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ABSTRACT

While many strategies have been suggested to treat communication apprehension (CA), no research has accounted for potential gender differences in the treatment of CA. Further, no research has documented the effect on CA of self-modeling. A study identified differences in CA remediation across gender among the following treatment conditions: video self-observation edited to display only positive behaviors; unedited video self-observation; and control (no video observation). Subjects, 308 students enrolled in "Basic Speech" or "Business and Professional Communication" at a regional southwestern university, completed communication apprehension measurement instruments prior to delivering any graded speeches. Results indicated a significant gender effect, although self-observation was not found to be an effective remediation strategy. (Contains 59 references.) (Author/RS)

Communication Apprehension Remediation:
The interaction effect of Video Self-Observation and Gender

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Abstract

While many strategies have been suggested to treat communication apprehension (CA), no research has accounted for potential gender differences in the treatment of CA. Further, no research has documented the effect on CA of self-modeling. This research identifies differences in CA remediation across gender between the following treatment conditions: video self-observation edited to display only positive behaviors; unedited video self-observation; and, control (no video observation). Results indicate a significant gender effect although self-observation was not found to be an effective remediation strategy.

Reticence Remediation: The Impact of Gender and
Videotaped Self-Observation on Communication Apprehension

Communication apprehension is referred to by diverse labels in the literature including reticence, shyness, communication apprehension, and unwillingness to communicate (Kelly, 1982; Leary, 1983). Regardless of its moniker, communication apprehension (CA) is a serious and pervasive problem facing today's work force and student body. Various studies have indicated that "debilitating communication apprehension" is experienced by fifteen to twenty percent of the population (Beatty & Andriate, 1985; McCroskey, 1977a). CA influences virtually every facet of a person's life as it affects student achievement (McCroskey & Anderson, 1976; Richmond & McCroskey, 1989), student attitude toward school (McCroskey & Daly, 1976), and one's general ability to interact (Burgoon & Koper, 1984). McCroskey (1977b) concluded that "people who experience a high level of CA will be negatively impacted in terms of their economic, academic, political and social lives" (p. 85).

Communication apprehension has a pervasive effect on an individual's daily life. Those classified as "high apprehensives" will tend to avoid classes that require oral reports, choose large classes rather than small ones, tend to sit in the back of the classroom, and have limited class participation. In dyadic settings, high apprehensives will often remain in unsatisfactory relationships rather than face the task of establishing a new relationship. Occupational choice is also influenced by apprehension, with high apprehensives choosing occupations with low communication demands. So far as housing choices are concerned, high apprehensives select those which inhibit social interaction (Richmond & McCroskey, 1989).

Interventions

Communication scholars have approached the remediation of CA in a variety of ways, including systematic desensitization and cognitive restructuring (Fremouw & Scott, 1979; Glaser, 1981), social skills training (Kelly, 1982), biofeedback, group counseling, false heart-rate feedback, and rational emotive therapy (Daly & McCroskey, 1984; McCroskey, 1977b; Watson & Dodd, 1991). Systematic desensitization has three basic components 1) selection of a stimulus which can neutralize the anxiety (usually relaxation), 2) identification of events producing anxiety, and 3) association of the anxiety producing event and relaxation (Pedersen, 1980). In cognitive restructuring, individuals are taught how to modify the "sorts of cognition that they say to themselves" (Weissberg & Lamb, 1977). The social skills approach is based on the idea that inadequate skills development leads to apprehension (Kanfer & Phillips, 1970). Therefore, the improvement of skills should lead to a decrease in apprehension.

The treatments which can be grouped under physiological assessment include biofeedback and false heart rate feedback. As noted by Beatty (1984), such assessments have mainly been correlational between physiological arousal and self-report measures. The interpretation of increased heart rate, for example, may be identified as "fear" by those who are highly apprehensive while low apprehensives identify this as "excitement."

Rational Emotive Therapy (RET) is defined by Ellis as a theory of personality and a method of psychotherapy. Cognitive restructuring is used in accordance with the A-B-C theory of emotional disturbance in which A represents the activating event, B is the belief system, and C is the irrational consequences of the behavior. At point D, individuals are taught to dispute the irrational belief (Watson & Dodd, 1991). Therefore, RET combines the elements of cognition, emotion, and behavior.

Recent studies have explored the combination of several of these remediations. Hopf & Ayres (1992) found that treatment combinations which began with skills training were ineffective in reducing public speaking anxiety. Both visualization and systematic desensitization appeared to be preferred to treatment conditions that began with skills training. Using a videotaped intervention, Ayres et al. (1993) found that the videotape, "Coping with the Fear of Public Speaking," effectively reduces trait and state communication apprehension both in group and on a self-help basis.

Self-Modeling as Remediation for CA

The intervention chosen for this study involves using video self-observation. Dowrick (1983) defines self-modeling as "the behavioral change that results from the observations of oneself on videotapes that show only desired behaviors" (p. 106). This approach is a pragmatic one having its origin in clinical settings where inappropriate behavior is replaced with appropriate behavior. Dowrick proposes that "videotape replay is efficacious when it provides the conditions that make the modeling effective" (p. 108). Hosford & Mills (1983) claim "videotape is unsurpassed in ability to provide accurate, objective feedback" (p. 135) and explain that self-modeling involves editing all inappropriate behaviors from the videotape before the individual views it. Because self-modeling shows no errors, Dowrick suggests that the individual experiences an increase in self-esteem and self-expectancy. The application of self-modeling as a remediation technique for CA has not been studied. Because this intervention has been successful in clinical settings, (Dowrick & Dove, 1980; Hosford & Brown, 1975; Hosford & Mills, 1983; Rosenberg & Robinson, 1983; Walker & Clement, 1992; Woltersdorf, 1992), it seems likely that its application to CA experiences by students in basic communication courses is worth pursuing.

Additionally, communication scholars have been interested in the pedagogical benefits of

using videotape recorders since the early 1970s. Bush, Bittner, & Brooks (1972) in their study of the effects of using a videotape recorder (VTR) on speaker anxiety found that the presence of the VTR did not create negative aspects of speaker response. They found no significant increase in levels of anxiety, exhibitionism, and reticence in students speaking before an audience with a VTR present as compared to an audience with no VTR present. Goldhaber & Kline (1972) reported higher attendance and better attitudes toward the use of videotape by students whose speeches were videotaped. An added benefit discovered in this study was that students in those classes using videotaping evaluated their instructor significantly higher than those students from non-video classes. Dieker, Crane, & Brown (1971) found that students participating in self-viewing on closed circuit television tended to develop a more realistic self-concept than did students without self-viewing. Moreover, Mulac (1974) reported significant increases in speech skill by students who viewed two of their own class performances. Videotaped students improved an average of forty percent more than their counterparts in overall speaking ability. Although Mulac's study did not specifically target CA, it can be theorized that improved speaking ability may mean reduced CA, or at least, the ability to effectively control CA. With the growing availability of VTR and playback equipment at colleges and universities, self-modeling could be undertaken in many communication classrooms.

The Effect of Gender on CA

Canary & Hause (1993) suggest several reasons for the "muddled picture" of sex differences in communication" (p. 129). They note that sex has generally been regarded as an independent variable that has an effect on communication. However, they recommend that gender, so far as communication research is concerned, should be studied as a dependent variable. That is, we should study how gender "affects people's sex role beliefs and attitudes," discovering the communication based reasons for people's gender differences." Since McCroskey, Simpson, and Richmond's (1982) study of biological sex and CA, no studies have shown a significant difference in CA encountered because of gender. However, these earlier studies were composed of samples with greater numbers of men than is now typical of college classrooms. Furthermore, research by Tannen (1990) reveals that men and women have different responses about speaking to mixed gender as compared to same gender audiences. It is possible that a woman facing a mixed gender audience experiences considerably more CA than when she faces a same gender audience.

The nature of self-report measures used to gauge CA may also work against accurate evaluations of female CA. As noted by Arliss (1991), women disclose more than men, not only in amount of information but also in depth of disclosed information across a greater number of topics.

While admitting that there are studies showing no gender differences in self-disclosure, Arliss points out "no study has ever reported that males disclose more than women" (p. 71). It would seem that since females are more prone to self-disclose, then their self-reported reactions to a CA questionnaire would be more accurate. However, research by McCarrey, Piccinin, Welburn, and Chislett (1990) found that males and females were "equally proficient in actually giving and receiving criticism," but that women reported "themselves as less proficient and feeling less satisfied and less self-esteem with respect to enacting criticism behaviors " (p. 321). In other words, the women in this study devalued their skills in criticism. This same kind of devaluation may be occurring when women complete self-report measures of CA. Although women may be proficient in several communication contexts, they do not perceive their abilities accurately.

Derlega, Metts, Petronio, and Margulis (1993) suggest that gender differences in self-disclosure may be due to the different value placed on self-disclosure in male and female subcultures gender-related social norms about appropriate self-disclosure for males and females, and different expectancies about self-disclosure for males and females. In Western culture, females seem to value talking about feelings and personal concerns, a practice which stems from the tendency for females to engage in intimate conversations more frequently than males. Therefore, in the case of self-report measures, there may also be a tendency for men to self-disclose less frequently about their feelings regarding communication apprehension.

Mulac & Wiemann (1984) suggested in their appraisal of the Behavioral Assessment of Speech Anxiety (BASA) that this instrument needed to be tested for its utility with female as well as male speakers. Particularly, the eighteen BASA variables should be examined to see if there is a gender bias in the negative behavior variables the scale measures. For example, women speakers may be consistently rated lower in number of gestures than are men speakers without the rater's realizing that gesturing is much more typical of male speakers than it is of female speakers. Because of the differences in women's and men's communication, and because of possible inaccuracies in measurement of female CA, this study analyzes the interaction of psychological gender, as measured by the BEM Sex Role Inventory, with self-modeling.

Hypotheses

Therefore, this study tests the following hypotheses:

H^1: Subjects who view videotaped presentations of themselves in which negative behaviors have been removed will experience a significantly greater decrease in communication apprehension than will subjects who view unedited videotaped presentations of themselves and subjects who view no videotapes.

H^2: Subjects who view unedited videotaped presentations of themselves will experience significantly greater decreases in communication apprehension than will subjects who view no videotape.

H^3: The effects in Hypotheses one and two will be moderated by gender.

Methods

Subjects were 308 students enrolled in "Basic Speech" or "Business and Professional Communication" at a regional southwestern university. Successful completion of at least one of these two courses is a general education requirement of the university ensuring an accurate representation of the university. The university's student body is older than traditional universities (median age = 27) and has a higher percentage of females (52%). The greater percentage of women may be attributable to this institution's long history as a "teacher's college."

Each class requires students to prepare and deliver four speeches over the course of the semester. All students enrolled in Basic Speech or Business and Professional Communication during the Spring 1993 semester participated in this research. For purposes of enrollment management, subjects were divided into 13 sections: ten sections of Basic Speech and three sections of Business and Professional Communication.

Measurement Instruments

Prior to delivering any graded speeches, all subjects completed the following two measurement instruments.

Bem Sex Role Inventory.

Subject gender orientation was operationally defined as ones' score on the Bem Sex Role Inventory (BSRI)[3]. The BSRI is the most often used measure in gender-related research as it has been reported in over 1,000 articles and ERIC documents (Beere, King, & King, 1991). The inventory, developed by Sandra Bem (1974), consists of sixty adjectives (e.g. adaptable, dominant, tender) which subjects rate on a one to seven scale indicating the degree to which the adjective is or is not descriptive of them. Twenty of the adjectives are "stereotypically feminine (e.g. affectionate, gentle, understanding, sensitive to the needs of others) and twenty are stereotypically masculine (e.g. ambitious, self-reliant, independent, assertive)" (Bem, 1981, p. 4). The remaining twenty adjectives are fillers.

Perhaps the most important characteristic of the Bem inventory is its treatment of masculinity and femininity as independent dimensions rather than opposite ends of a continuum.

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This enables researchers to obtain separate scores identifying the masculinity and femininity of each subject.

Personal Report of Communication Apprehension.

Subject communication apprehension was operationally defined as the subject's score on the Personal Report of Communication Apprehension (PRCA-24). The PRCA is the most commonly employed communication apprehension measure currently in use (McCroskey, Beatty, Kearney, & Plax, 1985) and has been found to be both reliable and valid. Richmond and McCroskey (1989) assert that the PRCA-24 "is the best available measure of traitlike communication apprehension" (p. 40). Previous versions of the PRCA were criticized due to their overemphasis on public speaking. The PRCA-24 overcomes that criticism by asking six questions "for each of four contexts: public speaking, talking in meetings or classes, talking in small groups, and talking in dyads" (McCroskey, 1984, p. 92). Lubbers and Gergen (1992) argue that the PRCA-24 is superior to other versions of the PRCA for it "does not have a bias toward public speaking settings" (p. 20). McCroskey (1984) reports the reliability of the PRCA-24 as "usually above .90" (p. 92).

McCroskey (1978) argued that "the best indicator of 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" (p. 193). McCroskey identified five theoretical predictions concerning communication apprehension.

> People vary in the degree to which they are apprehensive about oral communication with other people. . . . People with high oral communication apprehension seek to avoid oral communication. . . . People with high oral communication apprehension engage in less oral communication than do less orally apprehensive people. . . . When people with high oral communication apprehension do communicate, their oral communication behaviors differ from those of people who are less apprehensive. . . . . As a result of their own communication behavior, high oral communication apprehensive are perceived less positively by others than are less apprehensive people. (pp. 193-197)

In each case, the PRCA possessed sufficient validity to confirm the predictions.

The PRCA-24 consists of 24 statements (e.g. "I feel relaxed when giving a speech", "I'm afraid to speak up in conversations") which subjects rate on a scale of one to five indicating whether or not they agree or disagree with the statement.

Treatment Conditions

The 13 sections were randomly assigned to three conditions. For pedagogic reasons, all students in a randomly selected section were placed in the same condition.

Condition One.

Each subject in condition one (N = 97) was video-taped while delivering his or her first speech. The subject received the video-tape upon completing the speech. Each video-tape contained only one speech to control for apprehension which could be engendered by the comparison of speeches. Subjects viewed the video-tape at their leisure after which time subjects were assessed for communication apprehension.

Each subject in condition one was also video-taped delivering the third speech. Again, each subject received a video-tape comprised only of his or her speech. Subjects viewed the speech at their leisure after which time the subjects were assessed for communication apprehension.

Condition Two.

Condition two (N = 98) varied from condition one only in the content of the video-tape. Subjects in condition two were video-taped at the same points in the semester as condition one and were assessed for communication apprehension after each video-tape viewing. However, the tape they were given consisted of an edited version of their speech. Each speech was edited by the research team to eliminate inappropriate public speaking behaviors. Inappropriate public speaking behaviors were identified through the "Behavioral Assessment of Speech Anxiety" criteria (Mulac & Sherman, 1974). Editors were tested for reliability using Mulac and Sherman's criteria.

Condition Three.

Condition three (N = 113) served as the control group. Subjects in condition three were assessed for communication apprehension at the same times as subjects in conditions one and two. However, subjects in condition three were not video-taped at any point in the semester.

Results

Hypotheses One and Two

The results do not confirm these two hypotheses. Subjects who viewed videotapes of themselves speaking did not exhibit significantly less apprehension than subjects viewing no videotape (H^2). Further, subjects who viewed edited videotapes where inappropriate behaviors had been removed did not exhibit significantly less communication apprehension than subjects viewing unedited videotapes (H^1).

The inverse of this relationship was found to be true. Subjects in condition three (control) who viewed no videotapes experienced the greatest decrease in communication apprehension. At the first assessment, there were no significant differences found among the three conditions. By the second assessment, subjects in the control group were significantly less apprehensive than were subjects in either of the videotaped conditions ($p < .041$). This significant difference was also

found in the third assessment ($p<.001$). The mean of the control group dropped from 65.451 at the first assessment to 54.957 at the third assessment while the mean of the "unedited" group decreased from 65.208 to 58.352 and the "edited" group dropped from 68.387 to 64.975.

The public speaking portion of the PRCA was analyzed with similar results. The first assessment found no significant differences. The second assessment found significant differences with the control group experiencing the greatest decrease ($p.<.048$) with the third assessment following suit ($p.<.002$).

Finally, the change in scores from assessment one to assessment three was tested for significant differences. Consistent with the previously mentioned results, the control group experienced the greatest change ($p.<.048$).

Gender

The results provide partial confirmation for hypothesis three. In 2-way ANOVAs, no significant interaction effects were found between gender and the treatment condition. However, gender did provide significant results in other areas.

Gender, as measured by the BSRI, provided a low but significant correlation with the change in subjects' apprehension score across the four assessments ($r=-.2642$, $p.<.001$). Specifically, subjects who were more feminine as measured by the BSRI were less likely to experience a decrease in apprehension. Conversely, subjects who were more masculine as measured by the BSRI were more likely to experience a decrease in apprehension.

Perhaps more interesting was the correlation between gender and change in each condition. There was virtually no correlation between the change scores and the BSRI scores in the control group (masculine $r = -.080$; feminine $r = -.075$). In the edited condition, the correlations were slightly higher most notably for the feminine subscale (masculine $r = .0393$; feminine $r = .187$). Similarly in the unedited condition, the "feminine" subscale of the BSRI correlated .243 with change indicating that the more feminine subjects experienced the *least* change in this condition. None of these correlations were significant. However, it is interesting that feminine subjects as identified by the BSRI in each of the experimental conditions changed the least whereas in the control condition they were effected virtually the same as all other subjects.

Gender was also analyzed as a nominal variable in ANOVAs using quartile analysis. Significant differences were found across quartiles ($p.<.001$) with the more masculine quartiles consistently exhibiting the least apprehension. Further, those in the more masculine quartiles experienced a significantly greater decrease in apprehension ($p.<.001$). No significant interaction effects were found.

Discussion

Self-Modeling

Subjects in both video-taped conditions experienced significant decreases in their level of communication apprehension lending support to the prediction that self-modeling remediates apprehension (Hosford, 1981; Hosford & Mills, 1983). However, given that the control group experienced the greatest decrease in communication apprehension, one must conclude that self-modeling does not reduce apprehension as well as doing nothing. Indeed, the control group experienced a decrease in CA of 10.5 points from assessment one to assessment three. Had the experimental conditions experienced a similar decrease, their means in assessment three would have been notably lower. If this argument is accepted, then viewing unedited video *increased* apprehension 3.644 points and viewing edited video *increased* apprehension 7.188 points.

Self-modeling has been effective in a variety of settings including teaching swimming skills for the disabled (Dowrick & Dove, 1980), training parents (Rosenberg & Robinson, 1983), teaching inattentive, impulsive, hyperactive children (Walker & Clement, 1992; Woltersdorf, 1992), and training teachers (Hosford & Brown, 1975). Further, self-modeling has been hypothesized to be effective in treating apprehension (Hosford & Mills, 1983). Nevertheless, self-modeling was not effective in treating communication apprehension.

This lack of effectiveness may be attributable to several factors. First, some individuals may not be as amenable to modeling effects as others. Asendorpf and Baudonniere (1993) found that some infants could not recognize themselves in self-modeling exercises. These infants were immune to the effects of self-modeling for they were unable to relate the taped performances to their own. While there are numerous differences between infants and adults, it may be that some adults more easily *accept* the image as being their own. Further, some adults may not be able to associate the taped behavior to the performed behavior.

Second, although self-modeling has proven to be effective in most instances, it has not proven to be effective in all instances. For example, Clark, Beck, Sloane, and Goldsmith (1993) found that self-modeling *did not* increase "pro-social" behaviors in children. Further study may reveal that self-modeling is a treatment effective only in specialized areas.

Third, the problem may lie in apprehension created by viewing oneself on video tape. As noted above, Bush, Bittner, & Brooks (1972) found that the presence of a video recorder did not increase levels of anxiety or reticence. However, Bush et al. did not study the effects of *viewing* the taped presentation. For some students, the trauma of confronting their own image may engender apprehension. Dieker, Crane, & Brown (1971) found that students participating in self-

viewing developed a more realistic self-concept. Hosford (1981) recognized the impact of self-concept on self-modeling. Hosford speculated that those who already perceive themselves positively may be helped by self-modeling while those who view themselves poorly may be hindered by self-modeling.

Kinzer (1985) also approached the issue from the perspective of self-perception. Given that high apprehensive students typically distort their self-perception, video self-observation may heighten apprehension by reinforcing the distorted self-perception. In otherwords, even in an adequate performance, high apprehensives will view their own performance as being poor. Kinzer (1985) argues that video is not an "objective report" for

> each of us are disposed to see the evidence in his/her own way. Social-communicative anxious . . are likely to have low self-esteem, to make many negative self-statements, and to interpret information about the self--even positive information--negatively. (p. 17) [underline in original]

We found this tendency to be true in our informal observations of students. Comments such as "I'm so fat!" and "I didn't realize how bad I was" were common as students viewed their tapes. This was true even in the edited condition where negative behaviors had been removed. In fact, one student commented to one of the authors that if this tape only contained the good points of his speech it must have been an awful speech.

Kinzer (1985) presents a comprehensive review of the possible effects of video feedback on student communication apprehension. Kinzer argues that "some uses of verbal and video feedback prompt deleterious intensification of anxiety. Video feedback is likely to be especially risky because it is self-confrontational" (p. 5). He further argues that

> those already disposed to anxiety might also experience reactive anxiety . . . when confronted with the video camera. Some students with low trait anxiety might also experience reactive anxiety in the same situation but are likely to bring the anxiety under control. High trait anxious, who already have little expectation of success with the communication assignment, could experience a further decrement in performance caused by the elevated physiological arousal of reactive anxiety. (p. 7)

Kinzer's argument, therefore, is that the confrontation with the recorded image may exacerbate anxiety in all students. However, the problem is more pronounced in the highly anxious.

Interestingly, this is the inverse of what self-modeling predicts. Schunk and Hanson (1987) state that

> self-modeling may occur partly due to an enhanced sense of perceived self-efficacy,

> [underline in original] or personal beliefs about one's capabilities to organize and implement actions necessary to attain designated levels of performance. (p. 4)

Indeed, the present study found that self-modeling *diminished* the "sense of perceived self-efficacy."

Nevertheless, with the increasing availability of video tape recorders their use will unquestionably increase. Quigley and Nyquist (1992) presented four opportunities for using video in performance courses:

> the opportunity to adopt a role similar to that of observer, (b) the opportunity to identify or emphasize particular skills, (c) the opportunity to receive feedback about specific skills simultaneously while performing those skills, and (d) the opportunity to compare different performances. (p. 325)

These are certainly excellent reasons for using video in the classroom. However, given the results of this study, one must be cautioned to consider the potential effect on communication apprehension.

Gender

Despite the findings of Eakins & Eakins (1978) about sex differences in communication and more recent discussion by Bate (1992) and Wood (1994), one of the assumptions which seems to underlie most CA research is that there is no difference in the CA experienced by men and women (McCroskey, Simpson & Richmond, 1982). The results of video self-modeling as a remediation procedure contradict this assumption. That is, if a student is classified as more "feminine," then that student is less likely to experience a decrease in CA using the technique of video self-modeling. If we equate higher levels of CA with being less competent as a communicator, then we are met with the contradiction discussed by Mulqueen (1992) which seems typical of American women. Mulqueen indicates that "the existing pattern of sex-role socialization" relegates women's "expression of competence to spheres devalued by society." According to Mulqueen: "Women face the 'choice' of being perceived as either competent or feminine, since being competent and feminine is contradictory in contemporary American society" (p. 1). This cultural expectation appears to be reflected in this study, since those classified as more feminine in the two experimental conditions experienced higher levels of CA and also were less likely to experience a decrease in apprehension following the viewing of the videotape.

Another explanation of the differences in CA reduction which can be attributed to gender is the nature of the college classroom itself. Wood & Lenze (1991) discuss the college classroom as one where "recurrent instances of devaluing, trivializing, and negative stereotyping create an

environment not conducive to women students' intellectual and personal development" (p. 16). Bate (1992) summarizes some of the findings which make the college classroom a "chilly climate" for women: 1) Professors call on men by name more often than they do women, 2) Comments by professors divert discussion about a woman's work to the topic of her appearance (the same does not occur with men), 3) Faculty are more attentive to men's comments and questions than to women's questions, giving more eye contact to men, 4) Examples are often worded as if no women were present, and 5) Answers by males are often extended by the instructor and later referred to by the male student's name, while females' ideas often receive a quick nod, followed by a change of focus (p. 142). Perhaps, as Wood & Lenze suggest, the instructors involved in this study "inadvertently" favored a model of public speaking more characteristic of male speakers. Therefore, when those who were ranked higher in feminine qualities viewed themselves on videotape, they saw behaviors that were "feminine" and, thus, may have devalued them. If, indeed, as Sandler (1991) asserts, "women . . . are not generally expected to be competent or in positions of authority" (p. 11), then those students who were more "feminine" did not expect themselves to appear competent in the videotaped speeches. Rather than increasing their confidence by reducing CA, viewing the videotapes reinforced their images of themselves as less competent.

Therefore, if video self-modeling is to be an effective remediation for CA, students who view themselves on video may need to have a facilitator present during the viewing. The facilitator would assist the student in valuing the performance, rather than devaluing it. This approach would be consistent with the research that indicates women learn better in more cooperative, rather than competitive environments (Wood & Lenze, 1991).

Conclusion

Unquestionably, video-taping speeches in communication courses will continue. Further, video-tape and self-modeling may have legitimate, useful applications in communication courses. However, caution must be advised given the impact viewing video-tape may have upon the communication apprehension of the students. Perhaps more importantly, more focus must be placed on the role gender may play in communication apprehension remediation. Clearly, there is a gender difference in communication apprehension and there is a gender difference in CA remediation. Future research must focus on these differences.

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