While this was not universally true, it was a very common pattern. Thus a fairly substantial correlation should be expected between communication apprehension and self-esteem or self-acceptance. In a study of 39 college students, Lustig found a $-.48$ correlation between the PRCA and self-esteem and a $-.52$ correlation between the PRCA and self-acceptance.³⁹ In each of these cases the measure of self-esteem or self-acceptance was treated as unidimensional. Employing a multidimensional measure of self-esteem, the observed correlations have been somewhat higher. With two samples of elementary and secondary teachers ($N = 202$ and $N = 384$) the multiple correlations were $-.54$ and $-.58$, with two samples of college students ($N = 192$ and $N = 272$) the multiple correlations were $-.59$ and $-.63$, and with 211 Federal employees the correlation was $-.72$.⁴⁰ As a group these results indicate a moderately high association between the PRCA as an index of oral communication apprehension and self-esteem or self-acceptance.

Verbal reticence. According to Lustig,

³⁸ Jackson R. Huntley, "An Investigation of the Relationships Between Personality and Types of Instructor Criticism in the Beginning Speech Communication Course," diss. Michigan State 1969.

³⁹ Myron W. Lustig, "Verbal Reticence: A Reconceptualization and Preliminary Scale Development," paper presented at the Speech Communication Association, Chicago, 1974.

⁴⁰ James C. McCroskey and Virginia P. Richmond, "Self-Credibility as an Index of Self-Esteem," paper presented at the Speech Communication Association, Houston, 1975. James C. McCroskey, John A. Daly, Virginia P. Richmond, and Raymond L. Falcione, "Studies of the Relationship Between Communication Apprehension and Self-Esteem," *Human Communication Research*, 3 (1977), 269-277.

an individual who is a verbal reticent is "a person whose average verbal output is characteristically low and who regards this behavior as problematic."⁴¹ This definition of verbal reticence is clearly similar to the definition of the construct of oral communication apprehension. In fact, if independent measures are developed according to these two definitions, we would expect them to be substantially correlated and possibly even interchangeable. Lustig developed a verbal reticence scale and tested its relationship with the PRCA. He found the two were correlated $.74$.⁴² These results suggested concurrent validity for the two measures of the two highly similar constructs.

General personality. Oral communication has been linked theoretically to a wide variety of personality characteristics. In an attempt to determine the relationship between communication apprehension and general personality, McCroskey, Daly, and Sorensen administered the PRCA and Cattell's 16PF personality measure to 99 college subjects. Directional hypotheses were made for the relationship between communication apprehension and twelve of the sixteen personality factors. Nine of these twelve hypotheses received statistical confirmation, and the other three were in the hypothesized direction but not statistically significant. The observed multiple correlation between the sixteen dimensions of the personality measure and the PRCA was $.72$.⁴³ The magnitude of this multiple correlation is in the range which should be expected, indicating that while there is a substantial relationship between general personality and the PRCA, there

⁴¹ Lustig.

⁴² Lustig.

⁴³ James C. McCroskey, John A. Daly, and Gail A. Sorensen, "Personality Correlates of Communication Apprehension," *Human Communication Research*, 2 (1976), 376-380.

remains substantial variance which the two do not share.

Taken as a group, the observed correlations between the PRCA and other personality indices suggest validity for the PRCA. Where moderate relationships should be expected, these have been observed. Where a high relationship should be expected, this also has been observed.

MEASUREMENT OF CHANGE

An underlying assumption concerning oral communication apprehension is that it is a characteristic trait of an individual that is relatively enduring and not subject to major fluctuation from one time to another. Consequently, a valid measure of the construct should show little fluctuation from one period of time to another unless there has been some major intervening variable present which would be expected to alter the level of communication apprehension. The test-retest reliability of the PRCA reported in the initial report of the development of the scale indicates that the PRCA does indeed obtain similar scores at different times. In the case noted in the original article, there was no intervention between the first and the second testing period which would be expected to alter the individual's score. In subsequent research, such interventions have been attempted, and should be expected to produce differences in scores on the PRCA. We will look at the two types of intervention that have been attempted.

Clinical treatment. Since the inception of the construct of communication apprehension it has been considered to be a negative element for the individual having it. Consequently, there has been an attempt to develop techniques to help people lower oral communication apprehension. The method most commonly employed in the research has been sys-

tematic desensitization. In four major laboratory tests of systematic desensitization as a method of overcoming oral communication apprehension, the PRCA has been used on a pretest-posttest basis. In each instance, significant changes in the apprehension level were observed for subjects who had received systematic desensitization in the period between pretesting and posttesting while no substantial change was observed for subjects in a control condition.⁴⁴ Similar results were found in the major field investigation of the systematic desensitization treatment.⁴⁵ Those who received the treatment showed marked shifts in their PRCA scores while those in a control condition did not. Recent studies employing other clinical methods have produced similar results, both for skills training⁴⁶ and cognitive restructuring.⁴⁷

Classroom methods. Because oral communication apprehension can have a major effect on students who are taking courses in communication, particularly public speaking courses, there has been concern evidenced for developing teaching methods which would have the most positive impact on the highly apprehensive student. Dymacek conducted a study in which he attempted to determine whether the number of speeches a student was required to give would have an effect on the student's level of oral com-

⁴⁴ Charles D. Ertle, "A Study of the Effect of Homogenous Grouping on Systematic Desensitization for the Reduction of Interpersonal Communicative Apprehension," diss. Michigan State 1969; Jack G. Nichols, "An Investigation of the Effects of Varied Rates of Training on Systematic Desensitization for Interpersonal Communication Apprehension," diss. Michigan State 1969; Blaine Goss, Millie Thompson, and Stuart Olds, "Behavioral Support for Systematic Desensitization," *Human Communication Research*, 4 (1978), 158-163; and Moore.

⁴⁵ McCroskey, "The Implementation of a Large Scale Program of Systematic Desensitization for Communication Apprehension."

⁴⁶ William J. Fremouw and Robert E. Zitter, "A Comparison of Skills Training and Cognitive Restructuring-Relaxation for the Treatment of Speech Anxiety," *Behavior Therapy*, in press.

⁴⁷ Glogower.

munication apprehension. He varied the number of speeches from none to seven, and found significant differences among some of the conditions.⁴⁸ Similarly, Huntley controlled the type of criticism the instructor provided to students in a public speaking class, either directing the criticism directly to the student or directing it to the class as a whole while controlling the level of the student's extroversion. He found significant changes over a semester's time in the students' communication apprehension level based upon an interaction of level of extroversion and type of criticism.⁴⁹

All of these studies taken together suggest that the PRCA indexes a relatively stable construct of oral communication apprehension, but at the same time can measure change in the level of an individual's oral communication apprehension if a major intervention strategy is imposed between measurement periods. This argues strongly in support of the validity of the PRCA as an index of oral communication apprehension.

PRCA—LONG AND SHORT FORMS

One criticism of the face validity of the original PRCA is that it contains an apparently large proportion of items directed toward the public performance setting, eight of twenty items. In 1972, an attempt was made to determine whether there was more than one dimension of oral communication apprehension. New items, all of which were directed toward dyadic or group communication settings ($n = 30$) were administered, in conjunction with the original instrument, to 1,042 college students at the outset of basic courses in communica-

tion. Factor analysis of the 50-item instrument indicated the presence of a single factor. A forced two-factor solution yielded one factor composed of positively worded items and one composed of negatively worded items. The two factors were obliquely related, $r = .71$.

In order to increase face validity of the PRCA, the five new items with the highest factor loadings on the unrotated solution were added to the original instrument to produce a 25-item instrument. That instrument is reported in Figure 1.

The new instrument has been employed in about half of the studies cited in this paper. Over 12,000 college students and 4,000 other adults have completed the instrument. In all administrations the distribution of scores has failed to deviate from the expected normal distribution. The sample means have consistently ranged between 73 and 75 (possible score range, 25-125; hypothetical mid-point = 75). The standard deviation has ranged between 13 and 15. Based on previous interviews with subjects scoring at the various levels, it has become customary to consider subjects scoring above 88 (one standard deviation above the typical mean) to be "high" in communication apprehension and those scoring below 58 to be "low." While these cut-off points are not perfect (there will be some error particularly with subjects scoring very near the cut-offs), they have been found to be optimal in numerous studies.

Internal reliability estimates for the scale have ranged from .92 to .96. Test-retest reliability ($N = 762$) over a seven-week period was .82. Consequently, this form of the PRCA is suggested for use with college students, adults, and older (11th, 12th grade) high school students as the best form presently available. Note, however, for any non-student sample the words "in class" should be dropped from item 22.

⁴⁸ David A. Dymacek, "Effects of Number of Classroom Speeches on Anxiety Reduction and Performance Improvement," paper presented at the Speech Communication Association, San Francisco, 1971.

⁴⁹ Huntley.

FIGURE 1

PRCA — LONG FORM

DIRECTIONS: This instrument is composed of 25 statements concerning your communication with other people. Please indicate the degree to which each statement applies to you by marking whether you (1) Strongly Agree, (2) Agree, (3) Are Undecided, (4) Disagree, or (5) Strongly Disagree with each statement. There are no right or wrong answers. Work quickly, just record your first impression.

1. While participating in a conversation with a new acquaintance I feel very nervous.
2. I have no fear of facing an audience.
3. I talk less because I'm shy.
4. I look forward to expressing my opinions at meetings.
5. I am afraid to express myself in a group.
6. I look forward to an opportunity to speak in public.
7. I find the prospect of speaking mildly pleasant.
8. When communicating, my posture feels strained and unnatural.
9. I am tense and nervous while participating in group discussions.
10. Although I talk fluently with friends, I am at a loss for words on the platform.
11. I have no fear about expressing myself in a group.
12. My hands tremble when I try to handle objects on the platform.
13. I always avoid speaking in public if possible.
14. I feel that I am more fluent when talking to people than most other people are.
15. I am fearful and tense all the while I am speaking before a group of people.
16. My thoughts become confused and jumbled when I speak before an audience.
17. I like to get involved in group discussions.
18. Although I am nervous just before getting up, I soon forget my fears and enjoy the experience.
19. Conversing with people who hold positions of authority causes me to be fearful and tense.
20. I dislike to use my body and voice expressively.
21. I feel relaxed and comfortable while speaking.
22. I feel self-conscious when I am called upon to answer a question or give an opinion in class.
23. I face the prospect of making a speech with complete confidence.
24. I'm afraid to speak up in conversations.
25. I would enjoy presenting a speech on a local television show.

To compute the PRCA score, follow these 3 steps:

1. Add the scores for items 1, 3, 5, 8, 9, 10, 12, 13, 15, 16, 19, 20, 22, and 24.
2. Add the scores for items 2, 4, 6, 7, 11, 14, 17, 18, 21, 23, and 25.
3. Complete the following formula:

$$PRCA = 34 - (\text{total from step 1}) + (\text{total from step 2.})$$

Researchers, particularly those involved in field investigations, often desire short, but reasonably accurate measures of constructs because of time constraints. Figure 2 reports a short, 10-item form of the PRCA. This instrument was generated by selecting the items from the long form with the best item-total score correlations in a sample of 1,183 college students.

Correlations between the short and long form have ranged between .88 and .92. Internal reliability estimates have ranged between .87 and .90 for student samples above 10th grade level. Test-retest reliability was estimated at .74 for a sample of 243 college students over a five-week period. This instrument has been administered to over 5,000 public

school students and 4,500 college students. The obtained distributions have not deviated from normality. The instrument appears to be a satisfactory measure for students above the tenth-grade level. For students in grades seven through ten, the internal reliability estimates drop to approximately .80, and for younger students fall substantially below .80.

Scores on the short form can range between 10 and 50 with a hypothetical midpoint of 30. Means from samples studied have ranged between 27 and 28 with a consistent standard deviation of approximately seven. Scores above 34 should be considered "high" and those below 21 should be considered "low" since these

FIGURE 2

PRCA — SHORT FORM

DIRECTIONS: This instrument is composed of 10 statements concerning your communication with other people. Please indicate the degree to which each statement applies to you by marking whether you (1) Strongly Agree, (2) Agree, (3) Are Undecided, (4) Disagree, or (5) Strongly Disagree with each statement. There are no right or wrong answers. Work quickly, just record your first impression.

1. I look forward to expressing myself at meetings.
2. I am afraid to express myself in a group.
3. I look forward to an opportunity to speak in public.
4. Although I talk fluently with friends, I am at a loss for words on the platform.
5. I always avoid speaking in public if possible.
6. I feel that I am more fluent when talking to people than most other people are.
7. I like to get involved in group discussion.
8. I dislike to use my body and voice expressively.
9. I'm afraid to speak up in conversations.
10. I would enjoy presenting a speech on a local television show.

To compute the PRCA score, follow these 3 steps:

1. Add the scores for items 2, 4, 5, 8, 9.
2. Add the scores for items 1, 3, 6, 7, 10.
3. Complete the following formula:

$$\text{PRCA} = 36 - (\text{total from step 1}) + (\text{total from step 2}).$$

scores are analogous to the cut-off points for the long form.

This short form of the PRCA appears to be a useful instrument when time constraints do not permit employing the longer form. However, since reliability and precision are reduced by the use of the short form, the long form should always receive preference.

SUMMARY

In the original report of the development of the Personal Report of Communication Apprehension, a strong case was built for the reliability of the instrument, a case that has been supported consistently in later research. Lit-

tle support was provided in the original report for the validity of the instrument. Subsequent to the publication of the PRCA, a substantial number of studies have been completed utilizing the instrument. The results of these studies suggest that the PRCA: (1) is capable of predicting behavior that is theoretically consistent with the construct of oral communication apprehension, (2) is correlated with other personality variables at a level theoretically consistent with the communication apprehension construct, and (3) provides a measure of a stable characteristic of an individual that can be altered through substantial intervention.