

# Treating Communication Anxiety: Implications of the Communibiological Paradigm

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*Recent advances in neuropsychology have led scholars to investigate the relationship between biological predisposition and communication anxiety. Growing evidence suggests that an individual's predisposition to experience anxiety when communicating is linked to biologically-based personality factors (i.e., neuroticism and introversion). In fact, Beatty, McCroskey, and Heisel (1998), have proposed a communibiological paradigm and have reconceptualized communication apprehension as neurotic introversion. Given the compelling evidence, scholars in the field of communication are engaging in a discussion regarding the implications of a biological view of communication anxiety. This manuscript is an attempt to further the discussion by examining possible treatment implications of a biological model of communication anxiety for teachers of speech communication, particularly of public speaking. Pedagogical strategies are advanced, based upon the premise that novel stimuli and perceived threat of punishment are the key factors that trigger inhibition and anxiety associated with communicating. **Keywords:** communication anxiety, speech anxiety, public speaking anxiety, speech anxiety treatment, communibiology, communibiological paradigm*

In 1914, at a convention of the National Council of Teachers of English, a group of individuals agreed to leave the association and organize the National Association of Academic Teachers of Public Speaking, which later became the Speech Communication Association (Friedrich, 1989) and is now the National Communication Association. As Friedrich (1989) argued, "From the beginning, the communication discipline has been, to use Craig's (1989) description, a practical discipline whose essential purpose is to cultivate communication as a practical art through critical study" (p. 297). Since the discipline's inception, public speaking has been at the core of speech communication. Scholars, practitioners and teachers have studied the processes involved in public speaking and have made the teaching of it a central enterprise of the discipline, despite the objections of some (e.g., Burgoon, 1989). The primary objective of most instruction has been to help individuals develop competence in public speaking preparation and presentation.

For the majority of Americans, however, public speaking is the most feared communication context (Wallechinsky, Wallace, & Wallace, 1977). Teachers of speech are continually confronted with students who express extreme apprehension about the prospect of giving a speech, and for decades, the discipline has made helping people with "stage fright" (Clevenger, 1959) a primary instructional mission. Public speaking texts are replete with advice about coping with anxiety and fear (e.g., Grice & Skinner, 1993; Hamilton, 1999; Jaffe, 1998; Verderber, 1988), and in fact, entire books are devoted to the topic of managing or overcoming speech

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anxiety (e.g., Ayres & Hopf, 1993; Dwyer, 1998). Researchers have developed and tested several treatments for communication anxiety, including systematic desensitization (McCroskey, 1972), cognitive restructuring or modification (Fremouw, 1984; Fremouw & Scott, 1979; Meichenbaum, 1977), skills training (Kelly, 1984, 1997; Phillips, 1986, 1991), and visualization (Ayres & Hopf, 1985, 1991; Ayres, Hopf, & Ayres, 1997). Meta-analyses (Allen, 1989; Allen, Hunter, & Donohue, 1989) have revealed that: "All forms of treatment (cognitive modification, systematic desensitization, and skills training) were effective in reducing public speaking anxiety . . . Skills training alone is the least effective method . . . The most effective method . . . was a combination of all three treatments" (Allen et al., 1989, p. 62). The treatments are most effective when change is measured via self-report data, followed by observer ratings, and then physiological assessments (Allen, 1989).

A recent survey of speech communication departments (Robinson, 1997) found that only 13 percent offer a special treatment program for communication anxiety, and a little more than half of those said the program was run as a course. For the remaining half, the treatment program took the form of workshops, labs or one-on-one counseling (Robinson, 1997). The vast majority of responding departments (81 percent) indicated that communication anxiety is treated in the public speaking classroom. When asked which of the major treatment approaches were incorporated into the public speaking course, nearly all of the respondents (96 percent) reported that skills training is used, 63 percent include cognitive modification, 59 percent employ visualization, and only 25 percent use systematic desensitization (Robinson, 1997). Beyond these treatment approaches, 75 percent or more of respondents indicated that they identify students' fears as normal, encourage speech practice, establish a warm climate in class, teach students to select familiar topics, make speech evaluations a positive experience, emphasize that students become audience centered, and encourage class participation (Robinson, 1997).

Given the centrality to the discipline of speech communication of public speaking instruction and the specific aim of helping speech anxious students, scholars must scrutinize and examine the implications of any theoretical arguments relevant to the understanding and treatment of communication anxiety, especially public speaking anxiety. Recent theorizing about the etiology of communication apprehension (Beatty & McCroskey, 1998; Beatty, McCroskey, & Heisel, 1998; McCroskey & Beatty, 1998) clearly has implications for the treatment of speech anxiety and therefore warrants such scrutiny. Examination of this "communibiological paradigm" (Beatty et al., 1998) and its treatment implications is appropriate for this special issue on "Nature vs. Nurture." Interest in the relationship between biology, particularly brain structure/processes, and communication has attracted the attention of other scholars (e.g., Sellers & Stacks, 1991; Stacks & Andersen, 1989; Stacks & Sellers, 1986, 1990). The work of these scholars, which looks at the neocortical region of the brain, focuses on the cognitive processes involved in communication competence and apprehension. Treatment implications of such cognitive explanations for communication anxiety deserve to be examined, but our interest is in the recent theory advanced by Beatty and colleagues with its focus on emotional processes underlying communication apprehension.

Thus, the purpose of this paper is to conduct an analysis of Beatty et al.'s (1998) reconceptualization of communication apprehension in order to examine implications of the reconceptualization for treating communication anxiety, particularly

anxiety about public speaking. Our discussion is not focused solely on speech anxiety, but also concerns the broader problem of communication anxiety. Specifically, we argue why treatment of communication anxiety is still appropriate even if one adopts a communibiological perspective; we examine the potential effectiveness of major treatment approaches currently in use; and we discuss the need for a special course for speech anxious students as well as strategies that should be used in the regular speech course. Given that the communibiological paradigm is a recent development in our discipline and that much research remains to be done, we view our conclusions as speculative at this point. Furthermore, space limitations preclude full, detailed development of the practical suggestions offered for implementing either a special course or strategies for helping anxious students in the regular speech communication classroom.

### **Synopsis of the 1998 Reconceptualization of CA**

Beatty and colleagues have provided thorough explanations of their revised model of communication apprehension (Beatty & McCroskey, 1998; Beatty et al., 1998); it is our intent to provide an overview of those elements of the reconceptualization that are particularly germane to the focus of our paper. It should be noted that Beatty and McCroskey (1998) have proposed the communibiological paradigm as a theory of interpersonal communication, but have applied the theory to reconceptualize communication apprehension (Beatty et al., 1998). Although we draw from the broader theory to inform this synopsis, our primary focus is the application of communibiological theory to communication anxiety.

Beatty and colleagues (Beatty et al., 1998) argue that researchers have tended to presume that trait communication apprehension is largely the result of social learning processes (p. 197) but that there is little evidence to support this view (p. 197). They have proposed a biologically-rooted explanation for the etiology of CA, which they have drawn from the literature on temperament, particularly the work on underlying neurobiological structures that are inherited and, therefore, determine fundamental personality types. Although Beatty, McCroskey and Heisel's theory draws upon the work of many scholars of temperament and psychobiology, two theories seem central to the communibiological paradigm: H. J. Eysenck's (1986, 1990; Eysenck & Eysenck, 1985) personality theory and Gray's (1982, 1990, 1991) theory of the neuropsychology of temperament. Eysenck and Eysenck (1985) have proposed a theory explicating the structure of personality, two components of which Beatty et al. (1998) view as fundamental to communication apprehension. Although H. J. Eysenck (1967, 1990) proposed a biological explanation of personality, Beatty and colleagues rely on an alternative theory developed by Gray (1982, 1990, 1991).

As Eysenck and Eysenck (1985) explain, the two main aspects of personality are temperament and intelligence, and it is the temperament aspect with which Beatty et al. (1998; Beatty & McCroskey, 1998) are concerned. In essence, Eysenck and Eysenck (1985) have identified three personality types or "superfactors" (p. 185) [defined as "a group of correlated traits" (p. 12)]: extraversion (E) (as opposed to introversion), neuroticism (N) (as opposed to stability), and psychoticism (P) (as opposed to impulse control). Traits, which are "correlated behavioral acts or action tendencies" (Eysenck & Eysenck, 1985, p. 14) define the three types. The traits that form extraversion are sociable, lively, active, assertive, sensation-seeking, carefree, dominant, surgent, and venturesome (p. 15). The traits of neuroticism are anxious,

depressed, guilt feelings, low self-esteem, tense, irrational, shy, moody, emotional (p. 15), and psychoticism consists of the traits of aggressive, cold, egocentric, impersonal, impulsive, antisocial, unempathic, creative, and tough-minded (p. 14).

H. J. Eysenck's personality theory is relevant here because the primary components of communication apprehension, according to Beatty et al. (1998), are introversion and neuroticism. Beatty and colleagues state: "The distorted perceptions, avoidance tendencies, behavioral disruption, and unpleasant affect associated with high trait communication apprehension represent manifestations of neurotic introversion" (Beatty et al., 1998, p. 201).

As summarized by Eysenck and Eysenck (1985), there is substantial evidence that the basic personality superfactors of E, N, and P are inherited (an issue to be discussed in greater detail later in the paper); thus, researchers have tried to explicate the physiological structures and processes that underlie the dimensions of personality. Beatty and colleagues offer Gray's theory of the neuropsychology of temperament to explain communication apprehension. In their reconceptualization of CA, these authors (1998) provide a detailed explanation of Gray's model; thus, we will be brief.

Gray's (1982, 1990, 1991) model advances a behavioral inhibition system (BIS) and a behavioral activation system (BAS), which Beatty and colleagues (1998) have applied to explain the high trait communication apprehensive's tendency to experience anxiety, avoidance and behavioral inhibition. Sawyer and Behnke (1999) and Freeman, Sawyer and Behnke (1997) similarly have applied Gray's theory to explain public speaking anxiety. The BIS is activated by novel stimuli and perceived threat of punishment and the cessation of reward; BIS activation is experienced as anxiety. Individuals have an inherited threshold for BIS stimulation such that some people's systems are more easily and frequently activated. Activation of the BIS is thus related to anxiety, and is also associated with increased attention to negative or threatening aspects of social situations (Beatty et al., 1998). "Activation of the BIS inhibits ongoing behavior when triggered by novel stimuli, punishing stimuli, or those associated with loss of reward. When flight is impossible, inhibition results . . . Therefore, we would expect high apprehensive communicators to exhibit verbal inhibition in the presence of strangers, when negative feedback is expected, or when talking might result in loss of reward" (Beatty et al., 1998, p. 211).

In summary, individuals with high levels of trait communication apprehension have a neurotic, introverted personality or temperament, according to Beatty and colleagues, which evidence strongly suggests they have inherited (Eysenck & Eysenck, 1985). To explain the functioning of personality, theories have been developed to explicate the neurobiological structures and processes that underlie temperament; Beatty and colleagues rely on one such theory, that of Gray (1982, 1990, 1991). Drawing on Gray's theory, Beatty et al. (1998) argue that high CAs have inherited a low threshold for BIS activation or, in other words, an overactive BIS (Beatty et al., 1998, p. 206), which, when triggered by novel or punishing stimuli or the threat of cessation of reward, produces anxiety, avoidance or behavioral inhibition.

### **Treatment Issues and Implications**

The provocative theory advanced by Beatty and colleagues warrants careful scrutiny on a number of fronts, but our purpose in this paper is to look at treatment issues and implications raised by the theory. Some might argue that a biologically-based

account such as communibiology precludes treatment since temperament and its underlying neurobiological structures are genetically determined. We view the above as a radical oversimplification of the issue, and in this section offer a discussion of why treatment issues are germane and the forms treatment may need to take if the communibiological paradigm is adopted.

### Why Treatment?

In their seminal paper on communibiology, Beatty et al. (1998) state: “Virtually no temperament theorist claims that traits are exclusively genetic products. Neither do we” (p. 213). These authors claim that environment plays a role, albeit a limited one, in trait development and that “It may be that the moderate effects achieved by treatment represent the parameters within which environment can influence communication apprehension” (p. 213). Thus, Beatty and colleagues acknowledge that treatment may produce moderate effects in communication anxiety (p. 214), although “changing one’s CA level typically is very difficult, and for some, impossible” (McCroskey & Beatty, 1998, p. 228).

The primary role of genetics in the communibiological explanation of communication anxiety would seem to leave little room for “nurture,” and hence, suggests limited effects for treatment. However, as Beatty and colleagues (1998) caution, the theory is not complete and requires additional empirical evidence before we can have greater confidence in its explanatory power. Even if the proposed theory is adopted, we believe that treatment issues are still vital for three principal reasons. First, teachers of public speaking are faced with substantial numbers of students who are terrified of public speaking and whose cries for help cannot be ignored. We simply cannot tell them: “Sorry, you were born this way and there is nothing anyone can do.” Beatty et al. (1998) do not claim that speech communication teachers can and should do nothing to help; rather, as described above, they believe treatments may have some beneficial effects.

Second, environment (nurture) does influence the development and impact of communication anxiety and should not be ignored. Beatty and colleagues, drawing from Eysenck and Eysenck (1985), argue that genetics contributes 80 percent and environment contributes 20 percent in the etiology of introversion and neuroticism, the two components of communication apprehension (Beatty et al., 1998; McCroskey & Beatty, 1998). Eysenck and Eysenck (1985) provide a lengthy discussion of the relative contributions of genetics and environment to personality. Using the example of intelligence (intelligence and temperament are the two major dimensions of personality), they state:

Consider the statement that 80% of the variance in IQ is determined by genetic factors. This is often erroneously interpreted as implying a greater degree of genetic determination than is actually present . . . The 80%/20% ratio of genetic to environmental factors referred to proportional *variance*, which is a concept not too well understood by the general public or even by some psychologists. The variance is the square of the standard deviation, and therefore, if we want to talk in terms of standard deviations [the standard deviation is used to determine classification into high and low CA groups] we should take the square root; thus, looking at the ratio 80/20, we should take the square root of  $8/2 = 4$ , which is 2! Thus in ordinary terms environment is only half as important as heredity, but this of course is still quite a lot (p. 91).

Furthermore, Eysenck and Eysenck (1985) remind us that “Heritability is always a

*population statistic*” (p. 90) and population statistics “do not apply to individuals; like estimates of variance, it is impossible to apply such statistics to singular cases” (p. 91).

The points made by Eysenck and Eysenck (1985) are particularly germane to any consideration of treatment issues. First, as the lengthy quote above illustrates, although environment may contribute less than genetics to temperament (and thus to communication anxiety), it still plays a substantial role. Second, when dispensing treatment, we are always dealing with an individual case and cannot, therefore, assume that heredity contributes more than twice as much as environment to the development of a specific person’s communication anxiety. For any given individual, environment may have a more substantial impact, although that, of course, is impossible to determine with current technology. In any case, treatment is warranted, if the individual wants it, and may have a strong effect on his or her degree of anxiety about communication.

The third reason we believe treatment is of great importance even within a communibiological paradigm has to do with notions of reward and punishment. Central to the experience of communication anxiety is threat of punishment or the cessation of reward (Beatty et al., 1998); although the BIS is stimulated by threat of punishment or by the cessation of reward, provoking an anxiety response, it seems reasonable to assume that what is considered to be punishing or rewarding is culturally or socially determined because in the public speaking situation there is usually no real danger of physical harm. When people communicate, the punishments they fear and rewards they seek pertain to social evaluation and approval and, of course, validation of self-concept. Even if the threshold for activation of the BIS is inherited, the stimuli that elicit the BIS response are either novel or *conditioned* stimuli. Gray (1991) explains the activation of the BIS: “The critical stimuli are conditioned stimuli associated with punishment, conditioned stimuli associated with the omission or termination of reward . . . or novel stimuli” (p. 109). In other words, an individual has been taught, through association, that certain stimuli possess the potential for punishment or a decrease in reward. Therefore, an individual possesses the potential to reinterpret the same stimuli as having a lower potential for punishment. Thus, speech teachers can work to redefine notions of what constitutes punishment among speech anxious students. The success of cognitive therapies in altering people’s cognitions about communication, and hence their anxiety (Fremouw, 1984; Glass & Shea, 1986; Meichenbaum, 1977), bolsters our position that teachers can help students redefine their perceptions of punishments and rewards in the public speaking context.

### **What Kinds of Treatment?**

Beatty and colleagues (1998) do not offer specific treatment recommendations; they briefly assert that existing treatments may help but note that “These therapies do not change the individual’s basic temperament, but they allow the individual to control some of the negative aspects of that temperament” (McCroskey & Beatty, 1998, p. 229). Our goal in this section is to examine how to provide treatment of communication anxiety if it is indeed largely genetically determined. If one adopts the communibiological perspective on communication anxiety, what kinds of treatment should be administered and how effective are such treatments likely to be? Do existing major treatment methods have the potential to help? How can anxious students be helped through special or regular speech courses? In this section we

address these questions. We view our comments and suggestions as logically derived from the communibiological theory of communication apprehension but as tentative until additional research can be carried out.

### ***Major Treatment Approaches***

Systematic desensitization (SD) as a treatment approach may have some utility in addressing one of the core aspects of CA as neurotic introversion, that is the effects of novel stimuli on BIS activation. SD was developed by Wolpe (1958) and, as described by Friedrich, Goss, Cunconan and Lane (1997) is “a treatment package that systematically includes (a) training in deep muscle relaxation, (b) construction of hierarchies of anxiety-eliciting stimuli, and (c) the graduated pairing, through imagery, of anxiety-eliciting stimuli with the relaxed state” (p. 308).

Currently, there is evidence that SD is effective in treating communication anxiety, particularly in the public speaking context, but why SD works is unknown (Friedrich et al., 1997). From the viewpoint of social learning theory, it may be that SD helps individuals learn to associate relaxation with particular stimuli, replacing their learned anxious response to those same stimuli. Viewing SD from a communibiological perspective, using imagery to confront anxiety-provoking stimuli hierarchically arranged, may serve to reduce the novelty of those stimuli, thus eliminating overactivation of the BIS. Novelty may be reduced simply through imagined exposure to stimuli.

Freeman et al.'s (1997) speculations about the mechanisms underlying SD's effectiveness seem to be consistent with a communibiological perspective. They quote Gray's (1982) statement that behavior therapies, such as SD, may work because of habituation, which “is viewed as response specific, that is to say, it results from a particular stimulus and is dependent on well-defined neural mechanisms. It is not related to the intensity of the stimulus but increases with repeated exposure to the stimulus” (p. 184). Sensitization, on the other hand, is a response process that is related to stimulus intensity, “first increasing and then decreasing with repeated exposure” (Freeman et al., 1997, p. 184). Freeman and colleagues (1997) conclude that “According to this model, the effectiveness of systematic desensitization depends on the intensity of the stimulus and total exposure time. In order to decrease sensitization while allowing habituation to occur, a low intensity stimulus would be presented repeatedly over short periods of time” (p. 184). As Gray (1982) notes, however, behavior therapies such as SD are effective in treating anxiety, but an explanation for the efficacy of these treatments consistent with his theory of the behavioral inhibition system has not been adequately tested. Finally, SD does not appear to treat perceived threat of punishment or reward cessation, the other core aspect in the theory of CA as neurotic introversion. This may potentially limit its effectiveness as a treatment of biologically-determined anxiety.

Cognitive therapies, on the other hand, may deal well with the speech anxious person's elevated fear of punishment. Rational-emotive therapy (Ellis, 1962) and cognitive restructuring (Meichenbaum, 1977), for example, attempt to replace irrational themes or beliefs individuals hold with rational or coping beliefs. The teacher or therapist helps the individual change his or her cognitions about the anxiety-eliciting situation; undoubtedly, many of those cognitions pertain to perceived threats of punishment (e.g., “I will bore people” or “They'll laugh at me”) or perceived cessation of rewards (e.g., “They won't like me any more” or “My grades will suffer”). Therefore, perhaps the documented success of cognitive modification

procedures in alleviating anxiety, especially in the public speaking context (Fremouw, 1984) is attributable to the success of those procedures in redefining potential punishments and rewards, reducing the high CA's perceived threat of punishment and cessation of reward. The same may be true for performance visualization because the treatment approach uses public speaking scripts (Ayres et al., 1997) which enable high anxious individuals to envision themselves speaking competently and "receiving the congratulations" of their audience members (p. 404). Thus, students visualize themselves being rewarded, not punished, for their speech performance, reducing or preventing BIS activation.

Cognitive-oriented treatments work by getting people to change their cognitions about communication or anxiety-eliciting stimuli. Taking a social learning perspective, cognitive therapies help individuals learn to replace anxiety-provoking thoughts with calming thoughts, thus reducing anxiety. On the other hand, cognitive treatments are effective in alleviating anxiety, from a communibiological point of view, by redefining stimuli so that they are no longer seen as threats of punishment or reward cessation. Nonthreatening stimuli do not lead to activation of the BIS; thus anxiety is not experienced.

Skills training (ST) as a treatment of communication anxiety can take many forms, but the essence of the approach is to teach individuals the skills required to perform competently in public speaking or other communication contexts (Kelly, 1997). Like the other treatments discussed above, there is substantial evidence that skills training programs are effective in reducing fear of communication (Kelly, 1997). The explanation for the success of ST from a social learning viewpoint is straightforward; through ST anxious individuals learn skills that enable them to perform competently. Competent performance enables success in achieving goals and in gaining social approval, confidence is elevated and anxiety, therefore, diminished. Approaching skills training from a communibiological perspective, ST may work by reducing the amount of novelty associated with stimuli; that is, in the public speaking situation, for example, through ST, students learn how to organize a speech, use visual aids, prepare notecards, rehearse, etc., all of which may decrease the novelty associated with speech making.

Threat of punishment is central to BIS activation and, hence, the experience of anxiety in communibiological theory. If skills training also includes practice speeches before audiences, then it may also be effective in addressing perceptions of threat of punishment by enabling students to experience speaking without being punished. This would be true, however, only if training was effective in developing students into sufficiently competent speakers that peer and teacher feedback was positive (i.e., rewarding, not punishing).

The other way in which ST may address the threat of punishment in anxious speakers is by providing structure to the public speaking experience. As Booth-Butterfield (1986) found, high CAs appear to benefit from greater structure in speaking assignments; perhaps structure provides a sense of what the rules are for speaking, and to follow the rules is to avoid punishment. ST may give anxious students structure (e.g., how to organize a speech, the parts of an introduction and conclusion, etc.) and thus may enable them to feel they are following the rules, thus reducing threats of punishment or reward cessation.

In sum, all of the major treatment approaches may have some utility in alleviating communication anxiety, even if the communibiological theory is adopted. Cognitive

modification should decrease perceptions of threat of punishment, and systematic desensitization should reduce the novelty associated with public speaking. Skills training, depending on the form it takes, should address both of the core aspects of CA as neurotic introversion. Future research is warranted to test these speculations.

### *Treatment in Special and Regular Speech Courses*

We advocate that departments with the resources to run special programs designed to help alleviate students' communication anxiety should do so. If, as Beatty et al. (1998) argue, communication apprehension is genetically determined such that individuals have lower thresholds for BIS activation in response to novel and potentially punishing stimuli, for treatment to have lasting impact it should occur over a period of time. It is doubtful that very brief interventions can maintain their effectiveness over time.

Regarding the design of a special course, the analysis offered thus far in this paper suggests the following:

1. The course should be a full-semester in length in order to have sufficient time to enact the remaining recommendations and to provide students with enough time and opportunities to change and improve.
2. Our analysis suggests that all of the major treatment approaches may help alleviate communication anxiety so the special course should include a combination of approaches. Skills training, in at least some forms, addresses both of the core aspects of the theory of communication apprehension as neurotic introversion (i.e., novel stimuli and threat of punishment/reward cessation) and should be incorporated into a special program. Beyond that, the use of SD and/or a cognitive treatment such as visualization or cognitive restructuring should be included.
3. Students should be gradually exposed to situations that elicit anxiety to avoid stimulation of the BIS due to perceived threat of punishment or novel stimuli. For example, for the public speaking context, instructors can begin by simply asking students to respond to questions from their seats. From there, students can give very brief reports or mini-speeches while the class is seated in a circle, followed by having them say a single sentence or two as they stand in front of the class. The next step could involve having students present short speeches just to the instructor, then to a small group, and finally to the entire class. The Pennsylvania State University Reticence Program, described in detail in a book by Kelly and colleagues (Kelly, Keaten, & Phillips, 1995), is a model of this method of gradually exposing students to anxiety-provoking stimuli.
4. Provide students with highly structured communication assignments. As discussed earlier in this paper, structure may alleviate anxiety by reducing the threat of punishment. Structured assignments allow students to know what the teacher's expectations are and enable students to have a greater chance of meeting those expectations, thereby reducing the likelihood of punishment.
5. Teachers should provide frequent feedback to students and often the feedback should not be accompanied by a grade. For instance, instructors can give students feedback about their choice of speech topics, their sources, and their outlines. By providing feedback throughout the process of speech preparation and rehearsal, the threat of negative evaluation or punishment is reduced. Turning in outlines for feedback and rehearsing for the teacher and possibly a small group of

classmates enable the anxious speaker to have a preview of the audience's reaction to the speech. Even if the teacher and/or students need to offer some constructive criticism, the anxious speaker is less likely to perceive the feedback as punishing because it is offered in the context of preparation or rehearsal, not the "real" speech.

Given that most communication departments responding to Robinson's (1997) survey do not offer special treatment programs but opt to deal with anxiety within the regular public speaking classroom, it is vital to look at the implications of the communibiological paradigm for regular classroom instruction. The survey results revealed that some departments incorporate cognitive modification, visualization, and/or systematic desensitization into the regular speech classroom (Robinson, 1997). Both existing research (Allen et al., 1989) and the analysis offered in this paper suggest that the inclusion of these treatment approaches is appropriate. Our intent in this section, however, is to offer additional guidelines for treating communication anxiety in the context of the regular public speaking course.

1. Incorporate one brief coping strategy such as visualization into the course early in the semester. Additional materials such as audiotapes of the SD procedure or books like *Conquer Your Speechfright* (Dwyer, 1998) or *Coping with Speech Anxiety* (Ayres & Hopf, 1993) should be made available to students.
2. As much as possible, teachers should use a gradual method of exposing students to feared situations, as described in #3 above. This or some other graduated procedure for getting students to present a speech should work to reduce the novelty associated with public speaking, and hence, should reduce activation of the BIS. Sawyer and Behnke (1999) suggest that instructors should pay particular attention to the anticipation period immediately preceding speech performance since psychological state anxiety is highest at this point. Perhaps a gradual approach to readying students to speak may be effective in reducing the very high anxiety experienced in the anticipatory period. At the very least, students should have the opportunity to present their speeches individually to the instructor prior to presentation in the classroom.
3. Teachers can reduce novelty and, thus, anxiety, by reducing uncertainty about speaking and what it involves. Instructors should show videotapes of student speeches from previous years or those provided by textbook publishers. The greater the exposure students have to public speaking, the more novelty is reduced. If exposure reduces novelty, then once students have successfully completed a first speech, they should be given many opportunities to speak.
4. Reconceptualizing communication apprehension as neurotic introversion also means that classroom teachers must help alter the tendency of high speech anxious students to perceive threats of punishment. There are three major sources of punishment in the public speaking class: teacher feedback, peer feedback, and intrapersonal communication. Peer and teacher feedback must be carefully planned and monitored so that it focuses on the positive aspects of a student's speech and provides specific suggestions for improvement. Feedback may be perceived as less punishing if it is given in writing at the class period following the period in which the student gave the speech because anxiety levels are still high upon completion of a speech, although considerably lower than in the anticipation period (Sawyer & Behnke, 1999). Teachers should also provide

an early feedback option in which students can submit speech preparation materials for instructor feedback rather than waiting until they present the completed speech. The purpose of this suggestion is to reduce the potential for students to perceive the threat of punishment. Moreover, to deal with the anxious individual's punishing self-talk, instructors ought to incorporate a brief session on cognitive restructuring into the public speaking course. Again, a model for how to implement this suggestion is provided by the Penn State Program (Kelly et al., 1995), which has been found to be effective in changing beliefs of reticent students (Keaten, Kelly & Finch, in press).

5. Teachers should create flexible assignments or assignment options that range from highly structured (for the very anxious student) to loosely structured (for the nonanxious student). Assignment options help because speech anxious students benefit from the structure and low anxious students are not stifled by having too much structure (Booth-Butterfield, 1986).

## Conclusion

Overall, we believe there is much good news in this analysis of the treatment implications of the communibiological paradigm. Even if people inherit a neurotic introverted temperament characterized by lower thresholds for BIS activation, existing treatments appear to be capable of addressing the core issues of novel stimuli and perceived threat of punishment or reward cessation which have been theorized as provoking anxiety reactions. Whenever possible, communication departments should institute special courses designed as a treatment of communication anxiety. If the communibiological perspective is adopted, a special course has the most potential for alleviating anxiety among students with a predisposition toward anxiety proneness. When a special program is not possible, regular classroom teachers can incorporate treatments and the suggestions offered here into the public speaking course to help those with high levels of communication anxiety.

Further treatment research is necessary, particularly to overcome the methodological problems which Beatty et al. (1998) claim have hampered such research. But we believe the arguments and evidence advanced in this paper suggest that there are ways to help students with high communication anxiety, even if they are predisposed to some degree to be anxious.

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