COMMUNICATION APPREHENSION AND SHYNESS: CONCEPTUAL AND OPERATIONAL DISTINCTIONS

James C. McCroskey and Virginia P. Richmond

FOR half a century communication scholars have been concerned with identifying and helping people who are anxious about communication. The early research generally employed the constructs of "speech fright" and "stage fright" and was focused on the anxiety experienced by public speakers and actors.1 As the field of communication evolved, more .cholars directed attention to communication in contexts other than public speaking. With this evolution came an awareness that many people experience anxiety in settings that do not involve the formal presentation of speeches, such as communicating in meetings, communication in small groups, and communicating with one other individual. With the advancement of the construct of "reticence,"2 the field's concern with communication anxiety moved from the narrow context of public speaking to the broader context of communication in general.

The construct of "communication apprehension" evolved from the earlier reticence conceptualization.3 The original

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¹ Theodore Clevenger, Jr., "A Synthesis of Experimental Research in Stage Fright," Quar-terly Journal of Speech, 45 (1959), 134-45. ² Gerald M. Phillips. "Reticence: Pathology of the Normal Speaker," Speech Monographs, 35 (1968) 30.49

(1968), 39-49.

3 James C. McCroskey, "Measures of Com-munication-Bound Anxiety." Speech Mono-

conceptualization, which has remained unchanged,4 viewed communication apprehension as the "fear or anxiety associated with either real or anticipated communication with another person or persons."5 Two elements of this conceptualization are noteworthy. First, there is no reference to the context of the communication. Presumably, then, communication apprehension could be experienced in any context, not just a public speaking context. Second, in the original enunciation of the construct it was unclear whether communication apprehension was viewed as a trait of an individual or a response to a specific communication encounter.6 However, the measure reported at that time (the Personal Report of Communication Apprehension, PRCA) clearly focused on a presumed trait-like response. In later writings, this aspect of the conceptualization was made explicit. Communication apprehension can be viewed either as an individual's trait or as an individual's response to a given situation.7

graphs, 37 (1970), 269-77. ⁴ See James C. McCroskey and Virginia P. See James C. McCroskey and Virginia P.
 Richmond. The Quiet Ones: Communication Apprehension and Shyness (Dubuque, Iowa: Gorsuch Scarisbrick, 1980) and James C. Mc-Croskey, "Oral Communication Apprehension: A Reconceptualization," in Communication Year-book 6, ed. Michael Burgoon (Beverly Hills, California: SAGE, 1982).
 James C. McCroskey, "Oral Communication Apprehension: A Summary of Recent Theory

Apprehension: A Summary of Recent Theory and Research," Human Communication Re-search, 4 (1977), 78-96. 6 McCroskey, "Measures..." 7 McCroskey, "Oral Communication Ap-prehension: A Summary..."

prehension: A Summary. . . .'

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COMMUNICATION APPREHENSION AND SHYNESS

Communication apprehension, whether viewed as a trait orientation of an individual or as the individual's reaction to a particular situation, is conceptualized as an internalized, affectively experienced response of the person experiencing it. No specific physiological characteristic or behavior is presumed to be perfectly correlated with this internal state, since different people may have different behavioral or physiological manifestations of their affective states.8 Nevertheless, certain behavioral tendencies are theoretically associated with communication apprehension. Numerous studies have confirmed hypotheses based on this theory.9 Thus, both theoretically and empirically, communication apprehension is viewed as an internal, affective response with external, observable impact on communication behavior.

In recent years the work of psychologists under the rubric of "shyness" has received increased attention. Much of this work has paralleled the work in the communication apprehension area, both in terms of effects and treatment. This research and clinical parallel has led to confusion of the two constructs, with some going so far as to consider communication apprehension and shyness to be "conceptual twins".¹⁰ Much of this confusion seems to have stemmed from the lack of a clear conceptualization of what is meant by shyness. As Zimbardo puts it, "shyness is a fuzzy concept".¹¹

11 "Phillip G. Zimbardo. Shyness: What It Is, What to Do About It (Reading, Massachusetts: Addison-Wesley, 1977).

Zimbardo, one of the leading writers in the area of shyness, carefully avoids providing a constituent definition of the construct and prefers to employ only an operational definition-a single question: "Do you presently consider yourself to be a shy person?" He then asked his subjects who answered yes to indicate what kinds of people and situations make them shy.12 Strangers, members of the opposite sex, and authority figures were the people most of the shys said caused them a problem. A majority of the shys found the following situations problematic: giving a speech, large groups, having lower status than others in the situation, social situations in general, new situations in general, situations requiring assertiveness, situations involving evaluation such as an interview, and situations in which the person is a focus of attention, such as a small group setting. Clearly, Zimbardo's data indicate that shyness has an impact across a wide variety of communication settings, much like communication apprehension. Also, shyness seems to be stimulated only by the possibility of communication. It does not seem to be related to non-social situations.

CONCEPTUAL DISTINCTIONS

If communication apprehension and shyness seem to be produced by the same situations, and they seem to have similar effects, it becomes increasingly important to clarify the conceptualization of shyness to determine, if, in fact, the constructs are different in any meaningful way.

The closest Zimbardo comes to providing a constituent definition of shyness is to quote the Oxford English dictionary and suggest that to be shy is to be "difficult of approach, owing to timidity, caution or distrust," and the shy person

12 Zimbardo.

⁸ James C. McCroskev, "Validity of the PRCA as an Index of Oral Communication Apprehension." paper presented at the Speech Communication Association convention. Houston, 1975. ⁹ James C. McCroskey, "Validity of the PRCA

⁹ James C. McCroskey, "Validity of the PRCA as an Index of Oral Communication Apprehension", *Communication Monographs*, 45 (1978), 192-203.

¹⁰ Malcolm R. Parks, "A Test of the Cross-Situational Consistency of Communication Apprehension". *Communication Monographs*, 47 (1980), 220-32.

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is "cautiously averse in encountering or having to do with some specified person or thing" and "wary in speech or action, shrinking from self-assertion, sensitivity timid" and the shy individual may be "retiring or reserved from diffidence".13 To continue in the mold of Zimbardo, the Thorndike-Barnhart dictionary defines shy as "uncomfortable in company, bashful, easily frightened away, timid, cautious, wary." Similarly we find in Roget's Thesarus that shy is taken to mean "reserved, unsocial, reticent" and "unaffectionate, uneffusive, unresponsive." Running through these nontechnical definitions of "shy" are the following components: discomfort in social-communicative situations, a tendency to withdraw, a tendency to be timid and lack confidence, and a tendency to be quiet, neither assertive nor responsive to others.

Pilkonis, a former student of Zimbardo, provides a definition of shyness which seems consistent with the nontechnical definitions. He indicates that shyness is "a tendency to avoid other people, to fail to respond appropriately to them . . . , and to feel nervous and anxious during interactions with them." Behaviorally, he notes, "shy people are characterized by avoidance of social interaction, and when this is impossible, by inhibition and an inability to respond in an engaging way; they are reluctant to talk, to make eye contact, to gesture, and to smile."14 Girodo, another major writer in the area of shyness, while failing to provide a specific definition of shyness, indicates that shyness is composed of three elements: undeveloped social skills, social anxiety, and low social self-esteem. He also indicates that one or more of these elements will be

14 Paul A. Pilkonis, Carol Heape, and Robert H. Klein. "Treating Shyness and Other Relationship Difficulties in Psychiatric Outpatients," *Communication Education*, 29 (1980), 250. dominant for any given shy person.¹⁵ Key to this conceptualization is the idea that the behaviors of all shys will be similar, but the reason(s) for those behaviors may differ sharply.

In his recent book on shyness, Phillips also fails to provide a specific definition of shyness.¹⁶ While noting that shy people talk less than others and are socially ineffective, Phillips stresses the view that shy people do not have a psychological problem but are the way they are because of inadequate skills. He indicates a preference for the term "reticent" rather than "shy" because the former suggests that the person has a choice to speak or be silent while the latter suggests the person has some kind of disability.

How, then, may we distinguish between shyness and communication apprehension? To begin, we may not be able to distinguish between the constructs on the basis of projected behavior. Both would predict withdrawal and reduced communicative output. Specifically, both would predict less talking. The critical distinction seems to be in terms of immediate causes of the behavior predicted. The communication apprehension construct predicts the behavior from a single cause-fear or anxiety. Shyness, on the other hand, suggests the behavior may be the product of social anxiety, low social skills (not knowing how to behave), or low social self-esteem (e.g. expecting to fail in the situation). Thus, we conclude, communication apprehension and shyness are not parallel constructs, nor are they isomorphic constructs. Rather, they form a genus-specie relationship. The genus is shyness-the tendency to be timid, reserved, and most specifically, talk less.

18 Gerald M. Phillips. *Help for Shy People* (Englewood Cliffs, New Jersey: Prentice-Hall, 1981).

¹³ Ibid.

¹³ Michel Gir. lo, Shy? (New York: Pocket Books. 1978).

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One of the species is communication apprehension-the tendency to behave in a shy manner (talk less) because of fear or anxiety. Another of the species is reticence-the tendency to behave in a shy manner (talk less) because of a lack of communication skill.

OPERATIONAL DISTINCTIONS

Although other measures have been developed recently,17 the 20-item18 and 25-item¹⁹ PRCA have been the operational definitions of communication apprehension in the overwhelming majority of the over 200 studies involved with this construct which have been reported to date. A strong case has been advanced for the validity of these instruments.20

Within the area of shyness, no consensus measure has emerged. The measure employed by Zimbardo and his associates, as noted previously, is a single-item, forced-choice scale.21 The metric qualities of the scale are not discussed by Zimbardo, but the findings generated by use of the scale are suggestive of its validity. More recently, two new instruments have been advanced to measure shyness. Cheek and Buss have provided a nine-item, Likert-type scale which they report as unidimensional.22 Most of the items on this scale suggest

17 See James C. McCroskey, Janis F. Andersen, Virginia P. Richmond, and Lawrence R. Wheeless. "Communication Apprehension of Elementary and Secondary Students and Teachers." Communication Education, 30 (1981), 122-32: James C. McCroskey, An Introduction to Rhetorical Communication, 4th ed. (Englewood

Chefforical Communication, 4th ed. (Englewood Cliffs. New Jersey: Prentice-Hall, 1982), ch. 2.
¹⁸ McCroskey, "Measures..."
¹⁹ McCroskey, "Validity...."
²⁰ John A. Daly, "The Assessment of Social-Communicative Anxiety Via Self-Reports: A Comparison of Measurers", Communication Monographs, 45 (1978), 204-18; McCroskey, "Validity...."

"Validity. . ." ²¹ Zimbardo. ²² J. Cheek and Arnold H. Buss, "Scales of Shyness. Sociability, and Self-Esteem and Cor-relations Among Them." unpublished research report. University of Texas, 1979.

nervousness or discomfort; thus, the measure may tap communication apprehension better than shyness. McCroskey, Andersen, Richmond, and Wheeless have provided a 14-item, Likerttype scale which they have labeled a "shyness scale."23 They report the scale to be unidimensional and factorally distinct from, though correlated with, communication apprehension. There is no substantial data base from which to argue the validity or invalidity of either the Cheek and Buss scale or the Mc-Croskey et al. scale.

Research Questions and Hypotheses

The primary purpose of the present investigation was to determine whether the conceptual distinction between communication apprehension and shyness was amenable to empirical operationalization. The first research question, therefore, was:

Q1 Are measurers of communication apprehension and shyness which are isomorphic with conceptualizations of these constructs empirically distinct from each other?

Within the trait framework employed in this study, it would be expected that measures of communication apprehension and shyness would be correlated. However, the correlation should not be so high as to suggest interchangeability of the measures or a single response structure. Therefore, two hypotheses were advanced:

- H1: A measure of communication apprehension and a measure of shyness will be moderately correlated.
- H2: With oblique factor analysis, the items on a measure of communication apprehension and the items on a measure of shyness will form separate factors.

Support of these two hypotheses would provide an empirical foundation for the

23 McCroskey, Andersen, Richmond, and Wheeless.

conceptual distinction between communication apprehension and shyness outlined earlier. The question would remain, however, whether the behavioral implications of the distinction are meaningful. If, as theorized, shyness is produced by multiple causes while communication apprehension stems from but one of these causes, observations of behavior should be better predictors of shyness than of communication apprehension. Thus, we advanced a third hypothesis:

H_a: Observer reports of shyness are more highly correlated with self-reports of shyness than they are with self-reports of communication apprehension.

Support for this hypothesis, in conjunction with support for the previous hypotheses, would provide substantial validation for the conceptual distinction advanced here. Failure to support this hypothesis would indicate weakness in the conceptualization, the operational measures, or both.

METHOD

Self-Report Measures

The 25-item PRCA was selected as our measure of communication apprehension.²⁴ As noted previously, this is the most commonly employed measure of this construct, and the instrument has a good record in terms of both reliability and validity. In our preliminary study, discussed below, we also employed a second measure of communication apprehension, the Personal Report of Communication Fear (FEAR).²⁵ This instrument is reported to have high reliability and to be highly correlated with the PRCA, which establishes concurrent validity.

The 14-item Shyness Scale (SHY) was

²⁴ McCroskey, "Validity...."
 ²⁵ McCroskey, Andersen, Richmond, and Wheeless.

selected as our measure of shyness.26 Although the Zimbardo scale has been used in more research and generated a better case for validity, it was rejected for this study because of its single-item nature which would result in major problems in terms of data analysis.27 The Cheek and Buss scale was rejected because it was insufficiently isomorphic with the shvness conceptualization advanced above.28 The SHY instrument, although receiving only limited previous use, has been found to be highly reliable and to be factorally distinct from at least one measure of communication apprehension.29 In addition, since all of the i ems on the scale refer directly either to shyness or to talkativeness, the scale is highly isomorphic with our shyness conceptualization.

Observer-Evaluation Measures

The design of this study required use of untrained observers providing evaluations based on observations of different subjects in different communication situations across varying lengths of time. Because of this variability in observation conditions, it was necessary to generate rating scales for communication apprehension and shyness that were general in nature and applicable across both subjects and observers. In order to fulfill this objective, the PRCA and SHY instruments were reworded to reflect an observer's rating rather than a selfreport. This was accomplished by removing personal pronouns and substituting grammatically appropriate versions of "this person" in their place. Post-study interviews indicated the observers had little difficulty completing the measures.

29 McCroskey, Andersen, Richmond, and Wheeless.

²⁸ McCroskey, Andersen, Richmond, and Wheeless. 27 Zimbardo.

²⁹ Cheek and Buss.

The Preliminary Study

A preliminary study was conducted to explore our research question and test our first two hypotheses. A sample of 606 college students completed the PRCA, FEAR, and SHY scales at the beginning of the semester in which they were enrolled in basic communication classes. No discussion of communication apprehension or shyness preceded the data collection. Although this study permitted us to test our first two hypotheses, the primary purpose of the study was to ensure that the measures we intended to employ in the major study were, as hypothesized, correlated with each other but factorally distinct. Were this found not to be the case, additional measurement development would be required before an appropriate test of Hypothesis 3 could be conducted.

In previous work, as noted above, the FEAR and SHY scales were found to be correlated but to form separate factors in an oblique factor rotation. Even though the FEAR scale had been found to correlate highly with the PRCA, it could not be assumed that a similar factoral relationship would hold for PRCA and SHY. Particularly troublesome to such an inference is the fact that one of the items on the PRCA specifically refers to shyness: "I talk less because I'm shy." In order for us to claim support for our second hypothesis, therefore, it was decided that, not only would we require that the items on the SHY measure load on a factor distinct from communication apprehension items, but also that this item from the PRCA would be required to load with the SHY items rather than with the other PRCA items.

The Major Study

The major study involved 590 subjects and observers. Half of the subjects (n = 295) were elementary and secondary school teachers (ages 23-64) voluntarily enrolled in graduate classes in instructional communication. The remaining subjects (n = 295) were friends of these individuals. The teacher-subjects were assigned random identification numbers for use by both themselves and a friend. Each of these subjects was asked to complete the PRCA and SHY measures on him or herself and to complete the revised versions of these scales on a "friend you know well and who knows you well." After completing and returning these instruments, the subjects were given an identical set and asked to have the selected friend complete them overnight, seal the completed measures in an envelope provided, and return them the next day. Thirty-two subjects (from an original sample of 327) were unable to secure data from the selected friend, due to their unavailability or unwillingness to participate. These subjects were excluded from all data analyses.

The procedure just described yielded data in the form of self-reports from 590 subjects and data in the form of observer ratings from the same number of subjects. It should be recognized that these observers must be classified as completely untrained. There was no instruction given as to what to look for or what to consider. Even with this limitation, we believe that our choice of friends as observers is the best that is realistically possible. Only friends can share the natural environment of an individual with minimal impact on that individual's behavior. More highly trained observers would alter behavior by their very presence. In addition, the friends' observations came prior to being aware they were to provide data, which mitigated against biased observation. We believe the best observation of behavior across situations, across time comes from observers who, in the course of their natural lives, are present across situations, across time. The only people

who meet this qualification are friends or spouses.

Data Analyses

The Preliminary Study. Internal reliability estimates (split-half) were computed for each of the three measures. The correlations among the raw, summated scores also were computed.

The main analysis was a factor analysis with oblique rotation. The SAS promax option was employed. One, two, and three factor solutions were examined, although the third factor accounted for an increase of less than five percent of the total variance. The one-factor solution was rejected because it generated low (below .30) communality estimates for many of the items. The threefactor solution was rejected because it produced two communication apprehension factors, one representing positively worded items and the other representing negatively worded items, an otherwise non-interpretable result frequently obtained in previous research.30 Therefore, the two-factor solution was retained for discussion.

The Major Study. Internal reliability estimates (split-half) were computed for the PRCA and SHY self-reports and for the observers' ratings on the PRCA and SHY measures. Correlations between the raw, summated self-report scores and between the raw, summated observer report scores were also computed.

The self-report and observer-report data were submitted to separate factor analyses. The two-factor solutions were submitted to oblique rotation employing the SAS promax option. These analyses permitted us to test our first two hypotheses and respond to the research question. A *t*-test for significance between dependent correlations (observer SHY/self SHY vs. observer SHY/self

30 McCroskey, "Measures. . . ."

PRCA) was computed to test hypothesis 3.

RESULTS

The Preliminary Study

The internal reliability estimates for the three measures were as follows: PRCA .95; FEAR .90; SHY .92. The correlations among the raw scores obtained were: PRCA/FEAR .85; PRCA/ SHY .57; FEAR/SHY .57.

The results of the oblique factor rotation are reported in Table 1. The obtained inter-factor correlation was .52. This indicates that the raw score correlations between SHY and either measure of communication apprehension share approximately five percent more variance (32%) than scores based on factor weights (27%). As indicated in Table 1, this is partly a function of one item on the PRCA loading with the items from the SHY scale—the item which specifically mentions shyness.

The results of this study provided support for our first hypothesis, the measures of communication apprehension were each moderately correlated with the measure of shyness, sharing approximately 30 percent of the variance. The results also support our second hypothesis, the measures of communication apprehension form one factor while the items from the shyness measure form a second factor, the only exception being the shy item from the PRCA which loads, as it should, with the other shyness items. We may, therefore, tentatively provide an affirmative answer to our research question: measures of communication apprehension and shyness which are isomorphic with conceptualizations of these constructs are empirically distinct.

The positive results of this study permitted us to conduct the major study as planned. However, since the one item on the PRCA appears to be out-of-place

		Preliminary Study		Major Study Self-Report		Major Study	
		Factor	Factor	Factor	Factor	Factor	Factor
Iten	1	Major StudyMajor StudyMajor StudyFactorFactorFactorFactorFactor1 (CA)2 (SHY)1 (CA)2 (SHY)1 (CA)250*.43.48*.47.62*.50*.43.48*.47.62*.50*.43.48*.47.62*.57.67*.6*.54.65*.46.64*.55.58*.61*.47.64*.72*.37.66*.40.64*.35*.20.48*.35*.20.48*.32.70*.46.65*.47.69*.30.67*.63*.41.60*.48.59*.23.58*.20.50*.46.57*.53.52*.27.70*.50*.46.57*.50*.46.57*.50*.34.71*.50*.46.57*.50*.46.57*.58.62*.57.50*.46.57*.58.62*.57.59*.32.62*.57.58*.29.65*.41.67*.43*.54*.43*.55*.42.55*.42.55*.42.55*.42.54*.56*.55*.42.55*.42.55*.44<	1 (CA)	2 (SHY)			
PRO	CA						
1	While participating in a conversation with a new acquaintance I feel						
	very pervous.	.50*	.43	.48*	.47	.62*	.45
9	I have no fear of facing an audience.	.71*	.35	.55*	99	.59*	.41
3	I talk less because I'm shy.	.57	.67*		13- x	.54	.62*
4	I look forward to expressing my opinions at meetings.	.65*	.46	.64*	.55	.58*	.54
5	I am afraid to express myself in a group.	.61*	.47	.64*	.47	.59*	.46
6	I look foreward to an opportunity to speak in public.	.72*	.37	.66*	.40	.64*	.44
7	I find the prospect of speaking mildly pleasant.	35*	.20	.48*	37	55*	.32
8	When communicating my posture feels strained and unnatural.	.50*	.29	.48*	.32	.49*	.30
0	I am tense and nervous while participating in group discussions.	.70*	.46	.65*	.47	.67*	.41
10	Although Litalk fluently with friends I am at a loss for words on the			.74*	.30	67*	.28
10.	Although I tak nuchtly with mends, I am at a loss for words on the	69*	80		100		
11	L have no fear about expressing myself in a group	63*	41	60*	48	53#	46
10	My hands tramble when I try to handle objects on the platform	59#	23	58#	20	56#	15
14.	My hands themple when i try to handle objects on the partonin.	71+	25	71+	87	79#	85
13.	I always avoid speaking in public it possible.		.55		.57	.14	.55
14.	I feel that I am more mucht when taiking to people than most other	50+	46	57+	5.9	59+	50
	people are.	.50*	.10	.57-	.00	.54"	.50
15.	I am fearful and tense all the while I am speaking before a group of	20+	94	70+	9.4	71.	9.4
	people.	.70*	.94	.72*	1°C.	./1*	.94
16.	My thoughts become confused and jumbled when I speak before an	0.0	07		00		
	audience.	.07*	.27	.70*	.29	.05*	.34 .30
17.	I like to get involved in group discussions.	.02*	.57	.57#	.58	.02*	.55
18.	Although I am nervous just before getting up, I soon forget my fears		00	00.	00	15	
	and enjoy the experience.	.59*	.32	.02*	.29	.47*	.24
19.	Conversing with people who hold positions of authority causes me			10.			
	to be fearful and tense.	.53*	.21	.43*	.31	.55*	.24
20.	I dislike to use my body and voice expressively.	.52*	.42	.32*	.22	.47*	.34
21.	I feel relaxed and comfortable while speaking.	.65*	.41	.67*	.40	.71*	.39
22.	I feel self-conscious when I am called upon to answer a question or give	1.6.1.1.1.1.1.1					
	an opinion in class.	.56*	.37	.49*	.34	.60*	.30
23.	I face the prospect of making a speech with complete confidence.	.64*	.24	.68*	.23	.71*	.39
24.	I'm afraid to speak up in conversations.	.55*	.42	.54*	.48	.56*	.45
95	I would enjoy presenting a speech on a local television show.	.61*	.29	.60*	.26	.61*	.43

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ROTATED FACTOR LOADINGS

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TABLE	1	(Continued)

ROTATED FACTOR LOADINGS

SHY								
1.	I am a shy person.	:56	.73*	.54	.74*	.63	.71*	
2.	Other people think I talk a lot.	.15	.63*	.20	.73*	.22	.70*	
3	I am a very talkative person.	.31	.76*	.32	.81*	.30	.78•	
4	Other people think I am shy.	.42	.66*	.39	.76*	.52	.74*	
5	I talk a lot	.21	.69*	.33	.78*	.29	.82*	
6	I tend to be very quiet in class.	.47	.54*	.51	.56*	.53	.54*	
7	I don't talk much	.38	.77*	.40	.81*	.40	.80*	
8	I talk more than most people.	.33	.68*	.33	.74*	.40	.74*	
0	I am a quiet person	.41	.76*	.37	.82*	.46	.84*	
10	I talk more in a small group (3-6 people) than other people do.	.27	.52*	.33	.47*	.25	.38*	
11	Most people talk more than I do	.41	.70*	.46	.76*	.44	.75*	
19	Other people think I am very quiet	.43	.71=	.37	.79*	.42	.77*	
12.	I talk more in class than most neople do.	.43	.52*	.48	.56*	.48	.61*	
14	Most people are more shy than I am	.32	.53*	.37	.54*	.37	.46*	
11.	Most people are more sny than I am							
FEA	R							
1.	Talking with someone new scares me.	.52*	.44					
2.	I look forward to talking in class.	.68*	.52					
3	I like standing up and talking to a group of people.	.76*	.40					
4	I like to talk when the whole class listens.	.73*	.42					
5	Standing up to talk in front of other people scares me.	.72*	.36					
6	I like talking to teachers.	.49*	.30					
7	I am scarred to talk to people.	.49*	.43					
8	I like it when it is my turn to talk in class.	.70*	.48					
0.	I like to talk to new people	.46*	.44					
10	When someone asks me a question it scares me.	.55*	.33					
10.	There are a lot of neanle I am scared to talk to.	.53*	.32					
10	The to talk to people I haven't met before.	.43*	.33					
12.	I like it when I don't have to talk	.52*	.51					
13.	Talking to teachers scares me	.53*	.28					
14.	Taiking to teachers scales me.							= '

*Primary loading. Items reflected to equal polarity before analysis.

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on that scale, separate analyses, scoring the PRCA with and without this item, were performed in the major study.

The Major Study

The internal reliability estimates for the self-reports on both PRCA and SHY were .94. For the observer ratings, the estimate for the PRCA was .95 and for the SHY the estimate was .94. The correlations between the self-report raw scores (PRCA/SHY) was .59. The correlation between the observer-report raw scores was .63. These correlations are not significantly different (Z = .91, p > .05). Including the PRCA item which mentions shyness increased the self-report correlation to .61 and the observer correlation to .65, both non-significant changes.

The results of the oblique factor rotation for the self-report data are reported in Table 1. The obtained interfactor correlation was .49. This indicates that the raw score correlations between PRCA and SHY share approximately 11 percent more variance (36%) than scores based on factor weights (25%). This discrepancy is reduced by omitting the PRCA item which mentions shyness, as suggested by the results of the preliminary study, but only by about two percent.

The results of the oblique factor rotation for the observer-report data also are reported in Table 1. The obtained inter-factor correlation was .52. This indicates that the raw score correlations between PRCA and SHY share approximately 13 percent more variance (40%)than scores based on factor weights (27%). As with the self-reports, omitting the shyness item from the PRCA scores reduces the correlation somewhat.

These results provide support for our first hypothesis. The measures of communication apprehension were correlated with the measures of shyness for

both the self-report and the observerreport data and shared approximately 30 percent of the variance.

The results also support our second hypothesis. The items from the communication apprehension measure form one factor while the items from the shyness measure form another factor, for both self-reports and observer-reports. When the analyses included the shyness item on the PRCA, that item loaded with the items from the shyness scale. The remaining loadings were altered no more than .01 either direction by including this item or omitting it.

Support for our first two hypotheses suggests an affirmative answer to our research question: measures of communication apprehension and shyness which are isomorphic with conceptualizations of these constructs, although meaningfully related as conceptualized, are empirically distinct. The fact that the results for self-report and observerreport data were consistent strengthens this affirmation.

Our final hypothesis (H₃) also was supported. Observer reports of shyness were more highly correlated with selfreports of shyness (r = .53) than they were with self-reports of communication apprehension (r = .37; t = 5.07, p <.001). In contrast, the correlations of observer reports of communication apprehension with self-reports of communication apprehension (r = .46) and self-reports of shyness (r = .44) were virtually identical (t < 1). These results reinforce the conceptual distinction between communication apprehension and shyness advanced earlier. Since the former is an internal trait and is but one of the causes of shy behavior, it is more difficult for observers to identify than is the shy behavior itself.

DISCUSSION

The purpose of this research was to

draw a conceptual distinction between communication apprehension and shyness and to determine whether measures reflecting the distinction would provide empirical validation of the conceptualizations advanced. Our first hypothesis was that a measure of communication apprehension and a measure of shyness will be moderately correlated. This hypothesis was supported by the selfreport results of both the major study and the preliminary study as well as by the observer-report results of the major study. The second hypothesis suggested that the items on a communication apprehension measure would form a factor separate from the items on a shyness measure. This hypothesis was also supported by the self-report results of both the major study and the preliminary study as well as the observer-report results of the major study. Finally, the third hypothesis was supported. Observers' reports of shyness were more highly associated with self-reports of shyness than self-reports of communication apprehension in the major study. In sum, all thre hypotheses were supported.

Our research question was concerned with whether communication apprehension and shyness measures are empirically distinct from each other. The support obtained for our three hypotheses strongly indicates the appropriateness of an affirmative response to this question. Not only are these measures distinct when employed as self-reports, they are also distinct when employed as instruments for observer reports. Of course, this conclusion applies only to the measures employed in this investigation, PRCA, FEAR, and SHY. Other operationalizations may not yield empirical distinctions. For example, we would not expect the Cheek and Buss shyness scale to be distinct from the PRCA or FEAR scales, since many of the items on the scales are highly similar.31 In this regard, however, it should be noted that the item referencing shyness that appears on the PRCA shold not be included in future research where an empirical distinction between communication apprehension and shyness is of importance.

31 Cheek and Buss.