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The Influence Of Trait Anxiety And Feedback Message On Client Self-disclosing Behavior, Self-reported And Behavioral Anxiety In Videotape Self-confrontation (videotape Feedback)

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THE INFLUENCE OF TRAIT ANXIETY AND FEEDBACK MESSAGE ON CLIENT SELF-DISCLOSING BEHAVIOR, SELF-REPORTED AND BEHAVIORAL ANXIETY IN VIDEOTAPE SELF-CONFRONTATION (VIDEOTAPE FEEDBACK)

by

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Abstract

This dissertation was designed to examine the effects that receiving videotape feedback alone (no message), videotape feedback + positive feedback (positive feedback), and videotape playback of another student's performance (placebo feedback) would have on self-reported anxiety, behavioral anxiety and self-disclosing behavior; it also investigated the influence of trait anxiety alone and in interaction with the three treatments on the above dependent measures.

Two-hundred and two male students enrolled in Introductory Psychology at the University of Western Ontario volunteered to participate in the study. Initially, all subjects completed the A-Trait Scale of the State-Trait Anxiety Inventory (STAI). Ninety subjects were selected from this population according to their scores on the

A-Trait Scale and subsequently divided into three groups with an equivalent number of High, Middle and Low Trait Anxious subjects. Subjects blocked on trait anxiety were randomly assigned to one of three experimental conditions: placebo feedback (PL), no message (NO), and positive feedback (PO). The Carkhuff Discrimination Index was used to assess the functioning level of the two graduate psychology students employed as interviewers for the study.

The subjects were individually seen, delivering 5 minute monologues while being videotaped. One-third received immediate videotape feedback of their performance (NO), one-third received positive feedback from the interviewer prior to and during videotape feedback (PO), and one-third saw an immediate playback of another student delivering a monologue (PL). All subjects then gave another monologue while being videotaped. Self-reported anxiety was assessed by the STAI (Form X-1) A-State Scale. Behavioral Anxiety pre, during and post-treatment was assessed by the Behavior Anxiety Checklist (BACL). The First Person Pronoun technique (FPP) was used to measure self-disclosing behavior.

The experimental design, a three-way analysis of covariance consisting of a 3(trait anxiety) x 3(treatment) x 2(interviewer) was utilized. The post-treatment scores

on the dependent measures (self-reported anxiety, behavioral anxiety and self-disclosing behavior) were adjusted by their respective pre-treatment scores in the covariance design. Nonsignificant interviewer main effects and interactions with the other independent variables, led to computations of two-way (trait anxiety x treatment) analyses of covariance for each dependent measure.

Results of the study indicated significant trait anxiety x treatment interactions, trait anxiety main effects and treatment main effects on the STAI (Form X-1) and BACL during and post-treatment scores. There was also a significant trait anxiety x treatment interaction, and treatment main effect on the FPP.

The Newman-Keuls Q-Statistic was used to assess specific differences between treatments, trait anxiety levels, treatments across segments, and treatment x trait anxiety interactions. The results showed that positive feedback significantly reduced both self-reported and behavioral anxiety, while increasing self-disclosing behavior in contrast to placebo feedback and no feedback. Results also indicated that no feedback increased self-reported anxiety and significantly increased behavioral anxiety in contrast to placebo feedback. The influence of positive feedback on post-treatment scores decreased

across time segments, while the effect of no feedback during videotape playback increased over time.

The comparisons between the three trait anxiety levels confirmed the relative constancy of trait anxiety, indicating differences between High, Middle and Low Trait Anxious subjects on all measures. The significant differences were: High significantly differed from Low on all measures, High>Middle on behavioral anxiety, Middle>Low on self-reported and behavioral anxiety.

High and Middle Trait Anxious positive feedback subjects displayed significant reductions in self-reported and behavioral anxiety and significantly increased self-disclosing behavior in contrast to High and Middle Trait Anxious placebo and no feedback subjects. High and Middle Trait Anxious no feedback subjects significantly increased behavioral anxiety in contrast to High and Middle placebo subjects. Unexpectedly, Low Trait Anxious positive feedback subjects significantly decreased behavioral anxiety post-treatment, while Low Trait Anxious no feedback subjects significantly increased behavioral anxiety post-treatment, in contrast to Low Trait Anxious placebo subjects.

These results were discussed within the framework of Holzman's research and Spielberger's state-trait anxiety

theory. Limitations, clinical implications and future research possibilities were also discussed.

Acknowledgments

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Words are insufficient to express my gratitude to my parents, Sonne and Eva Stein. Much of what I know about living responsibly, I learned in the therapeutic atmosphere which they provided.

To Carla, my wife, I am again at a loss for words. It would be a serious error of omission, however, not to point out that her meaning for my life began some years ago - at a time when we started to share the pain and joy of life together.

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INTRODUCTION

Both the relatively small cost and ready availability of taping equipment have resulted in a dramatic increase of experimental work on videotape feedback (Bailey & Sowder, 1970). Often, the procedure involves confronting clients with their own recorded counseling sessions.

Videotape feedback has been used with many people in numerous settings and for varying objectives. It has been used with alcoholics, athletes, students and teachers. It has been utilized in counseling, drama, language, interpersonal communication, martial arts, mathematics, science and vocational retraining (Fuller & Manning, 1973).

Despite its widespread usage, there has not been a rigorous assessment of videotape feedback as a therapeutic technique, nor a general analysis of self-confrontation (Bailey & Sowder, 1970; Gergen, 1969; Kubie, 1969).

Holzman (1969) has found audiotape feedback to be an anxiety arousing (ego-threatening) experience for certain individuals, while other researchers also have suggested videotape feedback may be ego-threatening (Alkire & Brusne, 1974; Nielsen, 1963; Schaefer, Sobell, & Mills, 1971). One objective of this study was to establish whether or not videotape feedback was an anxiety arousing (ego-threatening)

stimulus situation.

Spielberger (1975) has theorized that ego-threatening situations have differential effects on individuals with varying levels of anxiety-proneness. This study tried to provide a better understanding of the self-confrontation experience within Spielberger's frame of reference. Specifically, the focus was on the influence of trait anxiety (High, Middle and Low) and feedback message (videotape feedback alone, videotape feedback+positive feedback and placebo videotape feedback) on client self-reported anxiety, behavioral anxiety and self-disclosing behavior.

In order to explore these issues, it was necessary to examine: (a) the theoretical and descriptive explanations of self-confrontation, (b) Holzman's theory and research on self-confrontation, (c) Spielberger's state-trait anxiety theory and related anxiety research, (d) research support for independent and dependent variables, (e) assessment considerations regarding the dependent variables, (f) operationalizing videotape self-confrontation, (g) this study's objectives and (h) the research hypotheses.

Theoretical and Descriptive Explanations of Self-Confrontation

The underlying theoretical rationale which explains how and why self-confrontation presumably effects positive

personality change has been given little consideration. Most researchers have turned to existing theories for "ad hoc" explanations.

> Psychoanalytic theory, Sullivanian theory, and Bateson's double-bind theory (and related concepts have been used obliquely and unsystematically in several of the reported self-confrontation studies. No explicit attempt was made to relate these theoretical positions to the self-confrontation process, but rather the presumed therapeutic changes were apparently analyzed according to the previous theoretical commitments of the individual researcher. (Bailey & Sowder, 1970, p. 134).

A survey of the literature, however, does suggest some convergence in thinking about the important aspects of self-confrontation. Three descriptive explanations have emerged.

1. Some researchers stress the discrepancy between how the individual believes he appears and how he actually appears to others. The use of videotape self-confrontation provides him with a more comprehensive and objective perception of his behavior than he generally has (Alger & Hogan, 1967; Boyd & Sisney, 1967; Kaslow & Friedman, 1977;

Stoller, 1968).

2. Another explanation underscores the multiplicity of stimuli surrounding the interpersonal situation which deluge the individual (Kagan, Schauble, Resnikoff, Danish, & Krathwohl, 1969). Stoller (1970) stresses the time-binding quality of the self-confrontation process. Videotape feedback provides immediate perception of "one's fate and one's participation in the formation of this fate" (Stoller, 1970, p. 15). The individual can relive the original experience, and explore in depth the thoughts and feelings which occurred during the counseling interview to which he was unable to respond.

Thus, the first two explanations accentuate the "objective" quality of the self-confrontation experience. This apparent objective self-awareness can be anxiety arousing as the individual is overwhelmed by stimuli to which to respond.

3. A third explanation claims that the changes self-confrontation effects begin with a disruption of cognition or perception so that discrepancies between what is heard and what is expected are noticed (Bahnson, 1969; Danet, 1968; Holzman, 1969, 1974; Kagan, et al., 1969). Kagan, et al., (1969) note that during videotape feedback the client first experiences anxiety. The research by Holzman

and his associates have offered the most support for this explanation (e.g., Holzman, 1969).

Holzman's Theory and Research on Self-Confrontation

A series of studies by Holzman and his associates from the Menninger Foundation (Gaviria, 1966, 1967; Holzman, Berger, & Rousey, 1967; Holzman & Rousey, 1966, 1971; Holzman, Rousey, & Snyder, 1966; Rousey & Holzman, 1968) led to Holzman's analysis of the self-confrontation process (Holzman, 1969). In his conceptualization, he uses Gill and Brenman's (1959) concept of deautomatization to describe the process.

Deautomatization is the redirection of an individual's attention in such a manner that previously habituated stimuli become the object of attention. It is characterized by either an advance (involvement) or retreat (avoidance).

In self-confrontation, attention is redirected to a number of habituated features of behavior, including a great variety of nonverbal cues (i.e., body posture, facial expression, etc.), and nonlexical communications (e.g., tone of voice, hesitations, etc.). Expressive behavior (i.e., speech) peremptorily confronts the individual, thus momentarily deautomatizing his usual cognitions. The result is initial astonishment, anxiety and defensive-

ness.

The series of investigations began when Holzman and Rousey (1966) observed that many adults are jarred by hearing short samples of their voices on tape. Forty-six females were divided into experimental and control groups. All subjects made tapes about their first jobs. Experimental subjects then listened to these tapes, while control subjects heard "an unfamiliar female voice" talking about her first job. The tape was stopped as soon as a subject manifested some affective response (based on the experimenters' judgement of verbal and nonverbal behavior).

Tapes were transcribed, coded and analyzed to ascertain what aspects of the self-confrontation process caused affective reactions using a specially designed Voice Confrontation Scale. A scoring schema was developed to detect and rate reactions to listening to one's own voice. Mahl's (1959) Speech Disturbance Categories Scale was used to code the protocols. The scale yields a ratio of negative words to total spoken words, which the authors suggest is a measure of defensiveness. Holzman and Rousey found that experimental subjects made significantly more affective responses, gave significantly more spontaneous evaluations, and made significantly more references to the experience of discrepancy between what they thought they would sound

like and what they heard. The experimental subjects' attention was drawn significantly more often to vocal qualities of the tape, than to content. Also, there was a greater incidence of negative responses by the experimental subjects.

Holzman and Rousey (1966) replicated the first experiment using a semantic differential that could be administered rapidly in an effort to measure the initial defensive reaction. This scale was administered on three occasions: before, immediately after, and 5 minutes after audiotape self-confrontation. Experimental subjects experienced a brief attitudinal disturbance (as measured by the semantic differential), which was exemplified by decreased evaluation and activity during immediate post-testing, followed by an increase 5 minutes later to the prestimulus calm.

Holzman, Rousey, and Snyder (1966) then explored the psychophysiological consequence of listening to one's own voice. A 7-second segment of the subject's taped voice was recorded. Control subjects were replayed other voices, while the experimental subjects were replayed their voices along with similar segments of nineteen other voices. The dependent measures were GSR and EMG (to assess psychophysiological responses), and the free association task (to assess defensiveness). In general, the subject's own

voice produced a significantly greater psychophysiological activation response than did other voices. Productivity of (free) association was decreased after listening to their own voices, but not when hearing other voices.

These findings were considered to be consistent with the hypothesis that hearing one's own voice produces a highly affective response, which is often accompanied by defensive behavior. Gaviria (1967) measured both the magnitude and the habituation of automatic, physiological responses to voices of different degrees of familiarity (own voice, spouse's voice, stranger's voice) and noise. Gaviria observed psychophysiological alerting or arousal, and noted that in studies of psychophysical habituation this arousal to one's own voice persisted considerably longer than did responses to strangers' voices. He had previously demonstrated in a learning experiment (Gaviria, 1966) that material presented in one's own voice was learned faster at first than material presented in another's voice. From the two studies he tentatively concluded that habituation occurred sooner to unknown voices than to known voices.

In an experiment with bilingual subjects, Holzman, Berger, and Rousey (1967) found that subjects showed greater affective reaction, greater experience of discrepancy

between their expectation and the present recording, more evidence of speech disturbance and significantly greater defensive negation to hearing themselves in their primary language (Spanish), than to hearing themselves in their second language (English). They suggested that the psychophysical effect was due to expressive qualities of the recorded speech (characteristic tone, hesitations, rate of verbalizations, etc.), rather than the discrepancy between hearing through bone and air conduction. The authors speculate that the secondary language is emotionally "not me", since it lacks subtle cues and thus fails to produce the ego-involvement which hearing oneself in the native tongue does.

Rousey and Holzman (1968) tried again to clarify the issue of whether subjects react primarily to physical discrepancy or motivational factors. They reported women listening to their own voices experience a consistent reliable disruption. Males' responses were unreliable. The results indicate that, at least for females, hearing one's own recorded voice produces a disruptive effect, which is referable not only to physical differences between the recorded voice and the speaking voice, but to psychological, motivational factors as well. From these findings and the physiological evidence a summary of the

process of audiotape self-confrontation was made by Holzman (1969) and Holzman and Rousey (1971).

1. Perception of a discrepancy between what the subject heard and what she expected to hear.
2. An affective reaction to the perception of this discrepancy usually accompanied by disavowel of the voice as heard.
   (Example: "Holy man! I don't sound anything like I think I sound to me!").
3. Identification of specific voice qualities.
   (Example: "It sounds gravelly.").
4. Further elaboration by some subjects on the meaning of what they heard, usually with an awareness of some personal conflict expressed in the voice.
   (Example: "It has a funny tone to it--a child-like tone.").
5. A growing acceptance of the voice with rapidly fading acknowledgement of the conflict just noted. In some instances subjects disavowed their previous aversive reaction.

The process took from two to three minutes. There was an initial sudden reaction after the subject had listened for a few seconds (deautomatization), with the intensity lessening (reautomatization) within 60 seconds. Holzman

and Rousey (1966) suggest the process involves anxiety, defensiveness, avoidance, and some cognizance of conflict. Reautomatization can be an advance or a retreat, and Holzman (1969) suggests this depends on the counselor's feedback message during deautomatization. Other researchers (Gotheil, et al., 1969; Nielsen, 1963; Paul, 1966b) have also concluded that the self-confrontation process is anxiety provoking and often ego-threatening.

Summary. From the Holzman studies we have seen research concerned with the disruption of usual cognitions and the consequences this has. The studies suggest that the process of self-confrontation is one in which the "self" is made an object of conscious attention, which leads to a disruption of the usual modes of perception so that discrepancies between what is heard and what is expected are noticed. This disruption and awareness of discrepancies evoke physiological arousal, anxiety, defensiveness, and is an uncomfortable "state" of anxiety which may lead to avoidance of the situation. It was suggested that the counselor's feedback message may determine whether avoidance or involvement occurs.

This study used the above conceptualization as a framework for the investigation of videotape self-confrontation (videotape feedback). This thesis tried to extend

Holzman's analysis (Holzman, 1969; Holzman & Rousey, 1971) of the process of audiotape self-confrontation into the videotape medium. Although the use of videotape feedback is probably the single greatest technical resource available for counseling and counselor training, questions about its effects require further clarification. Anxiety appeared to be a meaningful variable for an evaluation of the effects of self-confrontation. Further examination of the literature suggested both additional dimensions for this study and the salient methodological problems found in much of the research done in this area.

Videotape Self-Confrontation (Videotape Feedback)

Several investigators have used videotape feedback. This brief literature review will cover those most pertinent to this study; that is, two studies that demonstrated videotape feedback to be an anxiety arousing experience. Nielsen (1963), in a study using Harvard undergraduate students, found videotape self-confrontation to be a highly involving experience. Movies were taken of subjects engaged in "ego-involving" discussions with a challenging experimental collaborator. One week later they viewed the film. While viewing themselves, some subjects recognized manifestations of forceful emotions, and yet these emotions were not experienced during the interaction itself. Other

subjects reported having had strong emotional reactions during the interaction, but these internal states were not overtly visible. In a follow-up (1½ years) study, subjects were not as emotionally involved as during the initial viewing, though they did tend to focus more on themselves. Nielsen speculated that there was less involvement because subjects were, in a sense looking at a different person--their former selves, no longer themselves.

Alkire and Brusne (1974) used four groups of subjects in their study: videotape feedback (married couples), videotape feedback (male psychiatric patients), and two control groups (married couples, and male psychiatric patients). A semantic differential assessing self-concept was used as the dependent measure. Results from the semantic differential were viewed as of minor importance when compared with the "casualty rate" among those receiving self-confrontation. Of the nine couples who received the treatment seven were designated as casualties (suicides, divorces and/or separations). The authors conceded these results were probably high. However, they felt this type of data warranted caution and careful study of the process of videotape self-confrontation.

General Summary of Self-Confrontation Research.

Bailey and Sowder (1970) in their review were able to

delineate serious flaws in nearly all the investigations. Several problems seem evident:

1. There are few well controlled studies.
2. Many studies included as experimental investigations, under closer scrutiny, would be better reclassified as clinical or exploratory studies.
3. There appears to be no systematic investigation with the exception of the Holzman studies.
4. The results are inconclusive. Some studies report positive effects, some negative and others little or no effect.
5. The impressiveness of this area of research lies in the wide breadth and quantity of investigations, rather than in adherence to scientific method.

The typical design in self-confrontation research consists of subjects being placed into various groups. Generally, one group is interviewed and receives immediate videotape feedback. A second group receives the same interview in the presence of videotape equipment, but is not given feedback (placebo control). In better research, a third no-treatment group is included, and is given pre- and posttests, but no treatment. Dependent measures have been self-reports, behavioral ratings, physiological measures and clinical judgements.

Self-Confrontation Research

General Recommendations. In view of the difficulties in previous research, Bailey & Sowder (1970) delineate some questions that self-confrontation research has failed to answer.

1. What is the theoretical underpinning of self-confrontation?
2. What effect does self-confrontation have on certain individuals?
3. What constitutes the process of self-confrontation?

Any design that is to provide reliable and valid answers to these questions must involve a number of important components:

1. Subject selection--it is necessary to use homogeneous groups.
2. Assessment--this requires data on many characteristics (i.e., traits, sex, age, SES, etc.). Standard measures should be used (e.g., objective assessment of overt behavior), in lieu of "clinical judgements" (Bailey & Sowder, 1970). This will insure that all the subjects receive comparable treatments, and help to establish correlates and predictors of change. Assessments should be

administered at least three times: before (baseline), during (provide process information), and after feedback (test the stability of the results).

3. Research design--the subjects should be randomly placed into groups. The experimental group receives videotape self-confrontation, while the control group views a placebo film. Also, all relevant operations and variables should be reported. Some variables that require further study are: (a) feedback channels (audio, visual, audiovisual), (b) concealed or exposed equipment, (c) feedback message, (d) feedback context (focused, passive, positive, etc.), (e) length of feedback session, (f) relationship of personality characteristics to feedback (i.e., sex, interviewer differences, etc.), (g) relationship of emotions (i.e., anxiety, aggression), and (h) relationship of cognitions (i.e., imagery) to feedback.

Hypotheses should follow the format suggested by Paul (1967): What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances? He has also pointed out that no one study will ever be able to answer all these questions.

This cursory summary and list of recommendations will hopefully clarify the current status of self-confrontation research, and offer guidelines which will provide a more "objective" assessment of the self-confrontation experience. A major variable in this research was anxiety. The ensuing discussion will focus on three areas: (a) Spielberger's theory, (b) research support of the state/trait distinction, and (c) research support for Spielberger's theory.

Anxiety

Theoretical Perspectives on Anxiety. Anxiety was described by Freud (1936) as including fear, stress, helplessness, and ego-threat. Contemporary theorists have lent support to his contentions (Grinker, 1966; Mandler, 1972). Spielberger (1966, 1972a) estimates that over 5,000 books and articles on the topic of anxiety have been published in the past 20 years. These papers have included theorists from every "school of psychology". Behaviorists (Lazarus & Opton, 1966; Lazarus & Averill, 1972; Wolpe & Lazarus, 1966), psychoanalysts (Fenichel, 1945; Freud, 1936, 1949), and "third force" theorists (Fischer, 1969, 1971; May, 1950, 1967; Rogers, 1951) have all contributed to the psychological literature on anxiety. In recent years, one of the most influential theorists and researchers

has been Spielberger.

The Theory of Spielberger. Spielberger (1972b) delineates the necessary components of any anxiety theory.

> An adequate theory of anxiety must distinguish conceptually and operationally between anxiety as a transitory state and as a relatively stable personality trait. It is also apparent that a comprehensive theory of anxiety must differentiate between anxiety states, the stimulus conditions that evoke these states, and the defenses that serve to avoid or ameliorate them. (p. 38).

The Concepts of State and Trait Anxiety. Briefly stated, state anxiety (A-State) refers to a present "transitory" condition of an individual which consists of subjective feelings of tension and apprehension as well as autonomic arousal. It is assumed that anxiety states vary in intensity and fluctuate over time as a function of the stresses that impinge upon the individual. A-State is distinguished from anxiety-proneness (trait anxiety), which is defined in terms of individual differences in the frequency that anxiety states are manifested over time. A-Trait (trait anxiety), refers to a personality trait which consists of a predisposition to perceive relatively objective stimulus situations as threatening, and respond

with state anxiety.

The Anxiety Process. The theory assumes that arousal of state anxiety involves a "process" of temporally ordered events initiated by either external (e.g., physical danger) or internal (e.g., feelings of inadequacy) stimuli that are perceived to be dangerous or threatening to the individual. Situations involving evaluation of personal adequacy are perceived as more threatening by High A-Trait individuals.

Once a situation is "cognitively appraised" as threatening the theory assumes that: (a) this evokes state anxiety and (b) the intensity will be proportional to the amount of threat the situation poses for the person. The terms stress and threat are used to denote different aspects of the temporal sequence. Stress refers to stimulus situations or environmental conditions that are characterized by some degree of objective danger. Whether or not a stressful situation is regarded as threatening by a particular individual will depend upon his own cognitive appraisal of that specific situation. Frequent encounters of a stressful situation can lead an individual to develop effective coping responses that can ameliorate the danger and thereby immediately reduce the level of A-State. Defenses can be used to reduce the intensity of A-State

reactions in other threatening situations. High levels of state anxiety are unpleasant, and can initiate behavior (cognitive or motoric) that has been effective in the past. In two important "stressor situations": (a) threats from dangerous situations (e.g., surgery) evoke similar high state anxiety reactions in both High and Low Trait Anxious individuals, while (b) threats to "personal adequacy" are evaluated as more threatening (i.e., evoke higher state anxiety reactions) by High A-Trait individuals.

The principal assumptions of the theory may be summarized as follows:

1. For all situations that are appraised by an individual as threatening, an A-State reaction will be evoked. Through sensory and cognitive feedback mechanisms high levels of A-State will be experienced as unpleasant.
2. The intensity of the A-State reaction will be proportional to the amount of threat that the situation poses for the individual.
3. Individuals with high A-Trait will perceive situations or circumstances that involve failure or threats to self-esteem as more threatening than will persons who are low in A-Trait.
4. The duration of an A-State reaction will depend

upon the persistence of the individual's interpretation of the situation as threatening.

5. Elevations in A-State have stimulus and drive properties that may be expressed directly in behavior, or that may serve to initiate psychological defenses that have been effective in reducing A-State in the past.
6. Stressful situations that are encountered frequently may cause an individual to develop specific coping responses or psychological defense mechanisms which are designed to reduce or minimize A-State.

(Spielberger, 1972c, p. 44)

The origin and nosology of trait anxiety has been outlined by Spielberger (1971):

> With regard to the origin and etiology of individual differences in A-Trait, it is assumed that residues of past experience dispose high A-Trait persons to appraise situations that involve some form of personal evaluation as more threatening than do individuals who are low in A-Trait. We may speculate that childhood experiences influence the development of individual differences in A-Trait, and that parent-child relationships centering around punishment are espe-

> cially important in this regard. The fact that self-deprecating attitudes are aroused in high A-Trait persons under circumstances characterized by failure or ego-involving instructions suggests that these individuals received excessive criticism and negative appraisals from their parents which undermined their self-confidence and adversely influenced their self-concept. (Spielberger, 1971, p. 277)

State-Trait Anxiety Research

An Overview of Research not using the STAI (State-Trait Anxiety Inventory). A recent symposium highlighted an important controversy regarding the trait versus behavioral approaches to personality assessment (Bowers, 1973, 1976; Bucher, 1976; Endler, 1973, 1976; Jackson, 1976). Trait theory advocates seek to discover underlying, generalized dispositions that characterize persons relatively stable over time, across many situations, and search for behaviors that may serve as indices of such dispositions (Jackson, 1976). The behaviorally oriented psychologists (e.g., Bucher, 1976) focus on behavior directly, treating it as a sample from a wider repertoire, rather than as a sign of generalized inner attributes. Behavior is seen as "situation-specific".

The state-trait distinction in general is felt by

many researchers (Fiske & Pearson, 1970; Zuckerman, Persky & Link, 1967) to have great utility in clinical research. Fiske & Pearson assert that a "constructive way to avoid this handicapping assumption of consistency is to distinguish between measurements of enduring dispositions (traits) and measurements of momentary states" (Fiske & Pearson, 1970, p. 63). Farr and Kubiniec (1972) report stable (self-description) and dynamic (self-evaluation) components of self-concept and discuss resulting measurement issues.

Developers of state-trait anxiety inventories (Endler, Hunt, & Rosenstein, 1962; Spielberger, Gorusch, & Lushene, 1970) have tried to emphasize the importance of the two constructs (state and trait). Thus, it is not surprising that the major foci of research has been twofold: (a) establishing the validity of state and trait anxiety, and (b) defining the situations which normally evoke state anxiety. The inventories which have been most frequently used are: The Affect Adjective Checklist (Zuckerman, 1960; Zuckerman & Lubin, 1965), the S-R Inventory of Anxiousness (Endler, Hunt, & Rosenstein, 1962), the Taylor Manifest Anxiety Scale (Taylor, 1953) and the Test Anxiety Scale (Sarason, 1957). A thorough review of these scales is beyond the scope of this paper, and only research using

the STAI will be discussed.

Research using the STAI. The research has focused on: (a) establishing the presence of state and trait anxiety (both validating the state-trait distinction, and the hypothesis that A-Trait is a predictor of A-State), and (b) defining the "stressor" situations that evoke state anxiety (e.g., ego-threatening situations).

Several studies have tested the validity of Spielberger's conceptualizations, and most have shown that state anxiety is significantly changed by experimentally induced stress, while A-Trait measures remain stable. (Auerbach, 1973; Bartsch & Nesselroade, 1973; Lamb, 1972; Newmark, 1972a and b; Stoudenmire, 1972). Many of these studies have used factor analytic designs, as well as experimental manipulations and naturally occurring events, to show that measured trait anxiety is relatively stable, while A-State vacillates with the varying "stressor" conditions.

Numerous studies have investigated the stressor situations which evoke A-State (Hodges & Felling, 1970; Houston, Ohlson, & Botkin, 1972; Lamb, 1973; O'Neil, 1972; O'Neil, Spielberger, & Hansen, 1969). In general, these studies identify two important classes of stressor situations: threat to personal adequacy and threat of physical danger.

As previously noted, High Trait Anxious individuals evaluate threats to personal adequacy as more stressful than do Low Trait Anxious individuals. While in situations involving physical danger, both High and Low A-Trait people construe the situations similarly.

Since the theory was pertinent to this study, it seemed beneficial to review some of the research related to: (a) the state-trait distinction, (b) A-Trait as a predictor of A-State, and (c) the relationship between A-Trait and threats to personal adequacy.

Research Support for the State-Trait Anxiety Distinction

Allen (1970) found that subjects scored significantly higher on the A-State Scale when it was administered just prior to a test than when under typical classroom conditions. A-Trait scale measured under both the conditions remained stable. The results support the basic theoretical distinction between state and trait anxiety.

Newmark (1972b) assessed the stability of state and trait anxiety using undergraduate students. The test was administered on four occasions with test-retest intervals of 1 day, 1 week, 1 month, and 10 months. The results indicated that both scales have good internal consistency.

Stoudenmire (1972) assessed the effects of relaxation training for highly anxious coeds. The training consisted

of 15, 30, and 45 minute muscle relaxation for three sessions distributed over either 3, 9 or 15 days. State anxiety was found to decrease as a function of relaxation training. These findings are consistent with Spielberger's theory, since trait anxiety remained constant while state anxiety fluctuated.

Auerbach (1973) found that A-State scores varied under different conditions, while A-Trait scores remained stable. The conditions were time periods in relation to surgery, and subjects were hospital patients. The state anxiety scores were highest before, dropped slightly 2 days after, and decreased more sharply 6 days after surgery. The A-Trait scores were stable over two administrations, before and 6 days after surgery. Patients high in A-Trait were higher in A-State both before and after surgery.

Saunders (1973) divided subjects into High, Medium, and Low Trait Anxious groups and gave them a standardized interview. He found fluctuations in A-State, while A-Trait remained stable. The findings were construed to be supportive of Spielberger's theory.

Trait Anxiety as a Predictor of State Anxiety

Bartsch and Nesselroade (1973) found that High Trait Anxious individuals scored higher on A-State than did Low subjects. The experiment combined repeated measures factor

analytic procedure with a manipulative procedure (administration of math tests and coding with or without stressful feedback). State anxiety scores were found to be lower after the manipulation. There were no significant differences between the two conditions. Significant interaction effects revealed that: A-State scores were higher under stress than under nonstress conditions for the posttest; and High Trait Anxious subjects dropped in A-State scores from pre- to posttest, while Low A-Trait subjects remained at the same level.

The findings that A-State scores are lower after the treatment than before seems paradoxical, and the authors interpret this as meaning that adaptation to the study or the experimenter or the assessment device--or all three--produced overriding changes in state anxiety. However, the authors also state that the instructional set in administering the STAI the first time was changed. It may be that this deviation from standard procedure had something to do with the results. Nonetheless, they interpret the results as supporting the state-trait distinction. This conclusion is supported by the factor analysis, which found the two scales were measuring different factors of differing levels of stability over time.

Relationship of Trait Anxiety to Threats of Personal Adequacy

Hodges and Felling (1970) administered the STAI along with a questionnaire (Stressful Situations Questionnaire) describing 40 potentially stressful situations, and requiring the subject to rate the amount of apprehension he felt for each. A-Trait did not correlate with being anxious in situations involving physical danger or pain, but was moderately correlated with three other factors (classroom participation, dating, social and academic failure). The results are consistent with the theoretical position that differences between High and Low Trait Anxious subjects will manifest themselves in self-esteem or ego-threatening situations, but not when physical danger is involved.

Houston, Ohlson, and Botkin (1972) investigated the relationship between trait (dispositional) anxiety and beliefs that the environment is generally threatening. Subjects completed both the A-Trait Scale and the A-State Scale to assess the degree to which the individual believes that the environment is generally threatening to self-esteem. The results showed that trait anxiety is related to the belief that both physical safety and self-esteem are threatened by the environment. A-Trait is not related to fear of physical harm, but rather to a generalized

expectation that unfortunate events of any type may happen.

Lamb (1973) investigated the effects of different kinds of stress on anxiety (self-report, physiological and behavioral). Both threats to self-esteem and physical danger caused A-State scores to increase, while A-Trait scores remained stable. High Trait Anxious subjects had higher levels of state anxiety during the speech (ego-threatening situation) than Low Trait Anxious subjects, but not during the physical threat situation (blowing up a balloon until it burst). This supported Spielberger's theory, although it's questionable if the so-called physical threat situation was perceived by the subjects as stressful.

McAdoo (1972) found that strong failure feedback in a memory task caused greater increase in state anxiety scores for upper quartile subjects than for lower quartile A-Trait subjects. Mild failure feedback had little effect on A-State for Low Trait Anxious subjects, but it increased the A-State of High A-Trait subjects. This was interpreted as validating Spielberger's theory that "ego-threat" causes increases in state anxiety for only High A-Trait individuals.

A study which provides results inconsistent with the

theory was reported by Hedl, O'Neil, and Hansen (1973). A-State scores of subjects taking intelligence tests administered by computer, and by another person were compared. It was expected that administration by a person would be more ego-threatening for High A-Trait subjects. But it was found that A-State scores were higher with computer testing. There was no difference in A-State scores between High and Low A-Trait subjects.

Using coeds from the upper and lower 20th percentile of a distribution of A-Trait scores, O'Neil (1972) found that: in the stress conditions (negative feedback) High A-Trait subjects had greater initial increases in A-State than the Low Trait Anxious subjects. In a nonstress condition there were no differences in A-State scores.

Summary of Research Using the STAI on Spielberger's Theory

As in many other areas of research (e.g., self-confrontation), findings about the state-trait distinction are less than consistent across studies. Most studies supported the contention that High A-Trait individuals are more likely to react to situations with more A-State, but there are exceptions. Since the A-Trait Scale probably doesn't perfectly correspond to the underlying construct (trait anxiety) there may be too much overlap between High and Low STAI A-Trait scores. Thus, one is much more likely

to get significant differences in A-State by selecting subjects with large differences between their A-Trait scores (e.g., McAdoo, 1972; O'Neil, 1972) than by dividing the distribution into upper and lower halves (e.g., Hedl, et al., 1973). The former subject selection method is recommended by Spielberger, et al., (1970). Nevertheless, both experimental and factor analytic research point to the viability of Spielberger's state-trait theory.

Whether or not High A-Trait subjects are more threatened than Low A-Trait subjects in ego-involving situations remains questionable. It has been found that subjects had higher A-State scores when tested by a computer than by another person (Hedl, et al., 1973), which is inconsistent with the proposition that High A-Trait subjects will be more sensitive to interpersonal situations. Perhaps, the unfamiliarity with computers poses greater threat, than whatever threat might come from another person.

In sum, research tends to indicate that the A-State Scale is sensitive to "stressor" reactions. Whether the A-Trait Scale can distinguish between the likelihood of responding to stress with an elevation in A-State seems to depend on both the degree of stress (McAdoo, 1972), and the amount of separation between High and Low A-Trait scores (O'Neil, 1972; Spielberger, et al., 1970). Whether High

A-Trait individuals are more sensitive to ego-threatening situations seems likely, but requires further investigation.

Research Support for Choice of Independent Variables

An overview of the research suggests that independent variables regarding individual differences and feedback message are frequently cited as critical for the understanding of the self-confrontation process. Several authors have emphasized the relationship between individual differences and self-confrontation responses (Braucht, 1970; Danet, 1969; Dracoulides, 1965; Rousey & Holzman, 1968; Walz & Johnston, 1963). Differential effects of self-confrontation have resulted in the exacerbation of disturbances for some clients (Alkire & Brunse, 1974; Bailey, 1970; Danet, 1969; Schaefer, Sobell, & Mills, 1971). While research has included a wide variety of subjects (neurotics, psychotics, college students, etc.), basic personality variables have not been systematically controlled. Also, there are no theoretical suggestions as to which are the relevant variables from the self-confrontation research.

Two early studies (Bodin, 1969; Walz & Johnston, 1963) indicated that anxiety level might lead to differential results. Other studies suggest that self-confrontation is an "ego-threatening" situation (Danet, 1968; Holzman, 1969,

1971; Nielsen, 1963), which according to Spielberger's theory (Spielberger, 1966, 1971, 1972c) should lead to differential anxiety reactions by High and Low Trait Anxious individuals. Thus, it would seem that trait anxiety may be an important personality variable in the self-confrontation process.

Besides trait anxiety, another independent variable that has been discussed by researchers is feedback message. Support for the choice of this variable comes from four sources: (a) self-confrontation research (Bailey & Sowder, 1970; Hum, 1970; Kagan, et al., 1969; Robinson, 1970; Stoller, 1967a, b, c), (b) counseling research (Bergin, 1962; Frank, 1961; Shapiro, 1971), (c) anxiety research (Kieffer & Tennyson, 1973; McAdoo, 1972; Smith & Sarason, 1975), and (d) the experimental literature (Annett, 1969; Bilodeau & Bilodeau, 1969; Elwell & Grindley, 1938; Hunt, 1964; MacPherson, Dees, & Grindley, 1949; Trowbridge & Cason, 1932).

Videotape feedback usually involves two forms of feedback: playback of the tape, and the counselor's message. It has been suggested that playback without a message has limited value (Berman, 1972; Elwell & Grindley, 1938; Stoller, 1970; Trowbridge & Cason, 1932). The counselor's role is viewed as critical in cueing and motivating the

client to view important facets of his behavior (Geertsma & Reivich, 1969; Hum, 1970; Kagan, Krathwohl, & Miller, 1963; MacPherson, et al., 1949).

It has been found that prestige of the counselor adds to the credibility of his feedback (Bergin, 1962; Shapiro, 1971). Bergin (1962) found that a message, regardless of its validity, from a prestigious figure (e.g., a counselor) can influence a subject's attitude. Several authors have indicated that videotape playback may influence the credibility of the therapist's message (Bergin, 1962; Orne & Scheibe, 1964; Shapiro, 1971).

Holzman's theory suggests that facilitative feedback (positive feedback message) must be given to foster anything other than defensive maneuvers (Holzman, 1969; Holzman & Rousey, 1966).

The following statements summarize the research regarding the effect of feedback messages:

1. If there is no message, then the client might selectively attend during the videotape playback (Stoller, 1967a, b, c), which would shield the client from disturbing information. There is also the possibility he will be unable to process and/or encode all the information (Atkinson & Shiffrin, 1975; Kagan, et al., 1963, 1969). Thus, one function of the message is that it may help the

individual to process the new information.

2. The message from a prestigious individual (e.g., counselor, experimenter, etc.) will be perceived as both credible and influential to the subject (Bergin, 1962; Shapiro, 1971).

3. A positive (facilitative) message should enable the subject to process the new information, and reduce both the stressfulness and ego-threat involved (Kieffer & Tennyson, 1973; McAdoo, 1972; Smith & Sarason, 1975). Although several authors have suggested the importance of the feedback message in videotape self-confrontation, there have not been any studies on the relative merits of positive feedback messages. In fact, the possible differential effect of counselor feedback versus videotape feedback is infrequently studied (Fuller & Manning, 1973). The interviewer variable was controlled in this study, so that potential differences between interviewers could be explored.

Research Support for Choice of Dependent Variables

Anxiety is stressed by researchers as the outcome of self-confrontation (Alkire & Brunse, 1974; Danet, 1969; Holzman, 1969, 1971; Kagan & Schauble, 1969; Nielsen, 1963). It is suggested that self-confrontation causes a disruptive effect (Danet, 1969).

As previously noted, studies using the STAI have

focused on the anxiety reaction (Braucht, 1970; Hodges & Felling, 1970; Lamb, 1973; McAdoo, 1972). However, only one study has explored anxiety within the self-confrontation context (Braucht, 1970). His findings were not significant, but anxiety was a subsidiary variable and was discussed in an a posteriori fashion. Clearly, anxiety as an outcome of self-confrontation is suggested by Holzman's theory, stressed by other researchers, but lacks direct investigation.

Self-disclosure (self-disclosing behavior) as an outcome of self-confrontation has received little attention. Only two studies specifically mention self-disclosure (Hartson & Kunce, 1973; Paredes, Gottheil, Tausig, & Cornelison, 1969), while several others imply its importance (Bailey & Bailey, 1973; Holzman & Rousey, 1966; Holzman, Berger, & Rousey, 1967; Kingdon, 1975). Its inclusion in a study has been unsystematic, based on anecdotal statements of clinical judgements rather than reliable instruments (e.g., the Jourard Self-Disclosure Scale).

This is surprising since self-disclosure has been widely researched in the counseling literature. Several studies have demonstrated the inhibitory effects of recording (Roberts & Renzaglia, 1965; Tanny & Gelso, 1972), which may increase receptivity to feedback, because of the

potential danger it alerts to the subject (Fuller, Menaker, Peck, & Brown, 1967). It is unlikely to increase self-disclosure, which is more apt to occur in a nonstressful situation. This is supported by a recent study (Doster, 1975), which found low levels of anxiety to be related to self-disclosure. Self-disclosure has also been found to increase under positive evaluations (Colson, 1973; Greene, 1977; Janis, 1975; Taylor, Altman, & Sorrentino, 1969). In sum, it is expected that in ego-threatening situations (i.e., where self-esteem is being threatened) self-disclosing behavior will be reduced, since several studies have suggested that situational factors play an important part in determining the amount of information an individual will self-disclose (Chittick & Himmelstein, 1967; Halpern, 1977; Mehrabian, 1971; Powell, 1968).

Assessment Considerations for the Dependent Variables

Research on self-confrontation offers some recommendations about means of measuring the dependent variables (anxiety, and self-disclosing behavior), and some direction about specifying them as state rather than trait variables.

Anxiety. The measurement of anxiety in a state manner follows logically from Spielberger's theory of State-Trait Anxiety, and has been well considered; it has a place in a long history of research work on anxiety (Levitt, 1967;

Martens, 1971). In reviews of anxiety, both Levitt (1967) and Martens (1971) propose that for a reliable, relatively brief, self-report measure of both state and trait anxiety, the STAI is the most carefully developed and valuable instrument of those available.

Besides self-reported anxiety, a behavioral measure was proposed as a measure of state anxiety. A modified form of the Behavior Checklist (Paul, 1966) was used. The list contains a number of behaviors that have been demonstrated to be related to anxiety (Clevenger & King, 1961). The instrument has also been used in several studies (Borkovec, 1973; Carter & Papas, 1975; Marshall, Stoian, & Andrews, 1977). The instrument can be used as a state measure, since it can be used to assess ongoing behavior without reference to predispositions.

Self-Disclosing Behavior. The study's third dependent variable, self-disclosing behavior, was a subsidiary variable, important because of its hypothesized relationship to anxiety. In reviewing the literature on self-disclosure Cozby noted that "the term refers to both a personality construct and a process which occurs during the interaction with others" (Cozby, 1973, p. 73). It is defined "as any information about himself which Person A communicates verbally to a Person B" (Cozby, 1973, p. 73). Noting the

caution given by Gitter and Black (1976), no judgement is made here regarding the value or accuracy of the disclosures. To measure self-disclosure in a state manner requires using an assessment of the "process of self-disclosure". Although several personality variables have been correlated with self-disclosure, (femininity, introversion-extroversion, sociability, etc.), it is clear they are not well understood (Cozby, 1973). Following the recommendation of Cozby (1973), that self-disclosure should be measured behaviorally, the First Person Pronoun technique (Myrick, 1969) was selected. Holahan and Slaikeu (1977) report using a similar method to assess self-disclosure. The selected instrument provided a behavioral assessment of self-disclosure in a state manner, which was applicable to the study.

Toward Operationalizing and Clarifying Videotape Self-Confrontation (Videotape Feedback)

Finally, although results are rather tenuous and inconclusive, research provides some ideas about the operational definition of the self-confrontation experience. Some of the ambiguity of results may be attributed to the fact that self-confrontation methods are not as homogeneous as some researchers have assumed them to be. It would be preferable to consider self-confrontation not as a

technique, but as a generic term implying the use of video and audiotapes in some way.

The length of playback which constitutes self-confrontation is an issue which remains inadequately resolved, although it is one which has received some attention. At one extreme there are counselors who present the subject with the full videotape replay of the recorded event (Berger, Sherman, Spaulding, & Westlake, 1968; Kagan, et al., 1963; Kagan & Schauble, 1969). The idea here is that of reliving the entire experience. Under the same rubric of videotape self-confrontation there are counselors who: show the subject selected portions of the tape, and comment to the subject before, during and/or after the replay about its content (Czakowski, 1968; Alger & Hogan, 1967; Stoller, 1970; Wilmer, 1967, 1968). Basically these various techniques would appear to differ in the extent to which they provide the subject with a feedback message. Thus, we could conceive of the feedback message as being on a continuum from ambiguous to specific.

As the theoretical, laboratory research has used a brief tape playback to represent self-confrontation, with significant results (e.g., Holzman & Rousey, 1966: 1 minute), this study used a brief playback experience to approximate self-confrontation, while acknowledging the possibility of

a more complex impact with longer feedback.

Focus and Objectives

The focus of this research study was to investigate subjects receiving videotape self-confrontation. Self-confrontation has generated intense interest and enthusiasm without rigorous substantiation or theoretical work. The form of the study was investigatory "laboratory" research.

Laboratory research has been cited as "bridging the gap between basic research and counseling practice" (Strong, 1971, p. 106). The intention of the study was to simulate a counseling situation. This approach is closely akin to the analogue tradition, which despite its limitations (one session, vicarious client participation, etc.) and criticisms (e.g., Goldman, 1976) has been recommended by several authors (Bordin, 1965; Heller, 1971; Munley, 1974).

Following theoretical and research leads, dependent variables (self-reported and behavioral anxiety, and self-disclosing behavior) and independent variables (trait anxiety, interviewer, and feedback message) were selected for the study.

The primary objectives of this study in rank order of importance are summarized below.

1. To test for the differential effects videotape feedback alone, videotape feedback + positive

feedback and placebo videotape feedback have on self-reported anxiety, behavioral anxiety and self-disclosing behavior of High, Middle and Low Trait Anxious individuals.

2. To test Holzman's theory that self-confrontation (videotape feedback alone) is an ego-threatening situation.
3. To differentiate between and compare two types of feedback: videotape feedback alone and videotape feedback + counselor (positive) feedback.
4. To develop a behavioral measure of anxiety that was appropriate for self-confrontation research and significantly correlated with the self-reported anxiety scale.

The supplementary objectives are summarized below.

1. To test Holzman's (1969, 1971) analysis of the process of self-confrontation in the videotape medium.
2. To test for the effect of videotape feedback + positive feedback over time.

Research Hypotheses

1. Self-Confrontation. Subjects receiving videotape feedback alone (no feedback) will report and exhibit more behavioral anxiety than subjects

viewing placebo videotapes (placebo feedback).

2. Type of (counselor) Feedback Message. There will be a significant main effect due to the type of feedback message. Specifically, subjects receiving videotape feedback + positive feedback (positive feedback) will report and exhibit less behavioral anxiety and be more self-disclosing than subjects receiving no feedback and placebo feedback.

3. Trait Anxiety. The level of trait anxiety will significantly interact with the type of feedback message.

   (a) High Trait Anxious subjects receiving positive feedback will report and exhibit less behavioral anxiety and be more self-disclosing than High Trait Anxious subjects receiving no feedback and placebo feedback.

   (b) Middle Trait Anxious subjects receiving positive feedback will report and exhibit less behavioral anxiety and be more self-disclosing than Middle Trait Anxious subjects receiving no feedback and placebo feedback.

   (c) Low Trait Anxious subjects will perform similarly under all conditions. There will

be no significant differences in self-reported and behavioral anxiety and self-disclosing behavior between the three treatment conditions.

4. State Anxiety. There will be a significant positive correlation between the self-reported and the behavioral measures of anxiety.

5. Interviewers. There will be no significant differences in dependent measures due to differences between interviewers.

CHAPTER II

METHOD

Experimental Design

The design was a pretest-posttest paradigm (Campbell & Stanley, 1966). The analytic model for the study was a 3 x 3 x 2 Analysis of Covariance. The independent variables were: feedback message, trait anxiety, and interviewer, while the dependent variables were: self-reported anxiety, behavioral anxiety, and self-disclosing behavior. Pre-treatment test scores on the dependent measures were used as the covariates. The design is recommended by Campbell & Stanley (1966). Since there was blocking on the A-Trait variable (High, Middle and Low A-Trait) a simple comparison of post-treatment effects would reflect the state-trait correlation. The analysis of covariance controlled for possible confounding. This design permitted simultaneous evaluation of the effects of feedback message, interviewer, and comparison of the effects of videotape self-confrontation in High, Middle and Low A-Trait subjects, as well as the interaction among these main effects.

Subject Selection

The subjects were 202 male undergraduate students from the University of Western Ontario chosen from the subject

pool of introductory psychology students. The subjects were told that this was a two-part experiment for which they could receive one experimental credit if selected for participation in the second part.

The subjects were selected in the following manner: 202 subjects completed the STAI, Form X-2 (Trait Scale) that was administered in two large groups (See Appendix A for STAI, Forms X-1, X-2). The A-Trait scores assessed their level of trait anxiety.

The possible scores for the A-Trait Scale range from 20 to 80. From the 202 subjects that were pretested, 90 subjects were chosen according to a format suggested by the authors of the test (Spielberger, et al., 1970), and used successfully by other researchers (McAdoo, 1972; O'Neil, 1972; Saunders, 1973). The distribution of the subjects was proportioned so as to form three groups: High Trait Anxious (upper 20th percentile of the distribution), Middle Trait Anxious (middle 60%), and Low Trait Anxious (lower 20th percentile of the distribution). This format enabled the experimenter to choose the 90 subjects from the three groups. See Table 1 for actual distributions and their division.

The High, Middle and Low Trait Anxious subjects were randomly assigned to the three treatment conditions, 10 per

Table 1
Distribution of Trait Anxiety Scores

Group	Experimental Subjects Raw Score	Frequency	Population Sample Raw Score	Frequency
Low Trait-Anxious	23	2	23	2
	24	1	24	2
	25	1	25	1
	27	3	27	4
	28	5	28	7
	29	2	29	4
	30	3	30	3
	31	4	31	6
	32	9	32	15
		n=30		n=44
Middle Trait-Anxious	33	0	33	6
	34	0	34	2
	35	0	35	4
	36	0	36	15
	37	11	37	16
	38	1	38	10
	39	4	39	14
	40	1	40	9
	41	4	41	9
	42	9	42	24
	43	0	43	4
	44	0	44	5
	45	0	45	1
	47	0	47	3
		n=30		n=118
High Trait-Anxious	50	8	50	12
	51	7	51	9
	52	2	52	3
	53	3	53	5
	54	3	54	3
	55	1	55	1
	56	2	56	2
	57	0	57	1
	58	1	58	1
	61	1	61	1
	63	1	63	1
	64	1	64	1
		n=30		n=40
Overall Mean = 40.60		n=90	Overall Mean= 39.69	n=202
SD = 10.32			SD = 8.21	

group. In an effort to reduce client dropout, subjects were asked to fill out sign-up sheets for appointment times, and were contacted by phone to confirm their appointments.

Interviewers

The two male interviewers were doctoral level students in psychology. Both were naive with respect to experimental design. The interviewers were pretrained before the pilot study on: the procedure, delivery of positive feedback messages (both before and during videotape feedback), and in the operation of the videotape recorder. After pilot testing, the interviewers reviewed their instructions and participated in role playing for further practice. They were instructed not to interact with the subject during the monologue. They were also instructed not to go beyond the boundaries of the study in eliciting further information from the subjects. Before initiating the study proper, the interviewers were assessed on the Carkhuff Discrimination Index (Carkhuff, 1969) and were found to be consistent at the High Facilitative-Low Activation level. Thus, both their functioning level and previous training suggested the two interviewers were similar. During the experiment the interviewers were neatly groomed and dressed to increase the credibility of the feedback messages.

Equipment and Room Arrangement

Twenty-five videotapes were used, since approximately 15 minutes of each session was taped. Also, two complete sets of Sony videotape equipment were used (cameras, TV monitors, videotape recorders and microphones). Three identical and adjacent research rooms were used: the first room (interview room) contained a table, two chairs, a microphone, and a two-way mirror; the second room (playback room) was adjacent to the interview room and contained a complete set of videotape equipment, a table, two chairs and a two-way mirror; the third room was adjacent to the playback room and was equipped with a two-way mirror, a camera, TV monitor, and a videotape recorder.

Procedure

Each subject was individually brought to the interview room where he was asked to sit down. The subject was then requested to fill out the STAI (Form X-1, A-State Scale). The use of the videotape equipment was explained, including assurance that the tape would be treated confidentially and erased after the experiment (See Appendix D).

The subject was then asked to speak for 5 minutes while being recorded. The subject was told that the interviewer would not speak with him, nor ask questions, and the subject was on his own during the presentation. Next, the

subject was given an instruction sheet to read, which provided him with a list of potential topics that he could choose to present (See Appendix E). The topics were selected on the basis of content; that is, the author tried to provide the subjects with an equivalent number of positive and negative topics for each monologue.

The subject was instructed to:

> Present yourself as if you wanted someone to know you better. Talk about <u>yourself</u>. You are more likely to benefit from the experiment if you attempt to be as honest, open and free as you can. The following are a list of topics you may choose from. But, what you present is entirely up to you.

Subjects had a few minutes to gather their thoughts before commencing their presentation. When the subject indicated he was ready, the taping began. During the presentation the interviewer was seated in such a way that the subject could speak to him and still be in clear view of the camera. While the subject was speaking, the interviewer maintained eye contact, appeared interested, but did not verbally interact with the subject.

Fifteen seconds before the presentation was terminated, the interviewer warned the subject by raising his right hand. The presentation ended when the interviewer told the

subject "Time's up". Following the presentation, the interviewer delivered a feedback message (positive, or neutral feedback message). This feedback message closely resembled the messages in Appendix F, and described below (See Treatment Section).

The interviewer then took the subject into the playback room, and the subject received videotape feedback of his presentation or a placebo tape (a tape made prior to the experiment, and consisted of another male student giving an unrehearsed monologue). During the feedback, the interviewer tried to convey the message he delivered to the subject before the videotape feedback. This was done using both verbal and nonverbal feedback (See Appendix G). Next, the interviewer and the subject returned to the interview room, and filled out the STAI (A-State Scale) for a second time.

The interviewer gave the subject another instruction sheet requesting him to give another 5-minute presentation. The instructions were identical, but different topics were suggested (See Appendix E). When ready, the subject made his presentation, and upon its conclusion the subject was debriefed (See Appendix H).

Treatments

The three treatments were: (a) videotape feedback +

positive feedback (positive feedback), (b) videotape feedback alone (no feedback), and (c) placebo videotape feedback (placebo feedback). In the first condition the interviewer tried to maintain a consistent message to the subject during the videotape feedback.

Positive Feedback. Before the subject received videotape self-confrontation, the interviewer delivered a message which stressed two positive factors in the subject's presentation. This message was individualized according to subject in this treatment condition. The focus was on both verbal and nonverbal behavior (See Appendix F).

During the videotape self-confrontation the interviewer assumed a "facilitative" role. He used both verbal and nonverbal cues in conveying to the subject the positive features in his presentation. The interviewer's behavior was expected to increase both the credibility and potency of his message (See Appendix G for Instructions to Interviewers).

No Feedback. The interviewer delivered a short neutral message before the self-confrontation experience. During the videotape feedback, the interviewer appeared interested, but offered no subjective cues (See Appendix G).

Placebo Feedback. In this condition the interviewer

delivered the same feedback message as he did in the second treatment condition. However, the subject did not receive a playback of his own videotape. Instead he saw a placebo tape as described above. Before viewing the placebo tape he was instructed to watch the tape closely, because he would be asked to rate the speaker on a self-concept scale. The interviewer offered neither verbal nor nonverbal cues to the subject (See Appendix G).

Assessment Measures

State-Trait Anxiety Inventory (STAI). The STAI (Spielberger, et al., 1970) was used to assess both state and trait anxiety in the study. As noted above, in the selection phase, the STAI (A-Trait Scale) Form X-2 was used to obtain A-Trait scores, which was the basis for separating subjects into High, Middle and Low A-Trait groups. During the experimental phase, the STAI, Form X-1 (A-State Scale) was used prior to and after videotape self-confrontation to assess level of state anxiety. Pre-treatment A-State scores were used as covariates in later analyses. Post-treatment A-State scores were used to compare treatment groups on the dependent variable, self-reported anxiety (state anxiety) response.

The STAI consists of 40 Likert-type items, 20 on each scale. The A-Trait Scale asks individuals to describe how

they generally feel, while the A-State Scale asks individuals to describe how they feel at a particular moment in time. Each item is scored with a weight of 1 to 4, depending on how strongly the subject feels it applies to him. The four categories of response range from "not at all" to "very much so" for A-State items, and from "almost never" to "almost always" for A-Trait items (See Appendix A for both scales). Research offers both validity and reliability support.

Reliability. Reliability correlations of the STAI appear satisfactory. Alpha coefficients for the normative samples ranged from .83 to .97 for the A-State Scale, and .86 to .92 for the A-Trait Scale. Test-retest reliability ranged from .73 to .86 for the A-Trait Scale and from .16 to .54 for the A-State Scale. These results appear reasonable given the theoretical basis of the scales; that A-Trait represents a relatively stable personality trait and A-State represents a transitory emotional state.

Validity

Concurrent Validity. Concurrent validity of the A-Trait Scale has been computed by means of correlations with other anxiety inventories. Over three samples, these correlations ranged .75 to .77 with the IPAT (Cattell & Scheier, 1961), .79 to .83 with the Taylor Manifest Anxiety

Scale (Taylor, 1953), and .52 to .58 with the Affect Adjective Check List (Zuckerman, 1960).

Construct Validity. Construct validity of both scales has been tested by administering the STAI to samples of subjects with different instructional sets, and under different conditions. These studies report A-State varied over time in relation to experimentally induced stressor situations, while A-Trait remained relatively stable (Allen, 1970; Auerbach, 1973; Bartsch & Nesselroade, 1973; D'augelli, 1974; Leherissey, 1971, 1973; Newmark, 1972a, b; Spielberger, 1972c; Stoudenmire, 1972).

Correlations between scales depend upon the degree of stress present in the administration situation. Usually higher correlations are obtained under conditions in which some threat to self-esteem is present, while conditions in which some physical danger is present do not tend to elicit high correlations. This is supportive of Spielberger's theory (Spielberger, 1966, 1972). Correlations between scales have been found to range between .11 and .67 (Spielberger, et al., 1970).

Behavioral Anxiety Checklist (BACL). The list consists of items used and developed by Paul (1966). The list is intended to provide a behavioral estimate of anxiety exhibited by each subject. While Paul's "behavior check-

List" was used with live raters, the behavioral ratings in this study were made from videotape recordings of subjects' sessions. The change in rating procedure has reduced the original 20-item list of Paul's to a 15-item checklist (See Appendix C).

The Pearson Product Moment Correlation computed between the BACL and Paul's original checklist was highly significant ($r=1.00$, $p < .001$). The five behaviors eliminated (paces, face deadpan, face pale, face flushed, and perspires) were not present in the judges' ratings. Apparently, the behaviors did not occur, or the raters were unable to detect them. It should be noted that Paul's original list was developed for live rather than videotape rating, and some of the behaviors (e.g., perspires) were difficult to detect from videotape recordings.

The segments rated were standard for all subjects, and closely corresponded (temporally) with administrations of the STAI (A-State Scale). The behaviors included were: extraneous hand and arm movement, arms rigid, hand tremors, no eye contact, breathes heavily, face muscles tense, moistens lips, clears throat, voice quivers, stammers, sways, shuffles feet, knees tremble, swallows and hands restrained.

Although there are no validity studies done with the checklist, research studies reported above (Borkovec, 1973;

Carter & Papas, 1975) have demonstrated the list's usefulness as a research instrument. Interrater reliability has been high (e.g., .93 to .96) as reported by Paul (1966). According to Paul (1966), this instrument is not only objective, "but also very reliable when highly trained observers are used" (Paul, 1966, p. 31). To insure the validity of the BACL, the items selected for use in the study were correlated with the items from the original list. This was done after pilot testing was completed.

In order to assess the possible differential effects of videotape feedback during (behavioral anxiety manifested during the videotape playback) and post (behavioral anxiety manifested in the second monologue) treatment, BACL scores during and post-treatment were rated and analyzed separately.

Analyses of both supplementary objectives also required the separate computation of during and post-treatment scores. The supplementary analyses were based on BACL scores across time segments. The three time segments used were: the first, third and fifth minutes. Thus, the computation of the supplementary objectives used individual time segments (e.g., the first, third and fifth minutes, respectively).

Self-Disclosing Behavior. The technique for assessing

self-disclosure was to obtain a frequency of first person pronouns. The method is derived from Myrick (1969), while others (Adams & Hoffman, 1960; Salinger & Pisoni, 1958; Sarason, Ganzer, & Singer, 1972) have demonstrated that client self-references could be objectively determined through first person pronoun count (FPP). There are no validity studies available, while interrater reliability has been reported to be as high as .99 (Myrick, 1969). The scoring instructions and a sample scoring sheet are included in Appendix B.

Raters and Rating Procedure

Two doctoral level students in psychology were trained as raters by the experimenter. The raters were naive with respect to the design and purpose of the study. The raters were pretrained for assessing both self-disclosing behavior and behavioral anxiety (See Appendices B and C). Training on self-disclosing behavior involved raters scoring and discussing practice tapes (before the pilot) and pilot tapes (before the experiment proper). Similarly, scoring instructions, practice sessions and discussions were given for the BACL. Each behavior was specified (See Appendix C) to facilitate reliable identification and consensual agreement in rater assessments (interrater reliability and interrater agreement, respectively). As noted below, both the

interrater reliability and agreement scores were adequate. The two raters' scores on each instrument (FPP and BACL) were averaged to provide a single score for each subject.

Data Analyses

A 3(Feedback Message) x 3(Trait Anxiety) x 2(Interviewer) analysis of covariance was used to analyze self-reported anxiety (STAI, Form X-1), behavior anxiety during-treatment (BACL), behavior anxiety post-treatment (BACL), behavior anxiety across time segments, and self-disclosing behavior (FPP). The pre-score of a dependent measure (e.g., self-reported anxiety pretest score) was used as the covariate in the analyses. Nonsignificant interviewer main effects and interactions led to the computation of 3(Feedback Message) x 3(Trait Anxiety) analyses of covariance on all the dependent variables. Significant main effects and interactions were more closely examined using the Newman-Keuls Q-Statistic for post hoc comparisons (Myers, 1973). Chi-Square tests were performed on debriefing interview questionnaire data. A Pearson Product Moment Correlation was computed to compare the STAI (Form X-1) with the BACL.

The Pearson Product Moment Correlations between raters' total scores (interrater reliability) and individual item scores (interrater agreement) on the Behavior

Anxiety Checklist and First Person Pronoun were computed. Table 2 presents the Pearson Product Moment Correlations for both the interrater reliability and interrater agreement on the BACL and the FPP. Adequate levels of interrater reliability and agreement were found for both of the dependent measures. The correlations for interrater reliability ranged from .97 to .99 on the BACL, and .97 to .98 on the FPP. As expected, the interrater reliability correlations were highly significant ($p<.001$). The mean interrater agreement correlations ranged from .81 to .93 on the BACL, and .85 to .86 on the FPP. The high correlations were attributed to quantity of practice and quality of instruction. Besides practice sessions (pre and post pilot testing), the judges had 3 and 4½ hours practice rating pilot data for the FPP and BACL, respectively. Thus, consensual agreement was improved through concise critiques of pilot ratings, and clear rater instructions.

Table 2

Interrater Reliability and Agreement on the Behavior Anxiety Checklist (BACL) and the First Person Pronoun (FPP)

	Pre	During BACL	Post	Pre	FPP	Post
***Interrater Reliability	.97	.99	.98	.97		.98
Item Number	****Interrater Agreement					
1	.97	.97	.97	.94		.94
2	.98	.84	.99	.94		.60
3	.93	.69	.99	.97		.95
4	.89	.98	.98	.95		.88
5	.59	.67	.68	.99		.73
6	.97	.98	.95	.59		.95
7	.93	.55	.86	.65		.89
8	.89	.81	.85			
9	.90	.97	.96			
10	.96	.79	.96			
11	.91	.25	.92			
12	.59	.70	.96			
13	.94	.97	.98			
14	.83	1.00*	.97			
15	.98	1.00**	.99			

* Behavior occurred twice.

** Behavior occurred four times.

*** Based on Pearson Product Moment Correlations.

**** Based on Pearson Product Moment Correlations.

CHAPTER III

RESULTS

There were no significant interviewer main effects or interactions found on any dependent variable; consequently, the analyses were collapsed across interviewers. Therefore, two-way analyses of covariance (Feedback Message x Trait Anxiety) were computed. The results were grouped and presented by: (a) hypothesis, (b) supplementary analysis, and (c) debriefing results.

Hypothesis 1 Results

Subjects receiving videotape feedback alone (no feedback) will exhibit more self-reported and behavioral anxiety than subjects receiving placebo videotape feedback (placebo feedback).

Self-Reported Anxiety (STAI). Means, standard deviations and adjusted means for the STAI pre and posttest scores by feedback message (treatment) are presented in Table 3.

The analysis of covariance (ANCOVA) summary table for the pretest and posttest self-reported anxiety scores is presented in Table 4. The effect of the covariate was significant, $F(1,80) = 325.13$, $p < .001$. The table reveals that there was a significant treatment main effect,

Table 3

Means, Standard Deviations and Adjusted Means for the State-Trait Anxiety Inventory (A-State Scale) Pretest and Posttest by Feedback Message

Feedback Message	**Pretest		Posttest		Adjusted Means
	M	SD	M	SD	*M
PLACEBO (PL)	41.30	3.32	40.03	4.19	40.30
NO FEEDBACK (NO)	39.00	3.12	43.77	3.45	42.68
POSITIVE FEEDBACK (PO)	42.27	4.00	31.12	4.90	31.97

Note: The higher the score, the higher is the tested level of self-reported anxiety.

* The adjusted mean is derived from a Two-Way Analysis of Covariance.

** Pretest scores are the covariates.

Table 4

Analysis of Covariance for Self-Reported Anxiety Scores on the State-Trait Anxiety Inventory by Feedback Message and Trait Anxiety

Source	SS	DF	MS	F
Covariate (Self-Reported Anxiety Pre-Scores)	4636.47	1	4636.47	325.13**
A (Feedback Message)	2311.86	2	1155.93	81.06**
B (Trait Anxiety)	123.94	2	61.97	4.34*
AB (Feedback Message x Trait Anxiety)	1044.59	4	261.15	18.31**
Residual	1140.82	80	14.26	

*$p < .05$

**$p < .001$

$F(2,80) = 81.06$, $p < .001$, and a significant trait anxiety main effect, $F(2,80) = 4.34$, $p < .05$. This table also reveals there was a significant interaction between treatment and trait anxiety, $F(4,80) = 18.31$, $p < .001$.

The Newman-Keuls Multiple Comparison method was used in order to analyze specific differences between the significant treatment conditions, treatment by trait anxiety interactions and to provide tests of the hypotheses. The .05 and .01 significance levels were adopted, requiring values of 2.82 and 3.75 for two step comparisons, 3.37 and 4.27 for three step comparisons, 3.72 and 4.57 for four step comparisons, 3.96 and 4.80 for five step comparisons, 4.14 and 4.97 for six step comparisons, 4.29 and 5.10 for seven step comparisons, 4.42 and 5.23 for eight step comparisons, and 4.53 and 5.34 for nine step comparisons.

The results of the post hoc comparisons for the treatment main effect on the STAI are presented in Table 5. This table shows that the adjusted mean score for the no feedback group was greater than the mean score for the placebo feedback group, but the difference was not significant. Thus, the results on the STAI failed to support Hypothesis 1.

Behavior Anxiety During-Treatment. Means, standard deviations and adjusted means for the BACL pre and during-

Table 5

Newman-Keuls Multiple Comparison for Treatment (Feedback Message) Main Effect on the State-Trait Anxiety Inventory (STAI)

Treatment Means		PO 31.97	PL 40.30	NO 42.68
PO	31.97		8.33*	10.71*
PL	40.30			2.38
NO	42.68			

*$p < .01$

treatment scores by feedback message (treatment) are presented in Table 6.

The ANCOVA summary table for the pre and during-treatment scores on the BACL by feedback message and trait anxiety is presented in Table 7. The covariate was significant, $F(1,80) = 67.37$, $p < .001$. The table also reveals that there was a significant treatment main effect, $F(2,80) = 30.05$, $p < .001$, and a significant trait anxiety main effect, $F(2,80) = 36.32$, $p < .001$. The table further reveals a significant interaction between treatment and trait anxiety, $F(4,80) = 13.54$, $p < .001$. The results of the a posteriori comparisons of the treatment main effect on the BACL are presented in Table 8. Table 8 shows that the adjusted mean score for the no feedback group was significantly greater than the adjusted mean score for the placebo group. Unlike the STAI results, these analyses supported Hypothesis 1.

Behavior Anxiety Post-Treatment. Means, standard deviations and adjusted means for the BACL pre and post-treatment scores by feedback message (treatment) are presented in Table 9.

The ANCOVA summary table for the pre and post-treatment behavior anxiety scores on the BACL by feedback message and trait anxiety is presented in Table 10. The covariate

Table 6

Means, Standard Deviations and Adjusted Means for the Behavior Anxiety Checklist Pre and During-Treatment by Feedback Message

Feedback Message	**Pre		During		Adjusted Means
	M	SD	M	SD	*M
PL	72.68	17.21	50.46	12.25	50.51
NO	75.13	16.84	62.86	18.67	62.88
PO	83.72	20.36	31.81	9.40	31.75

Note: The higher the score, the higher is the level of behavioral anxiety.

* Adjusted means are derived from a Two-Way Analysis of Covariance.

** Pre-Treatment scores are the covariates.

Table 7

Analysis of Covariance for Behavior Anxiety During-Treatment Scores on the Behavior Anxiety Checklist by Feedback Message and Trait Anxiety

Source	SS	DF	MS	F
Covariate (Behavior Anxiety Pre-Score)	15844.47	1	15844.47	67.37*
A (Feedback Message)	14135.71	2	7067.86	30.05*
B (Trait Anxiety)	17082.04	2	8541.02	36.32*
AB (Feedback Message x Trait Anxiety)	12744.43	4	3186.11	13.54*
Residual	188126.69	80	235.15	

*$p < .001$

Table 8

Newman-Keuls Multiple Comparison for Treatment Main Effect on During-Treatment Scores of the Behavior Anxiety Checklist (BACL)

		PO	PL	NO
Treatment Means		31.75	50.51	62.88
PO	31.75		18.76*	31.13*
PL	50.51			12.37*
NO	62.88			

*$p < .01$

Table 9

Means, Standard Deviations and Adjusted Means for the Behavior Anxiety Checklist Pre and Post-Treatment by Feedback Message

Feedback Message	**Pre		Post		Adjusted Means
	M	SD	M	SD	M*
PL	72.68	17.21	74.20	15.30	76.92
NO	75.13	16.84	88.10	16.25	89.34
PO	83.72	20.36	68.12	16.51	64.17

Note: The higher the score, the higher is the level of behavior anxiety.

*= Adjusted Means are derived from a Two-Way Analysis of Covariance.

** Pre-Treatment scores are the covariates.

Table 10

Analysis of Covariance for Behavior Anxiety Post-Treatment Scores on the Behavior Anxiety Checklist by Feedback Message and Trait Anxiety

Source	SS	DF	MS	F
Covariate (Behavior Anxiety Pre-Score)	38001.09	1	38001.09	243.69*
A (Feedback Message)	9178.31	2	4589.16	29.43*
B (Trait Anxiety)	2374.37	2	1187.19	7.61*
AB (Feedback Message x Trait Anxiety)	6721.59	4	1680.40	10.77*
Residual	12474.77	80	155.94	

*$p < .001$

was significant, $F(1,80) = 243.69$, $p < .001$. This table also reveals that there was a significant treatment main effect, $F(2,80) = 29.43$, $p < .001$, and a significant trait anxiety main effect, $F(2,80) = 7.61$, $p < .001$. This table further reveals a significant interaction between treatment and trait anxiety, $F(4,80) = 10.77$, $p < .001$. The significant findings were similar to those previously reported on the STAI, and BACL during-treatment. Each ANCOVA had significant results due to the covariate, treatment main effect, trait anxiety main effect, and treatment x trait anxiety interaction.

The results of the post hoc comparisons for the treatment main effect on the BACL are presented in Table 11. This table reveals that the adjusted mean score for the no feedback group was significantly greater than the adjusted mean score for the placebo feedback group, which supported Hypothesis 1. The results were consistent with the findings on the BACL during-treatment, but inconsistent with the STAI results. Therefore, Hypothesis 1 was partially supported. On the behavioral measures of anxiety (BACL during and post-treatment) the no feedback subjects exhibited significantly more anxiety than the placebo feedback subjects, while on the STAI no feedback subjects did not significantly differ from placebo feedback subjects.

Table 11

Newman-Keuls Multiple Comparison for Treatment Main Effect of Post-Treatment Scores on the BACL

Treatment Means		PO 64.17	PL 76.92	NO 89.34
PO	64.17		12.75*	25.17*
PL	76.92			12.42*
NO	89.34			

*$p < .01$

Hypothesis 2 Results

There will be a significant main effect due to counselor feedback message. Specifically, subjects receiving positive feedback: Will have less self-reported and behavioral anxiety and be more self-disclosing than subjects receiving no feedback and placebo feedback.

STAI and BACL Results. The results of both the STAI and BACL during and post-treatment relevant to Hypothesis 2 were presented above (Tables 3-11). The results of the post hoc comparisons showed that on the STAI (Table 5), BACL during (Table 8) and post-treatment (Table 11) the adjusted means for the positive feedback group were significantly lower than the adjusted means for both the no feedback and placebo feedback groups, which supported Hypothesis 2. Thus, the findings on the anxiety dependent measures were consistent for this hypothesis.

Self-Disclosing Behavior Results (FPP). Means, standard deviations and adjusted means for the FPP pre and post-treatment scores by feedback message (treatment) are presented in Table 12.

Table 13 summarizes the ANCOVA for self-disclosing behavior by feedback message and trait anxiety. The covariate was significant, $F(1,80) = 66.74$, $p < .001$. The table further delineates that there was a significant treatment

Table 12

Means, Standard Deviations and Adjusted Means for the First Person Pronoun Pre and Post-Treatment Scores by Feedback Message

Feedback Message	**Pre		Post		Adjusted Means
	M	SD	M	SD	M*
PL	23.92	6.02	22.29	6.37	23.07
NO	27.32	9.50	23.49	8.72	21.97
PO	24.03	7.21	29.32	10.61	30.05

Note: The higher the score, the greater is the amount of self-disclosing behavior.

* The Adjusted Means are derived from a Two-Way Analysis of Covariance.

** The Pre-Treatment scores are the covariates.

Table 13

Analysis of Covariance for Self-Disclosing Behavior Scores on the First Person Pronoun by Feedback Message and Trait Anxiety

Source	SS	DF	MS	F
Covariate (Self-Disclosing Behavior Pre-Score)	3247.76	1	3247.76	66.74**
A (Feedback Message)	1136.90	2	568.45	11.68**
B (Trait Anxiety)	202.18	2	101.09	2.07
AB (Feedback Message x Trait Anxiety)	745.05	4	186.26	3.82*
Residual	3892.75	80	48.66	

*$p < .01$

**$p < .001$

main effect, $F(2,80) = 11.68$, $p < .001$, and a significant interaction between treatment and trait anxiety, $F(4,80) = 3.82$, $p < .01$. No significant trait anxiety main effect was found, which was inconsistent with the previous analyses of covariance (Tables 4, 7 and 10). However, the significant covariate, treatment main effect, and treatment x trait anxiety interaction was consistent with the results from the other ANCOVAs.

The results of the a posteriori comparisons for the treatment main effect are presented in Table 14. This table shows that the FPP adjusted mean score for the positive feedback group was significantly greater than the adjusted mean scores of the no feedback and placebo feedback groups, which supported Hypothesis 2.

The dependent measures of self-reported anxiety, behavioral anxiety during and post-treatment and self-disclosing behavior yielded significant mean score differences between the positive feedback and no feedback and placebo feedback groups in the predicted direction, which supported Hypothesis 2. Thus, positive feedback reduced self-reported and behavioral anxiety and increased self-disclosing behavior, in contrast to no feedback and placebo feedback.

Table 14

Newman-Keuls Multiple Comparison for Treatment Main Effect on the First Person Pronoun (FPP)

Treatment Means		NO 21.97	PL 23.07	PO 30.07
NO	21.97		1.10	8.08*
PL	23.07			6.98*
PO	30.07			

*$p < .01$

Hypothesis 3 Results

The level of trait anxiety will significantly interact with the type of feedback message (treatment):

(a) High Trait Anxious subjects receiving positive feedback will have less self-reported and behavioral anxiety and be more self-disclosing than High Trait Anxious subjects receiving no feedback and placebo feedback.

(b) Middle Trait Anxious subjects receiving positive feedback will have less self-reported and behavioral anxiety and be more self-disclosing than High Trait Anxious subjects receiving no feedback and placebo feedback.

(c) Low Trait Anxious subjects will perform similarly under all conditions. There will be no significant differences in self-reported anxiety, behavioral anxiety and self-disclosing behavior between the treatment groups.

Hypothesis 3(a) Results. Cell means, standard deviations and adjusted means for the STAI, BACL during-treatment, BACL post-treatment and the FPP are presented in Tables 15 (STAI), 16 (BACL during-treatment), 17 (BACL post-treatment) and 18 (FPP), respectively.

The Newman-Keuls Multiple Comparison for treatment x

2

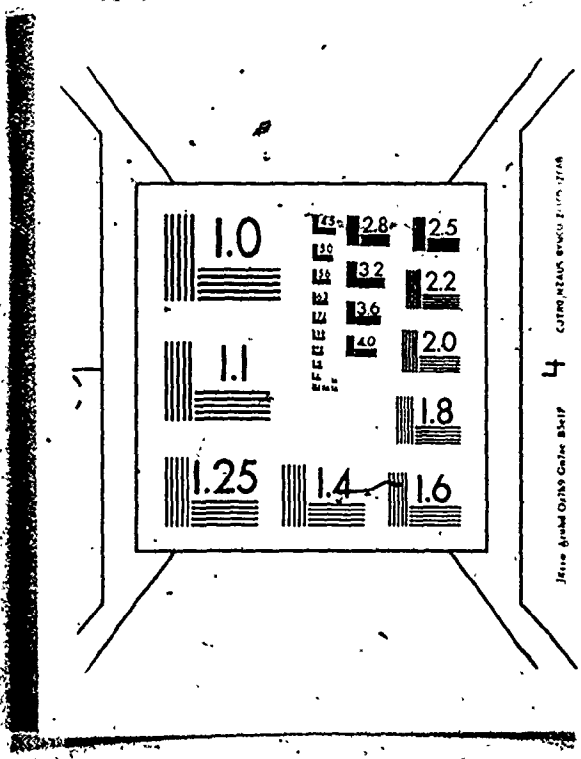


Table 15

Cell Means, Standard Deviations and Adjusted Means for the State-Trait Anxiety Inventory (A-State Scale) Pretest and Posttest by Feedback Message and Trait Anxiety

Feedback Message	**Pretest		Posttest		Adjusted Means
	M	SD	M	SD	M*
HIGH TRAIT					
PL	52.70	4.67	52.30	5.75	42.57
NO	50.90	2.79	54.90	3.32	46.32
PO	52.00	5.08	35.30	4.75	33.66
MIDDLE TRAIT					
PL	41.10	3.04	39.90	2.89	40.74
NO	36.50	3.39	43.90	3.47	44.49
PO	42.00	4.40	31.50	6.20	31.83
LOW TRAIT					
PL	29.90	2.94	28.70	3.07	36.76
NO	30.50	3.36	29.20	3.57	40.53
PO	32.80	2.53	29.10	3.74	27.87

Note: The higher the score, the higher is the level of self-reported anxiety.

* The adjusted means are derived from a Two-Way Analysis of Covariance.

** Pretest scores are the covariates.

Table 16

Cell Means, Standard Deviations and Adjusted Means for the Behavior Anxiety Checklist Pre and During-Treatment by Feedback Message and Trait Anxiety

Feedback Message	Pre		During		Adjusted Means
	M	SD	M	SD	M
HIGH TRAIT					
PL	100.10	21.70	88.55	20.49	72.91
NO	97.65	22.43	84.10	25.43	85.28
PO	104.30	29.90	40.40	10.41	54.15
MIDDLE TRAIT					
PL	67.65	16.80	43.25	8.62	54.99
NO	78.90	14.81	81.95	24.09	67.36
PO	91.45	19.57	33.45	6.96	36.23
LOW TRAIT					
PL	50.30	13.13	19.60	7.63	23.63
NO	48.85	13.27	22.55	6.48	36.00
PO	55.40	11.63	21.60	10.83	24.87

Table 17

Cell Means, Standard Deviations and Adjusted Means for the Behavior Anxiety Checklist Pre and Post-Treatment by Feedback Message and Trait Anxiety

Feedback Message	Pre		Post		Adjusted Means
	M	SD	M	SD	M
HIGH TRAIT					
PL	100.10	21.70	95.09	16.42	83.60
NO	97.65	22.43	108.99	22.55	96.02
PO	104.30	29.90	68.12	16.40	70.85
MIDDLE TRAIT					
PL	67.65	16.80	78.91	16.11	80.43
NO	78.90	14.81	92.91	17.57	92.85
PO	91.45	19.57	72.93	22.46	67.68
LOW TRAIT					
PL	50.30	13.13	48.49	13.37	80.43
NO	48.85	13.27	62.39	8.62	79.16
PO	55.40	11.63	42.41	10.67	53.99

Table 18

Cell Means, Standard Deviations and Adjusted Means for the First Person Pronoun Pre and Post-Treatment Scores by Feedback Message and Trait Anxiety

Feedback Message	Pre		Post		Adjusted Means
	M	SD	M	SD	M
HIGH TRAIT					
PL	21.80	11.06	19.16	9.02	21.05
NO	27.20	10.30	19.70	8.73	19.95
PO	18.95	6.18	25.15	11.14	28.03
MIDDLE TRAIT					
PL	25.15	4.49	24.50	6.60	23.37
NO	24.55	9.13	18.15	5.80	22.27
PO	24.65	5.54	32.70	9.51	30.35
LOW TRAIT					
PL	24.90	6.21	23.20	4.79	24.79
NO	30.20	11.98	32.60	12.88	23.69
PO	28.50	9.91	30.10	10.25	31.77

trait interaction on the STAI, BACL during-treatment, BACL post-treatment and the FPP are presented in Tables 19 (STAI), 20 (BACL during-treatment), 21 (BACL post-treatment) and 22 (FPP), respectively. Tables 19, 20 and 21 show that the mean anxiety scores for High Trait Anxious positive feedback subjects were significantly lower than the mean anxiety scores for High Trait Anxious no feedback and placebo feedback subjects, which supported Hypothesis 3(a). Table 22 reveals that the mean self-disclosing behavior score for High Trait Anxious positive feedback subjects was significantly greater than the mean self-disclosing behavior scores for High Trait Anxious no feedback and placebo feedback subjects, which also supported Hypothesis 3(a). The results from the post hoc comparisons of all the dependent measures were consistent in their support of Hypothesis 3(a). Therefore, positive feedback significantly reduced self-reported and behavioral anxiety and increased self-disclosing behavior in High Trait Anxious subjects in contrast to no feedback and placebo feedback.

Hypothesis 3(b) Results. The results from the STAI, BACL during and post-treatment and FPP relevant to Hypothesis 3(b) were presented above (Tables 15-22). The results of the post hoc comparisons revealed that on the STAI (Table 19), BACL during-treatment (Table 20) and post-

Table 19

Newman-Keuls Multiple Comparison for Treatment x Trait Anxiety Interaction on the STAI

	LPL 28.70	LPO 29.10	LNO 29.20	MPO 31.50	HPO 35.30	MPL 39.90	MNO 43.90	HPL 52.30	HNO 54.90
LPL 28.70		.40	.50	2.80	6.60*	11.20*	15.20*	23.60*	26.20*
LPO 29.10			.10	2.40	6.20*	10.80*	14.80*	23.20*	25.80*
LNO 29.20				2.30	6.10*	10.70*	14.70*	23.10*	25.70*
MPO 31.50					3.80*	8.40*	12.40*	20.80*	23.40*
HPO 35.30						4.60*	8.60*	17.00*	19.60*
MPL 39.90							4.00*	12.40*	15.00*
MNO 43.90								8.40*	11.00*
HPL 52.30									2.60
HNO 54.90									

*$p < .01$

Table 20

Newman-Keuls Multiple Comparison for Treatment x Trait Anxiety Interaction on the BACL During-Treatment

	LPL 19.60	LPO 21.60	LNO 22.55	MPO 33.45	HPO 40.40	MPL 43.25	MNO 81.95	HNO 84.10	HPL 88.55
LPL 19.60		2.00	2.95	13.85**	20.80**	23.65**	62.35**	64.50**	68.95**
LPO 21.60			.95	11.85**	18.80**	21.65**	60.35**	62.50**	66.95**
LNO 22.55				10.90**	17.85**	20.70**	59.40**	61.55**	66.00**
MPO 33.45					6.95**	9.80**	48.50**	50.65**	55.10**
HPO 40.40						2.85*	41.55**	43.70**	48.15**
MPL 43.25							38.70**	40.85**	45.30**
MNO 81.95								2.15	6.60**
HNO 84.10									4.45**
HPL 88.55									

*$p < .05$
**$p < .01$

Table 21

Newman-Keuls Multiple Comparison for Treatment x Trait Anxiety Interaction on the BACL Post-Treatment

	LPO 42.41	LPL 48.49	LNO 62.39	HPO 68.12	MPO 72.93	MPL 78.91	MNO 92.91	HPL 95.05	HNO 108.99
LPO 42.41		6.08*	19.98*	25.71*	30.52*	36.50*	50.50*	52.64*	66.58*
LPL 48.49			13.90*	19.63*	24.44*	30.42*	44.42*	46.56*	60.50*
LNO 62.39				5.73*	10.54*	16.52*	30.52*	32.66*	46.60*
HPO 68.12					4.81*	10.79*	24.79*	26.93*	32.70*
MPO 72.93						5.98*	19.98*	22.12*	27.89*
MPL 78.91							14.00*	16.14*	21.91*
MNO 92.91								2.14	7.91*
HPL 95.05									5.77*
HNO 108.99									

*$p < .01$

Table 22

Newman-Keuls Multiple Comparison for Treatment x Trait Anxiety Interaction on the FPP

	MNO 18.15	HPL 19.15	HNO 19.70	LPL 23.20	MPL 24.50	HPO 25.15	LPO 30.10	LNO 32.60	MPO 32.70
MNO 18.15		1.00	1.55	5.05**	6.35**	7.00**	11.95**	14.45**	14.55**
HPL 19.15			.55	4.05**	5.35**	6.00**	10.95**	13.45**	13.55**
HNO 19.70				3.50*	4.80**	5.45**	10.40**	12.90**	13.00**
LPL 23.20					1.30	1.95	6.90**	9.40**	9.50**
MPL 24.50						.65	5.60**	8.10**	8.20**
HPO 25.15							4.95**	7.45**	7.55**
LPO 30.10								2.50	2.60
LNO 32.60									.10
MPO 32.70									

*$p < .05$

**$p < .01$

treatment (Table 21) the means for the Middle Trait Anxious positive feedback subjects were significantly lower than the means for both Middle Trait Anxious no feedback and placebo feedback subjects, which supported Hypothesis 3(b). The a posteriori comparisons on the FPP (Table 22) show that the mean for the Middle Trait Anxious positive feedback subjects was significantly greater than the means for the Middle Trait Anxious no feedback and placebo feedback subjects, which also supported Hypothesis 3(b). The findings on all the dependent measures were congruent and supportive of Hypothesis 3(b). These results revealed a similar pattern for High and Middle Trait Anxious subjects. Thus, both High and Middle Trait Anxious positive feedback subjects significantly reduced self-reported and behavioral anxiety and increased self-disclosing behavior in contrast to High and Middle Trait Anxious no feedback and placebo feedback subjects.

Hypothesis 3(c) Results. The results from the STAI, BACL during and post-treatment and the FPP pertinent to Hypothesis 3(c) were presented above (Tables 15-22). The results of the a posteriori comparisons revealed that on the STAI (Table 19) and the BACL during-treatment (Table 20) there were no significant mean score differences for Low Trait Anxious subjects, thus supporting Hypothesis

3(c). Table 21 shows that on the BACL post-treatment scores, the Low Trait Anxious positive feedback subjects had significantly lower means than Low Trait Anxious no feedback and placebo feedback subjects, which failed to support Hypothesis 3(c). Table 22 reveals that on the FPP, the mean for the Low Trait Anxious positive feedback subjects was significantly greater than the mean for Low Trait Anxious placebo feedback subjects. This table further reveals that there were no significant mean score differences between Low Trait Anxious positive and no feedback subjects. The results from the FPP also failed to totally support Hypothesis 3(c). Hypothesis 3(c) was supported by results from the STAI and BACL during-treatment, but not supported by the results from the BACL post-treatment and the FPP. Thus, positive feedback unexpectedly significantly reduced behavioral anxiety post-treatment and increased self-disclosing behavior (in contrast to placebo feedback subjects) for Low Trait Anxious subjects.

In sum, Hypothesis 3(a) and (b) were fully supported, while Hypothesis 3(c) was only partially supported. The results from the STAI and BACL during-treatment supported Hypothesis 3(c), but the findings from the BACL post-treatment and the FPP did not.

Within A-Trait Comparisons between the No Feedback and Placebo Feedback Groups. Additional analyses contrasting the no feedback and placebo feedback groups within A-Trait levels were also computed. Partial support for Hypothesis 1 had suggested that on anxiety measures (the STAI and BACL) the videotape feedback alone group (no feedback) showed significantly higher levels of self-reported and behavioral anxiety than the placebo group. It was felt that further investigation might clarify this finding. Though no specific hypotheses were made, it was expected that videotape feedback alone would increase self-reported and behavioral anxiety for High and Middle Trait Anxious subjects, while not increasing self-reported and behavioral anxiety for Low Trait Anxious subjects. This was explored with the Newman-Keuls Q-Statistic comparing the no feedback with the placebo feedback group. The expectation was supported by the results of the post hoc comparisons presented in Tables 19 (STAI), 20 (BACL during-treatment) and 21 (BACL post-treatment). Table 19 shows that the means of High and Middle Trait Anxious subjects receiving no feedback were higher than the means of High and Middle Trait Anxious subjects in the placebo group, while the Low Trait Anxious subjects performed similarly in both groups. The mean differences between

High Trait Anxious no feedback and placebo feedback subjects did not reach significance. Table 20 shows that on the BACL during-treatment the mean of Middle Trait Anxious subjects receiving no feedback was significantly higher than the mean of Middle Trait Anxious subjects in the placebo group, while the means of the Low Trait Anxious subjects did not significantly differ. Contrary to expectation, the mean of High Trait Anxious subjects in the placebo group was significantly higher than the mean of High Trait Anxious subjects in the no feedback group. Table 21 shows that the mean scores of High, Middle, and Low Trait Anxious subjects in the no feedback group were significantly higher than the mean scores of High, Middle, and Low Trait Anxious subjects in the placebo group.

The post hoc comparisons between the no feedback and placebo group were supported by mean differences of High Trait Anxious subjects on the STAI, and BACL post-treatment scores; Middle Trait Anxious subjects significantly differing on the STAI, and BACL during and post-treatment scores; and Low Trait Anxious subjects not significantly differing on the STAI, and BACL during-treatment scores.

The comparisons between the two treatments were <u>not</u> supported by unexpected significant mean score differences of High Trait Anxious subjects on the BACL during-treatment

scores (NO<PL), and Low Trait Anxious subjects on the BACL post-treatment scores (NO>PL).

Between A-Trait Comparisons. Additional analyses were also computed comparing High, Middle and Low A-Trait subjects. Though no specific hypotheses were made regarding differences between A-Trait levels, significant trait anxiety main effects led to a closer examination of this independent variable. It was expected that if trait anxiety was a personality trait that is normally distributed in the population, then there should be differences between the three levels of trait anxiety (High>Middle>Low). This was supported by the significant F-ratios for the covariates in Tables 4 (STAI), 7, 10 (BACL), and 13 (FPP). The significant covariates (pre-scores) also supported the differences in trait anxiety level, and reflected the state-trait correlation. This justified the use of analysis of covariance, because it adjusts for the concomitant variable (controls for the pre-scores).

Means, standard deviations and adjusted means for the STAI, BACL during and post-treatment, and the FPP by trait anxiety are presented in Tables 23 (STAI), 24 (BACL during-treatment), 25 (BACL post-treatment) and 26 (FPP), respectively.

Significant trait anxiety main effects in Tables 4,

Table 23

Means, Standard Deviations and Adjusted Means for the State-Trait Anxiety Inventory (A-State Scale) Pretest and Posttest by Trait Anxiety

Trait Anxiety	Pretest		Posttest		Adjusted Means
	M	SD	M	SD	M*
HIGH (H)	51.97	4.52	47.50	10.04	40.85
MIDDLE (M)	39.87	4.80	38.43	6.97	39.02
LOW (L)	30.73	3.03	29.00	3.52	35.05

* The adjusted means are derived from a Two-Way Analysis of Covariance.

Table 24

Means, Standard Deviations and Adjusted Means for the Behavior Anxiety Checklist Pre and During-Treatment by Trait Anxiety

Trait Anxiety	Pre		During		Adjusted Means
	M	SD	M	SD	M
H	100.68	24.19	71.02	29.20	70.78
M	79.33	19.29	52.88	25.92	52.86
L	51.52	12.58	21.25	8.31	21.50

Table 25

Means, Standard Deviations, and Adjusted Means for the Behavior Anxiety Checklist Pre and Post-Treatment by Trait Anxiety

Trait Anxiety	Pre		Post		Adjusted Means
	M	SD	M	SD	M
H	100.68	24.19	97.70	22.55	83.49
M	79.33	19.29	81.62	25.15	80.32
L	51.52	12.59	51.10	11.00	66.63

Table 26

Means, Standard Deviations and Adjusted Means for the First Person Pronoun Pre and Post-Treatment Scores by Trait Anxiety

Trait Anxiety	Pre		Post		Adjusted Means
	M	SD	M	SD	M
H	22.65	9.43	21.34	9.70	23.01
M	24.78	6.54	25.12	9.46	25.33
L	27.87	9.33	28.64	10.07	26.75

7 and 10 were further clarified by an examination of adjusted mean scores. The results of the Newman-Keuls Multiple Comparisons are presented in Tables 27 (self-reported anxiety), 28 (behavior anxiety during-treatment), 29 (behavior anxiety post-treatment), and 30 (self-disclosing behavior), and partially support the expected differences in trait anxiety level. Tables 28 and 29 show that the means on the BACL during and post-treatment scores of High Trait Anxious subjects were significantly higher than the means of Middle and Low Trait Anxious subjects, while the Middle Trait Anxious subjects exhibited significantly higher levels of behavior anxiety during and post-treatment when compared to Low Trait Anxious subjects. Table 27 shows that the mean scores on the STAI for High and Middle Trait Anxious subjects were significantly higher than the mean of Low Trait Anxious individuals, whereas the High and Middle Trait Anxious subjects did not differ significantly in the self-report of anxiety.

Although trait anxiety did not reach significance on the FPP, the Newman-Keuls Q-Statistic was used to determine if there were any significant differences in self-disclosing behavior between the three levels of A-Trait. Table 30 reveals that the mean score on the FPP of High Trait Anxious subjects was significantly lower than the

Table 27

Newman-Keuls Multiple Comparison for Trait Anxiety Main Effect on the STAI

Trait Anxiety Means		L 35.05	M 39.02	H 40.85
L	35.05		3.97*	5.80*
M	39.02			1.83
H	40.85			

*$p < .01$

Table 28

Newman-Keuls Multiple Comparison for Trait Anxiety Main Effect of During-Treatment Scores on the BACL

Trait Anxiety Means		L 21.50	M 52.86	H 70.78
L	21.50		31.36*	49.28*
M	52.86			17.92*
H	70.78			

*$p < .01$

Table 29

Newman-Keuls Multiple Comparison for Trait Anxiety

Main Effect of Post-Treatment Scores on the BACL

Trait Anxiety Means		L 66.30	M 80.32	H 83.49
L	66.30		13.02**	16.19**
M	80.32			3.17*
H	83.49			

*$p < .05$
**$p < .01$

Table 30

Newman-Keuls Multiple Comparison for Trait Anxiety Main Effect on the FPP

Trait Anxiety Means		H 23.01	M 25.33	L 26.75
H	23.01		2.32	3.74*
M	25.33			1.42
L	26.75			

*$p < .05$

mean of Low Trait Anxious subjects. There were no significant differences between High and Middle or Middle and Low Trait Anxious subjects on the FPP.

In sum the findings from these post hoc comparisons were:

1. High Trait Anxious subjects significantly differed from Low Trait Anxious subjects on all dependent measures.
2. High Trait Anxious subjects significantly differed from Middle Trait Anxious subjects only on the BACL (both during and post-treatment).
3. Middle Trait Anxious subjects significantly differed from Low Trait Anxious subjects on both the STAI and BACL.

Further support was also provided by the Newman-Keuls Multiple Comparisons that were presented in Tables 19, 20, 21, and 22. Table 19 shows that on the STAI the order of the means for all treatments was as expected (H>M>L). In both the placebo and no feedback groups the differences between the three levels of A-Trait were significant ($p < .01$). In the positive feedback condition the High Trait Anxious subjects significantly self-reported more anxiety than both the Middle and Low Trait Anxious subjects ($p < .01$), while there were no significant differences

between the Middle and Low Trait Anxious subjects.

Table 20 shows that on the BACL during-treatment the order of the means for all treatment was as expected (H>M>L). In both the placebo and positive feedback treatments the differences between the three trait anxiety levels were significant ($p < .01$). In the no feedback group the High and Middle Trait Anxious subjects exhibited significantly more anxiety than the Low Trait Anxious subjects ($p < .01$), while there were no significant differences between the High and Middle Trait Anxious subjects.

Table 21 shows that on the BACL post-treatment for both the placebo and no feedback treatments there were significant differences between the three A-Trait levels in the expected order ($p < .01$). In the positive feedback condition there were also significant differences between the three levels of trait anxiety ($p < .01$). However, the Middle Trait Anxious subjects exhibited significantly more anxiety than the High and Low Trait Anxious subjects, while the High Trait Anxious subjects manifested significantly more anxiety than the Low Trait Anxious subjects (M>H>L).

Table 22 (FPP) offered the least support. In both the placebo and positive feedback groups the rank order on

the mean scores was identical (M>L>H). In these two treatments there were no significant differences between the Middle and Low Trait Anxious subjects, while both the Middle and Low Trait Anxious subjects exhibited significantly more self-disclosing behavior than High Trait Anxious subjects. In the no feedback treatment the order of the means was: Low>High>Middle. The Low Trait Anxious subjects significantly differed from both the High and Middle Trait Anxious subjects ($p < .01$), while there were no significant differences between the High and Middle Trait Anxious subjects.

In sum the findings from the treatment x trait anxiety post hoc comparisons were:

1. The order of the means for most treatments on the STAI and BACL during and post-treatment was in the expected direction (H>M>L).
2. Again the High Trait Anxious subjects significantly differed from the Low Trait Anxious subjects on all dependent measures in the expected direction.
3. The comparisons made on the FPP were least supportive, which is also consistent with the results found from the trait anxiety post hoc comparisons. Conversely, the comparisons made

using the anxiety measures (the STAI and BACL) were more supportive.

Thus, the results of a posteriori comparisons on the trait anxiety main effect and the treatment x trait anxiety interaction partially supported the expected differences between A-Trait levels. The findings were totally supportive in the High versus Low comparisons, and least supportive in comparisons made on the FPP.

Hypothesis 4 Results

There will be a significant positive correlation between the self-reported and the behavioral measures of anxiety.

Pearson Product Moment Correlations computed for all subjects between the Behavior Anxiety Checklist (BACL) and the A-State Scale of the State-Trait Anxiety Inventory (STAI) were significant. The correlation between the STAI and the BACL pre-scores was significant ($r = .64$, $p < .001$). The correlation between the STAI post-scores and the BACL during-treatment scores was also significant ($r = .77$, $p < .001$). Similarly, the correlation between the STAI post-scores and the BACL post-scores was significant ($r = .74$, $p < .001$). Hypothesis 4 was supported by these significant positive correlations between the STAI and the BACL. The significant correlations suggest that

the two scales were assessing two different (self-reported anxiety and behavioral anxiety) but related aspects of state anxiety.

Hypothesis 5 Results

There will be no significant differences in dependent measures due to differences between interviewers.

This hypothesis was fully supported by the non-significant interviewer main effects and interactions in the analyses of covariance.

Supplementary Analyses

These analyses were based on this study's two supplementary objectives: (a) to assess the effect of videotape feedback alone (no feedback) during videotape playback (during-treatment), and (b) to test the effect of videotape feedback + positive feedback (positive feedback) during the second monologue (post-treatment).

Behavior Anxiety During-Treatment Across Time Segments. Holzman's (1966, 1971) research on the self-confrontation process had suggested that anxiety is greater during the first minute, and decreases over time. This was tested by comparing the adjusted means of the no feedback group across time segments. The means, standard deviations and adjusted means for the BACL during-treatment scores by feedback message across time segments are

presented in Table 31. Analyses of covariance yielded significant treatment main effects ($p < .01$), which were further investigated with the Newman-Keuls Q-Statistic. The results of the post hoc comparisons of the adjusted no feedback means across time segments are presented in Table 32. The Newman-Keuls revealed that the mean score of the BACL during the first segment was significantly lower than the means of both the third and fifth segments (minute). There was a nonsignificant increase in mean scores from the third to fifth minute. Thus, contrary to Holzman's findings, behavior anxiety during-treatment (videotape feedback) significantly increased across time segments, which suggested there was a linear relationship between anxiety and time (as time increases so does anxiety).

Behavior Anxiety Post-Treatment Across Time Segments. The positive feedback treatment led to significant decreases in state anxiety, but it was felt that the effect of positive reinforcement would decrease across time segments. It was expected that positive treatment subjects would show an increase across time segments in behavior anxiety post-treatment mean scores. Means, standard deviations and adjusted means for the behavior anxiety post-treatment scores by feedback message across time segments

Table 31

Means and Adjusted Means for the Behavior Anxiety Checklist During and Post-Treatment Scores by Feedback Message Across Time Segments

Feedback Message	Time Segments 1		3		5	
	M	M*	M	M*	M	M*
	DURING-TREATMENT SCORES					
PL	15.80	15.83	18.22	18.20	16.45	16.53
NO	18.30	17.84	21.05	21.03	23.52	23.56
PO	9.55	9.50	10.62	10.71	11.68	11.45
	POST-TREATMENT SCORES					
PL	25.35	26.23	23.97	24.46	24.88	25.84
NO	27.28	27.37	29.17	29.64	31.17	31.70
PO	19.60	18.64	23.05	22.22	25.47	23.97

* The adjusted means are derived from a Two-Way Analysis of Covariance.

Table 32

Newman-Keuls Multiple Comparison of Adjusted During-Treatment Means of the No Feedback Group Across Time Segments on the BACL

No Feedback Means		Time Segments 1	3	5
		17.84	21.02	23.56
1	17.84		3.18*	5.72**
3	21.02			2.54
5	23.56			

The Time Segments 1, 3, and 5 are the first, third and fifth minutes respectively.

*$p < .05$

**$p < .01$

are presented in Table 31. Analyses of covariance yielded significant treatment main effects ($p < .01$), which were further investigated with the Newman-Keuls Q-Statistic. The results of the a posteriori comparisons are presented in Table 33. The Newman-Keuls Q-Statistic revealed that the mean of the BACL post-treatment scores of the fifth segment was greater than the means of both the third and first segments, while the mean score of the third segment was significantly greater than the mean of the first segment. This supported the expectation that behavior anxiety for subjects in the positive feedback group would increase across time segments. Behavior anxiety in the fifth minute was greater than behavior anxiety in the third minute; which was significantly greater than behavior anxiety in the first minute ($5 > 3 > 1$). Thus, there appeared to be a linear relationship between behavior anxiety post-treatment and time for positive feedback subjects, that is, behavioral anxiety increased over time.

Debriefing Results

In general, most subjects liked the self-confrontation experience; they did better than they had expected they would. They tended to get anxious while watching their monologues when they saw things they did not like (e.g., gestures, posture, physique).

Table 33

Newman-Keuls Multiple Comparison of Adjusted Post-Treatment Means of the Positive Feedback Group Across Time Segments on the BACL

Positive Feedback Means		Time Segments 1	3	5
		18.64	22.22	23.97
1	18.64		3.58*	5.33**
3	22.22			1.75
5	23.97			

*$p < .05$

**$p < .01$

The subjects were asked what they focused on during videotape feedback. Though no specific prediction was made, it was believed that High and Middle Trait Anxious subjects in the no feedback message groups would tend to focus on physical characteristics (e.g., gestures, facial expressions, etc.) rather than the content of their monologues. A Chi-Square analysis supported this expectation ($\underline{X}^2 = 14.45$, $\underline{df} = 4$, $\underline{p} < .01$).

Subjects receiving positive feedback were asked what they had thought about the interviewer's comments. This was a check on the credibility of the feedback message. Surprisingly, 80% of the subjects had forgotten what the interviewer had said! A Chi-Square analysis revealed that this was significant ($\underline{X}^2 = 29.4$, $\underline{df} = 1$, $\underline{p} < .001$). This suggested that the feedback messages prior to videotape feedback may not have made a significant impact on the subjects.

Subjects were asked after the experiment how they now felt. From an ethical standpoint it was felt this might identify any subjects who might have found the experiment to have been an aversive experience. Although 18% of subjects reported they were somewhat anxious, none were distressed. A Chi-Square analysis found this was not significant ($\underline{X}^2 = 1.03$, $\underline{df} = 4$, $\underline{p} < .98$). As noted above,

most subjects felt the experiment was an interesting and worthwhile experience.

CHAPTER IV

DISCUSSION

The results of this study provide information pertaining to the issue of positive feedback versus no feedback and a placebo feedback group in High, Middle and Low Trait Anxious subjects. The study compared the effects of 3 treatments, 3 trait anxiety levels and 2 interviewers on the self-report of anxiety, behavioral anxiety during and post-treatment, and self-disclosing behavior.

According to the analyses, it was found that positive feedback and no feedback produced significantly stronger effects than the placebo group on all the dependent measures. As predicted, the positive feedback treatment decreased self-reported and behavioral anxiety and increased self-disclosing behavior, and the no feedback treatment increased self-reported and behavioral anxiety. The efficacy of the positive feedback treatment was clearly demonstrated in the decrease of self-reported and behavioral anxiety and an increase of self-disclosing behavior in both High and Middle Trait Anxious subjects. Contrary to predictions, this treatment also decreased behavioral anxiety post-treatment, and increased self-disclosing behavior for Low Trait Anxious subjects where no effect

was anticipated, and thus the treatment was stronger than expected.

Further analysis of the no feedback group yielded partial support for an expected treatment x trait anxiety interaction on all dependent measures. The most convincing evidence was in the increase of A-State for Middle Trait Anxious Subjects on both the STAI and BACL, while an increase in state anxiety on the STAI and BACL post-treatment scores for High Trait Anxious subjects, and no significant increase on the STAI and BACL during-treatment scores for Low Trait Anxious subjects lent further support.

Analyses also indicated differences were present between the 3 levels of A-Trait on all the dependent measures (H>M>L). The significant differences were: H significantly differed from L on all the dependent measures; M>L on A-State measures (the STAI and BACL); and H>M on the BACL.

These results were also partially supported by the post hoc comparisons of the cell means (treatment x trait anxiety). These analyses found differences between the three levels of A-Trait in the expected direction on both the self-reported and behavioral measures of anxiety (e.g., HPL>MPL>LPL). Only the Low versus High A-Trait comparisons (L>H) yielded differences in the expected direction

on the FPP.

Supplementary analyses indicated an expected decrease in the potency of positive feedback over time. This was noted by an increase in behavioral anxiety post-treatment scores across time segments. Analysis of the no feedback treatment over time suggested that behavioral anxiety increased during videotape feedback across time segments.

The discussion considers and interprets the results for the dependent measures, and considers reasons for differential findings among them. Limitations, clinical implications and directions for future research are then discussed.

Research Hypothesis 1

This hypothesis had predicted that videotape feedback alone (no feedback) would be an anxiety arousing (ego-threatening) experience, and was investigated by comparing the no feedback to the placebo feedback treatment group. It was partially supported by the analyses on the STAI and the BACL during and post-treatment. On the STAI, no feedback subjects self-reported more anxiety than placebo feedback subjects; while the difference was in the predicted direction, it was not significant, thus failing to support Hypothesis 1. The analyses further showed that no feedback subjects displayed significantly more behavioral

anxiety than placebo feedback subjects on the BACL during and post-treatment, which supported Hypothesis 1.

The analyses which found a discrepancy between the STAI and BACL are somewhat misleading. The significant F-ratio for the covariate (pre-scores) in Table 4 (STAI) suggested that significant initial differences existed before the playback experience. Moreover, the means that were presented in Table 15 further suggested that High and Middle A-Trait subjects cognitively appraised the experimental situation as ego-threatening, and exhibited high levels of state anxiety. The initial A-State reaction evaluated across treatment conditions (see Table 3), was somewhat higher than subsequent state anxiety levels (e.g., post videotape feedback levels). High and Middle A-Trait subjects were initially ego-threatened for several reasons: (a) they were told this was an experiment in "self-evaluation", and may have felt they would not do well (fear of failure), (b) they knew they were in a "psychological" experiment, and (c) they were aware they were being recorded (see Roberts & Renzaglia, 1965; Tanney & Gelso, 1972). In order to avoid this potential contamination of results, the subjects should have undergone relaxation before the experiment proper.

Thus, while the analysis of covariance was the appropriate statistical test because it controlled for the state-

trait correlation, it yielded a conservative analysis by partialling out some of the predicted variance High and Middle A-Trait subjects initially self-reported. The use of a conservative test did however, further demonstrate that: (a) Spielberger's state-trait anxiety theory had the power to predict the continuation of differences between High, Middle and Low A-Trait subjects under subsequent ego-threatening situations, and (b) the treatment conditions were sufficiently powerful enough to continually ego-threaten (e.g., videotape feedback alone) High and Middle A-Trait subjects. In sum, the use of analysis of covariance further strengthened both Spielberger's theory and this study's results.

The results from Hypothesis 1 found that videotape self-confrontation was an anxiety arousing experience, which is consistent with previous research (Alkire & Brunse, 1974; Danet, 1969; Holzman, 1969; Kagan & Schauble, 1969; Kingdon, 1975; Nielsen, 1963, 1964).

The results from the BACL during-treatment (videotape feedback) may be interpreted in the following way. Holzman (1969) has suggested that videotape feedback alone causes anxiety because subjects are forced to see what they have been consciously avoiding. This ostensibly disrupts the modes of perception, forcing awareness of personal discre-

pancies and thus creating an uncomfortable, anxious state. The data also supported the extension of Holzman's findings (in the audiotape medium) into the videotape medium.

Holzman's (1969, 1971) research had also suggested that this experience of anxiety rapidly diminishes over time. Contrary to Holzman's research, it was found that anxiety across High, Middle and Low A-Trait subjects in the no feedback group, increased across time segments. The increase in behavioral anxiety on the BACL could be interpreted in the following way. Since stress and anxiety are aroused during videotape feedback self-confrontation may be thought of as a threatening or negative feedback message. Negative feedback has been demonstrated to cause inhibiting effects on a subject's performance, (Berkowitz & Cottingham, 1960; Hodges & Felling, 1970; Janis, 1975; Janis & Feschback, 1953; Janis & Terwilliger, 1962; McAdoo, 1972).

It may be deduced that without stress-reducing adjuncts (e.g., positive feedback) videotape feedback will continue to increase anxiety over time. It should be noted that the playback period was brief (5 minutes), and that over a longer time interval state anxiety might well decrease. In view of Holzman's research findings, it would be expected state anxiety decreases over time. However, the data of the present study suggested that state anxiety increased over time.

As noted above, videotape feedback appeared to function as a negative feedback message. In regard to the pattern of these results, it is interesting to see that the no feedback subjects continued to display significantly more self-reported and behavioral anxiety post videotape feedback on both the STAI and BACL post-treatment.

As Lazarus (1966) has pointed out, it is not only the stressor (videotape feedback) that determines the response (increase in behavioral state anxiety), but also the cognitive appraisal of that stress by the subject. Along these lines, it is interesting to speculate that the maintenance of behavioral anxiety post videotape feedback may have partially reflected concern over the lack of interviewer feedback. This concern was probably heightened by evaluation apprehension generated by the experimental situation.

The relationship between subject and interviewer is similar in many respects to everyday interpersonal relationships. These relationships are characterized by a number of customs that help us to get along with one another. For example, if we bump into a stranger we immediately and automatically, ask the stranger's pardon. Also, it is frequently true that we can compliment an individual for his performance regardless of its quality. This seems to be especially true when the individual is an amateur, and when we have prevailed

upon him to perform. Thus, in this study after requesting the subject (essentially an amateur) to deliver a monologue, the lack of any significant comment from the interviewer may have led the subject to doubt the quality of his first performance. It is important to remember that most subjects exhibited at least some anxiety during the first monologue, which suggested the subjects had some negative perceptions regarding their performance. This negative set in conjunction with no feedback may have provided fertile ground for whatever doubts the subject had about his first performance to grow. This explanation is consonant with research which suggests that the absence of feedback may result in deterioration of performance (Elwell & Grindley, 1938; Trowbridge & Cason, 1932). That is, a subject's (i.e., a trainee's) task performance will suffer in response to videotape feedback which is not accompanied by an expert's (i.e., a supervisor's) verbal and/or nonverbal feedback. Therefore, it seems clear from the results of both the STAI and the BACL (during and post-treatment) that the no feedback condition (videotape feedback alone) was an anxiety arousing experience.

Research Hypothesis 2

Hypothesis 2 had predicted that positive feedback would decrease state anxiety and increase self-disclosing behavior in contrast to no feedback and placebo feedback. This hypo-

thesis was fully supported by the analyses on the STAI (Form X-1), BACL during and post-treatment and the FPP. These analyses found that positive feedback subjects self-reported and displayed significantly less anxiety and significantly increased self-disclosing behavior in contrast to no feedback and placebo feedback subjects. These results suggest that positive feedback facilitated the reduction of anxiety and increased self-disclosing behavior in subjects receiving videotape self-confrontation (videotape feedback).

The positive feedback may have had a number of anxiety lowering aspects. It may have given reassurance for self-doubts evoked by the videotape feedback by providing an opportunity for exploration with an authority figure (the interviewer), and it may have reduced uncertainty concerning the evaluation of the self exposed on the tape. The playback may have been experienced as relieving simply because the interviewer provided some structure to the situation. The positive feedback may have heightened a sense of self-exploration, a pleasing sense of mastery and control, which may have reduced anxiety. The debriefing results suggested that subjects receiving positive feedback focused more on verbal behavior (e.g., content) during playback, while subjects in the two other treatments tended to focus on non-verbal behavior (e.g., posture, gestures). Quantified

results are not available, but verbal reports from subjects during the debriefing further suggested that positive feedback was meaningful: that it was pleasurable and relieved anxiety.

Further evidence from the debriefing results showed that most positive feedback subjects had forgotten the content of the feedback they had been given. This suggested that the verbal content alone was not critical, but rather the context in which it was given. The purpose of the nonverbal feedback was to augment the credibility of the positive verbal feedback. During the debriefing subjects reported the positive feedback was believable, which indicated the nonverbal feedback was important. While data are not available comparing the relative merits of the verbal and nonverbal positive feedback, it appeared that together (verbal + nonverbal) they produced changes in both state anxiety and self-disclosing behavior.

The results do point to the potency of the positive feedback treatment in reducing anxiety during and post-treatment. The most experience self-confrontation researchers have recommended that some kind of message should accompany videotape feedback (Kagan & Schauble, 1969; Nielsen, 1964; Stoller, 1970). It seems probable that focus on positive aspects of the subject's presentation led to the subject's

appraising videotape feedback as less anxiety evoking, than subjects receiving no feedback. Thus, it appears that while no feedback had an adverse effect on performance (e.g., increased anxiety), positive feedback led to the selection of certain behaviors for repetition which had a positive effect on performance (decreased anxiety).

The increase of behavioral anxiety in positive feedback across time segments may be interpreted in the following way. The subject's expectation of positive feedback developed during treatment, but was not further encouraged by the interviewer. This may have led to a gradual reduction of the subject's expectancy of positive feedback and consequently resulted in an increase in anxiety during the second monologue. The results of both the during and post-treatment self-reported and behavioral measures of anxiety illustrated the acquisition of the goal behavior (lower A-State scores) as a function of the positive feedback. The increase in behavioral anxiety across time segments suggested the effect of the positive feedback treatment diminished over time as the subject's expectation for it (positive feedback) decreased. Thus, the reassuring effects from this treatment significantly reduced ("wore off") over time. This characterizes the need for intermittent reinforcement as essential to maintain behavior during performance (the monologue).

The increased self-disclosing behavior was consistent with the research cited in Chapter I (Colson, 1973; Greene, 1977; Janis, 1975; Taylor, et al., 1969). Thus, as predicted, the subjects were influenced by situational factors (e.g., treatment group). The positive feedback (verbal and non-verbal) may have created a climate of "psychological safety", which altered the subject's appraisal of videotape feedback. Unlike the no feedback subjects who appeared to be threatened by the experimental situation (videotape feedback and/or the interviewer's behavior), the positive feedback subjects appeared to perceive the experience as meaningful and the interviewer's behavior as facilitative. These results are congruent with previous research, which had found that the subject's perception of the interviewer as faciliative led to increased self-disclosing behavior (Greene, 1977; Halpern, 1977; Jourard & Friedman, 1970).

Insofar as videotape feedback usually occurs in the presence of a companion (e.g., supervisor, counselor, etc.), it is encouraging to note that client self-reported anxiety, behavioral anxiety and self-disclosing behavior can be modified through counselor feedback. The results found that positive feedback had a significant effect on all the dependent measures. Moreover, the data confirmed the potential benefits numerous counselors (Alger & Hogan, 1967; Kagan,

et al., 1963; Stoller, 1970) have attributed to videotape feedback. Together the results from Hypotheses 1 and 2 exemplify the need to qualify videotape feedback with positive feedback (verbal and nonverbal).

Research Hypothesis 3

This section discusses the results which were relevant to the treatment x trait anxiety interaction. The presentation is divided into two parts: (a) Within A-Trait comparisons (e.g., Hypothesis 3(a), no feedback versus placebo feedback comparisons, etc.), and (b) Between A-Trait comparisons (e.g., High versus Middle versus Low A-Trait subjects).

Within A-Trait Comparisons. Hypothesis 3 had predicted a significant trait x treatment interaction. It was expected that positive feedback in contrast to no feedback and placebo feedback would decrease state anxiety (self-reported and behavioral anxiety) and increase self-disclosing behavior in High and Middle Trait Anxious subjects (Hypotheses 3a and 3b), while not affecting the behavior of Low Trait Anxious subjects (Hypothesis 3c). Hypotheses 3(a) and 3(b) were fully supported; that is, High and Middle Trait Anxious positive feedback subjects significantly reduced self-reported and behavioral anxiety (during and post-treatment) and significantly increased self-disclosing behavior in contrast to High and Middle

Trait Anxious no feedback and placebo feedback subjects. Hypothesis 3(c) was partially supported. On the STAI (Form X-1) and the BACL during-treatment, Low A-Trait subjects performed similarly across treatment conditions, which supported Hypothesis 3(c). However, on the BACL post-treatment Low A-Trait positive feedback subjects significantly decreased behavioral anxiety (in contrast to Low A-Trait no feedback and placebo feedback subjects) and increased self-disclosing behavior (in contrast to Low A-Trait placebo feedback subjects), thus failing to support Hypothesis 3(c).

Comparisons between no feedback and placebo feedback subjects also offered support for an expected differential effect within High, Middle and Low A-Trait levels. It was expected that if no feedback was an "ego-threatening" experience, then High and Middle A-Trait subjects would increase self-reported and behavioral anxiety, while Low A-Trait subjects would perform similarly across treatments. This was supported by results from: (a) all Middle Trait comparisons, (b) High A-Trait comparisons based on the STAI and BACL post-treatment, and (c) Low A-Trait subjects performing similarly on the STAI and BACL during-treatment. It was unsupported by the unexpected significant findings involving: (a) High A-Trait subjects on the BACL during-

treatment (HPL>HNO), and (b) Low A-Trait subjects on the BACL post-treatment (LNO>LPL).

The results suggested that High and Middle A-Trait subjects were similarly affected by the treatments; that is, positive feedback decreased self-reported and behavioral anxiety and increased self-disclosing behavior, while no feedback increased self-reported and behavioral anxiety. There was one salient exception, in which, contrary to expectation, High Trait Anxious placebo feedback subjects displayed significantly more behavioral anxiety than High Trait Anxious no feedback subjects. A possible explanation is that the task for the placebo feedback group was too ambiguously described in advance. The subjects were told only that they would be watching a tape which they would rate afterwards according to a self-concept scale. Since they were participating in a psychology experiment, and the situation was somewhat vague, the High Trait Anxious subjects may have been apprehensive about what was to follow. In other words, the uncertainty of the situation probably elevated their levels of behavioral anxiety. This explanation is consistent with Epstein's (1972) theoretical position. He has speculated that uncertainty (e.g., placebo feedback) is more anxiety arousing than the stressful situa-

tion (e.g., videotape feedback). The significant increase in behavioral anxiety further suggested that the placebo feedback condition was not appraised by High A-Trait subjects as a true placebo (neutral) stimulus condition.

An examination of Table 20 does indicate that the mean score difference between the no feedback and placebo feedback was considerably smaller than the mean score difference between the no feedback and positive feedback groups. This suggests that videotape feedback alone was ego-threatening to High Trait Anxious no feedback subjects. Thus, while High Trait Anxious placebo feedback subjects may have experienced increases in A-State for another reason (e.g., uncertainty), the High Trait Anxious no feedback subjects were apparently ego-threatened by videotape self-confrontation.

Previously it was suggested that videotape feedback alone was anxiety arousing. It now seems clear that it was anxiety arousing, or in Spielberger's terminology "ego-threatening" for High and Middle, but not Low Trait Anxious subjects. This finding was consistent with both the state-trait theory (Spielberger, 1966, 1972c, 1975) and previous research (Hodges, 1968; Lamb, 1973; McAdoo, 1972; O'Neil, et al., 1969). It could be inferred that High and Middle Trait Anxious positive feedback subjects

were able to reduce A-State by cognitively reappraising videotape feedback with regard to the interviewer's feedback. Spielberger's explication of the anxiety process appears relevant to the discussion.

In essence, "anxiety-as-process" refers to the sequence of cognitive, affective and behavioral responses that occur as a reaction to stress. The process may be initiated by a stressful external stimulus (e.g., videotape feedback) that is perceived as threatening. Cognitive appraisals of danger are closely followed by a state anxiety reaction (increase in A-State). Therefore, state anxiety is central to the anxiety process, and the concept of "anxiety-as-process" generally implies the following temporally ordered sequence of events:

External stress leads to a perception of danger which causes an A-State reaction. As increases in A-State are experienced as unpleasant, the individual will engage in cognitive and behavioral operations or responses that serve to minimize this discomfort. The individual then reappraises the stressful circumstances which help him identify a possible course of action. It is hypothesized that over time following cognitive reappraisal the individual identifies coping mechanisms, engages in avoidance behavior or utilizes psychological defenses in dealing with the stress-

ful situation. Thus, A-State reactions may give rise to the following sequence of individual responses:

The A-State reaction is cognitively reappraised so that the individual is able to cope with the external stress, avoid it, or adopt psychological defenses against it.

Based on the above conceptualization it may be inferred that the anxiety process for High and Middle Trait no feedback subjects involved the following temporally ordered sequence of events:

The videotape feedback was perceived as ego-threatening, which caused an A-State reaction.

Similarly, the High and Middle Trait Anxious positive feedback subjects' cognitive reappraisal of videotape feedback may be illustrated in the following manner:

The videotape feedback led to an internal A-State reaction, which was cognitively reappraised by the positive feedback subjects so that they were able to cope with this stressor stimulus.

High and Middle Trait Anxious positive feedback subjects may have experienced some internal discomfort, which was immediately coped with. Thus, High and Middle Trait Anxious positive feedback subjects displayed significantly lower A-State than High and Middle Trait Anxious no feed-

back subjects whose cognitive reappraisal and consequent anxiety reduction did not appear to have occurred until the debriefing interview. It could be deduced that the positive feedback enabled the High and Middle Trait Anxious subjects to attend to the significant aspects (verbal content) of their monologues, which ultimately led to their cognitive reappraisals. This explanation is consistent with recommendations made by several researchers (Kagan & Schauble, 1969; Nielsen, 1964; Reivich & Geertsma, 1968). Conversely, the High and Middle Trait Anxious subjects in the no feedback group appeared to focus on insignificant aspects (e.g., mannerisms) of their monologues.

It could be further deduced that High and Middle A-Trait positive feedback subjects increased self-disclosing behavior as a result of the cognitive reappraisal. Self-disclosing behavior may be related to the subject's feeling at ease. Thus, the present findings suggested that there might be an inverse relationship between A-State (state anxiety) and self-disclosing behavior for High and Middle A-Trait subjects. Ostensibly self-disclosing behavior may increase in proportion to the decrease in state anxiety. It would be presumptuous at this time to suggest a causal relationship between these two

variables.

As predicted, Low A-Trait subjects performed similarly across treatments on the STAI and BACL during-treatment. However, contrary to predictions the performances of Low A-Trait subjects on the second monologue was consistent with that of the High and Middle A-Trait subjects. That is, Low A-Trait positive feedback subjects significantly decreased behavioral anxiety and significantly increased self-disclosing behavior, while Low A-Trait no feedback subjects significantly increased behavioral anxiety.

Before considering these contradictory findings it would appear beneficial to summarize the discussion of state anxiety and self-disclosing behavior results. Comparisons between no feedback and placebo feedback groups had indicated that videotape self-confrontation was anxiety arousing (Hypothesis 1). Next, comparisons between positive versus no feedback, and placebo feedback groups had suggested that positive feedback was effective in reducing A-State and increasing self-disclosing behavior (Hypothesis 2). Further comparisons across treatments within anxiety levels (e.g., High Trait no feedback versus High Trait placebo) found videotape self-confrontation to be ego-threatening for High and Middle Trait Anxious subjects, but not for Low Trait Anxious subjects, which supported

Spielberger's theory. That is, videotape self-confrontation was cognitively appraised as a stressful, ego-threatening situation by High and Middle Trait Anxious subjects, while Low Trait Anxious subjects did not appear to be similarly threatened (Hypotheses 3(a), (b) and (c)). However, examination of BACL post-treatment results suggested that Low Trait Anxious subjects' performance during their second monologues was contrary to prediction, and outside Spielberger's theory. The theory deals with the transition from rest to initial A-State reaction. The data of the current study have implications for subsequent anxiety progression. Initial A-State reactions will be higher than later reactions, and High and Low A-Trait subjects will continue to be differentially affected by ego-threatening stimuli. The behavior of Low A-Trait subjects might be best explained through a closer examination of Spielberger's theory.

High and Middle A-Trait subjects appeared to reappraise their first monologues with respect to the positive and no feedback treatments. It could be deduced that these treatments represented past experiences for these individuals. It is also conceivable that while Low A-Trait subjects did not appear affected by these treatments during videotape playback, their past experiences were similar

to that of the High and Middle A-Trait subjects. That is, they were exposed to the same treatment conditions. Thus, Low A-Trait positive and no feedback subjects may have also cognitively reappraised their first monologues. A number of possible reasons for reappraisal have been cited above (e.g., positive feedback created a climate of psychological safety). This suggested that the behavior of all subjects (High, Middle and Low A-Trait) during the second monologue was similarly affected by the treatment conditions.

This explanation was not intended to conflict with Spielberger's theory. The theory adequately accounted for most of the results. The data indicated the predicted proportional differences between the three levels of A-Trait (High>Middle>Low), which partially supported Spielberger's contention that High and Middle Trait Anxious subjects would be more affected by ego-threatening situations (e.g., videotape feedback) than Low Trait Anxious subjects. However, it seems conceivable that variability may exist within A-Trait levels. The above explanation implies that at least some of the variability may be the result of the individual's past experience. Thus, a corollary to Spielberger's theory might be: Within levels of A-Trait, changes in A-State resulting from an individ-

ual's past experience will affect the individual's appraisal and consequent task performance (e.g., performance during the second monologue). That is, the differences between the levels of A-Trait will remain unchanged, while within differing levels of A-Trait, individual A-State reactions will be influenced by past experiences, which in turn can be affected by the type of treatment administered. It should be noted that Spielberger has suggested that state anxiety is characterized by "subjective, consciously perceived feelings of apprehension and tension .... and can be influenced by past experience" (Spielberger, 1966, p. 17). This appears to be in agreement with the current findings and explanation of them.

Between A-Trait Comparisons. The results from the post hoc comparisons of trait anxiety means were as expected on the STAI and the BACL (during and post-treatment). The order of the means were: High>Middle>Low. This indicated that High Trait Anxious subjects self-reported and exhibited more anxiety than Middle Trait Anxious subjects; while Middle Trait Anxious subjects self-reported and displayed more anxiety than Low Trait Anxious subjects. However, the difference between High and Middle Trait Anxious subjects on the STAI did not reach significance.

The nonsignificant difference between High and Middle subjects was similar to results found by Korn, Ascough, and Kleemeier (1972). Both studies employed self-report inventories, which may provide a possible explanation. Self-report measures may have had low ceiling scores; that is, High A-State scores may have had a restricted range. Thus, subjects exhibiting high state anxiety reported scores between 50 and 60. The highly significant pre-score differences suggested another explanation. These differences led to a significant adjustment of High and Middle Trait posttest mean scores (see Table 3). The adjusted means mask the difference of posttest mean scores between High and Middle Trait Anxious subjects, which an analysis of variance would have yielded. As noted above, while an analysis of covariance was an appropriate statistic it was conservative; that is, some of the predicted variance was partialled out.

The results from the a posteriori comparisons of the treatment x trait anxiety cell means were also as expected on both the STAI and the BACL (during and post-treatment). The order of the means in most comparisons were: High > Middle > Low. The findings were similar to those reported for the trait anxiety comparisons with one exception.

On the BACL post-treatment, the Middle A-Trait

subjects exhibited more behavioral anxiety than High A-Trait subjects; while Middle and High A-Trait subjects manifested more behavioral anxiety than Low A-Trait subjects in the positive feedback condition (MPO>HPO>LPO). However, the difference between the two groups (MPO and HPO) in this instance appears superfluous to the discussion.

Both groups significantly decreased behavioral anxiety in the predicted direction. The magnitude of the decreases were considerably larger than the differences between the 2 A-Trait levels. Furthermore, the results from the other anxiety post hoc comparisons were all in the expected direction (e.g., High>Middle). Thus, the results from this a posteriori comparison may be spurious. At most, the positive feedback may have enabled High A-Trait subjects to reappraise the videotape feedback as less ego-threatening (anxiety arousing) than for Middle A-Trait subjects. Nonetheless, as noted above, this conclusion warrants cautious interpretation.

The significant covariate and main effect on both measures (STAI and BACL) was attributed to the state-trait correlation and suggested the value of A-Trait as a predictor for A-State. The analyses indicated the differential level of A-State manifested across treatments on

both measures, that is, differences in anxiety-proneness led to differences in manifest (state) anxiety. The analyses supported Spielberger's (1966, 1972c, 1975) contention that A-Trait is a dispositional variable, which is a useful independent variable for the investigation of state anxiety.

The data of the present study affirm expectations of a state-trait anxiety position. Groups differing in trait (predispositional) anxiety manifested reliable differences also in the levels of self-reported and behavioral (situational) anxiety in the experiment.. Furthermore, the rank order of manifest anxiety was as might be anticipated by a state-trait hypothesis; namely, High Trait Anxious subjects were highest in state anxiety, followed in order by Middle Trait Anxious and then Low Trait Anxious subjects. These data may be taken as a further substantiation of the state-trait argument: while anxiety states may fluctuate over time, the basic predisposition to experience anxiety remains relatively constant and is, in fact, a governing factor in determining the extent of arousal. Better evidence, of course, awaits future research replications.

The results from the state anxiety measures also supported the use of analysis of covariance, which for the most part clarified results that would otherwise have been

masked by the state-trait correlation. The analysis of covariance appeared to be the appropriate statistic, since the level of A-State prior to treatment had some effect on the subjects' responses to videotape self-confrontation (videotape feedback). The relevance of both the dispositional variable (A-Trait) and the situational variables (Treatments) suggested their relative significance in the study.

The order of the means on the FPP was also as expected: L>M>H. However, only the difference between Low and High Trait Anxious subjects reached significance. The comparisons involving Middle Trait Anxious subjects did not reach significance, which was similar to the findings on the STAI.

These results were not surprising, since most previous research had been based on comparisons between High and Low Trait Anxious subjects (e.g., Hodges & Felling, 1970; Lamb, 1973; McAdoo, 1972; Saunders, 1973). However, examination of the unadjusted post-treatment means in Table 18 do indicate that the dispositional variable (A-Trait) had some effect on self-disclosing behavior. There appeared to be a nonsignificant trend between the 3 groups in the expected direction (L>M>H); that is, Low Trait Anxious subjects were highest in self-disclosing behavior, followed in order by Middle and High Trait Anxious subjects.

The results from the post hoc comparisons of the treatment x trait anxiety cell means partially supported the findings from the trait anxiety means. However, the order of the means for all 3 treatments were not as expected (e.g., MPO > LPO > HPO). The comparisons from all the treatments found significant differences in the expected direction between Low and High A-Trait subjects. The failure to support the expectations primarily involved the self-disclosing behavior patterns of Middle A-Trait subjects.

In 2 treatments (PL and PO) they self-disclosed more frequently; and in the third least frequently (NO). It should be noted that Middle A-Trait subjects were included in the present study in an effort to acquire more information regarding their behavior patterns. As noted above, most of the previous research had been based on High versus Low A-Trait comparisons.

The results from the within and between A-Trait comparisons are encouraging, and suggest that Middle A-Trait subjects performed more similar to High than Low A-Trait subjects. However, the relationship between Middle A-Trait subjects and self-disclosing behavior is more complex. On 2 treatments (PO and PL) Middle A-Trait subjects performed more like Low A-Trait subjects, while in the third

treatment (NO) their behavior was more similar to High A-Trait subjects. This suggests the need to cautiously interpret the relationship between Middle A-Trait individuals and self-disclosing behavior.

Generally A-Trait appeared to affect self-disclosing behavior. A-Trait was found to be inversely related to self-disclosing behavior; that is, the lower the A-Trait level the greater the self-disclosing behavior.

Jourard (1971) has speculated that self-disclosure is related to "mental health", which implies that fewer Low A-Trait individuals will desire counseling. Research with university students has confirmed that High A-Trait people are more likely to seek counseling (Spielberger, et al., 1970).

Self-disclosure has also been found to be related to counseling success (Jourard, 1971). This is encouraging because videotape feedback + positive feedback (positive feedback) increased self-disclosing behavior in High and Middle A-Trait subjects. It follows that using this technique (positive feedback) should increase the success rate of counseling with High and Middle Trait Anxious college students.

The impact of A-Trait was not as salient as it had been upon the A-State measures. The latter can be partly

attributed to the state-trait correlation. It should be noted that the inclusion of self-disclosing behavior was as a subsidiary variable, since the relationship between self-disclosure and anxiety had received little attention. The parameter of self-disclosure assessed by the FPP was limited to measuring frequency of self-reference statements emitted, which according to Cozby's (1973) classification is a self-disclosure measure of the amount of information disclosed. Thus, the limited scope of the FPP, dearth of previous research and the different parameters (self-report and behavioral) assessed by the 2 measures (A-Trait Scale and the FPP) made the nonsignificant differences between the 3 A-Trait levels not surprising.

In sum, the between A-Trait comparisons found: (a) general support for Spielberger's state-trait theory, (b) significant differences in the expected direction for High versus Low A-Trait comparisons, (c) the pattern of the results for anxiety measures (STAI and BACL) offered more support for Spielberger's theory than the FPP results, and (d) that Middle A-Trait subjects performed more like High A-Trait subjects on state anxiety measures (STAI and BACL), while performing more similar to Low A-Trait subjects on the FPP.

Research Hypothesis 4

This hypothesis had predicted that the two anxiety measures (the STAI and the BACL) would be positively correlated. It should be noted initially that the significant positive correlations between the two scales supported Hypothesis 4. This suggested that both may be measuring state anxiety; that is, each instrument may have been assessing the same construct (A-State) through differing vantage points. The STAI (Form X-1) represented the subject's phenomenological ("subjective") evaluation of his state anxiety level, while the BACL reflected an expert's ("objective") judgement of the subject's state anxiety level. The results indicated that there was a high degree of agreement between the subject and the expert, which also reinforced Spielberger's contention that most individuals' self-reports are truthful (valid).

The findings are also pertinent to the area of psychological assessment. Many radical behaviorists contend that only behavioral measures (e.g., the BACL) are useful for assessments, while most phenomenologists rely primarily on self-report instruments (e.g., the STAI). The results from this study suggest that both types of instruments were positively correlated and provided useful information. Thus, a subject's self-report of anxiety

closely resembled his behavioral manifestation of anxiety, and vice versa. Logically this leads to at least two conclusions: (a) both the radical behaviorists and the phenomenologists have correctly asserted that behavioral and self-report measures are accurate, and (b) neither the radical behaviorists or the phenomenologists are correct in maintaining that only behavioral or self-report techniques are accurate. It follows, therefore, that a third position which accepts the validity of each and recommends the use of both is more appropriate. This is supported by Cohen (1977) who has noted that a complete and accurate assessment requires the use of both self-reports and behavioral measures.

The data also offered support for the use of the BACL as a behavioral measure in videotape self-confrontation research, although a replication of the findings would significantly strengthen this position.

Research Hypothesis 5

This hypothesis had predicted that the interviewers' behavior would not significantly affect the subjects' performance as assessed from the dependent measures. The data found that there were no interviewer main effects, two-way (Interviewer x Trait Anxiety or Interviewer x Treatment), or three-way (Interviewer x Trait Anxiety x

Treatment) interactions on the dependent variables, thus supporting Hypothesis 5. These results were predicted, since the interviewers had been given the same interview instructions in the training and pilot sessions. Both the interviewers had similar academic training and experimental experience. Each had recorded similar levels of functioning on the Carkhuff Discrimination Index.

Although no interviewer effects on the dependent measures were found, there remains the important issue concerning the general influence of the interviewer on a subject's behavior. One aspect of this issue involves the emission of verbal and nonverbal reinforcements by the interviewers. Since the interviewer's behavior was not monitored, there was no unequivocal way of assessing his delivery of positive feedback to subjects. Also, although every precaution was taken against the interviewer dispensing nonverbal reinforcements to no feedback and placebo feedback subjects, the possibility of entirely eliminating reinforcement cues without affecting, to some extent, the subject's performance and perception of the videotape feedback is highly unlikely.

Limitations

A salient methodological problem had to do with the task. Even as an analogue study, the task might be consid-

ered artificial and a low level simulation. Clients do not often give extended monologues without counselor feedback. Nonetheless, some clients will give extended monologues, which suggests that this task may in fact reflect typical behavior for those clients.

The generalization of these results is limited to other situations where the subject receives only 5 minutes of videotape feedback. The relevance of the results will decrease as situations become more dissimilar to the one described here. A list of such parameters (e.g., length of playback) need to be further explored and should be considered in future research endeavors.

Similarly, the three treatments represented unusual experiences for the subjects. The no feedback condition presented the subject with a socially strained situation in which the interviewer did not speak to him during videotape playback, in contrast to the positive feedback treatment which provided the subject with only (verbal + nonverbal) positive feedback. The placebo condition had the subject view someone else giving a monologue. A typical videotape feedback experience would have a subject view his own behavior in the presence of an expert (supervisor, counselor, etc.) who would offer both positive and negative (verbal and nonverbal) feedback. Also, as noted

above, the placebo condition may not have been a true placebo group, since some subjects may have attempted to model the performer's (the individual on the tape) behavior.

Another limitation concerns the use of the STAI. A number of researchers (Auerbach, Kendall, Cuttler, & Levitt, 1976; Blankenstein, 1976: Endler & Okada, 1975; Mellstrom, Cicala, & Zuckerman, 1976) contend that the STAI Trait Scale is a unidimensional measure that focuses mainly on interpersonal anxiety, and ignores other dimensions such as physical danger, and ambiguous threat anxiety. This is a specious argument. Both the intent and the test construction strategies used in the development of the STAI were to provide a unidimensional test of A-Trait. Moreover, other researchers have found that most of the situations college students report as anxiety arousing concerned interpersonal or ego-threats (Endler, et al., 1962; Hodges & Felling, 1970; Janisse & Palys, 1976). Previous research has suggested that the A-Trait Scale is a good predictor of speech anxiety (Lamb, 1973). Thus, while a considerable body of research suggests the A-Trait Scale may be limited to predicting ego-threatening situations, both the prevalence of interpersonal anxiety in university populations and successful predictions of speech anxiety seem to validate its usage in the current study.

Further criticisms of the STAI are directed at it being a self-report scale. The arguments are: the items are vague and may mean different things to different people; subjects may lie; and many people are unwilling to admit negative things about themselves. In conceding the legitimacy of these criticisms Spielberger has noted that most people are capable and willing to reveal "how they felt while performing on experimental tasks, provided they are asked specific questions about their feelings and the feelings were recently experienced" (Spielberger, 1971, p. 270). He further contends that the STAI has been successfully used in many investigations (Spielberger, 1975), which was supported by the findings from Hypothesis 4.

While the findings of this study indicate significant results for university male students, this population limits the generalizations which can be made. The subject selection process and resulting division into High, Middle and Low Trait groupings also limits generalization to other populations. Over 50% of the subjects pretested were excluded from the experiment. Also, all the subjects were male, and generalizations to females is questionable. Furthermore, the study used male interviewer-subject dyads, and results may not extend to male-female dyads.

Another limitation involved the use of the FPP. As

previously stated, this measure was limited in scope. Noting Gitter & Black's (1976) recent article, FPP results do not imply "self-revealing", but was defined as any information about himself the subject communicated to the interviewer. It was not sensitive to the content of the subject's monologues, nor the differential meaning of positive versus negative self-reference statements. Other parameters such as flexibility of disclosure need to be further explored, and will be considered in a subsequent section.

Finally, no attempt was made to assess the interviewer's performances, and therefore there is no way to comment on the quality of performance and its possible effects. Nonverbal reinforcements emitted by interviewers during a subject's monologue could have considerably affected his performance. While some interviewer differences would be expected, the data suggested the other independent variables (treatments and A-Trait) were of greater import.

Clinical Implications

The state-trait issue has clinical implications. For instance, in desensitization therapy one might use the STAI (Form X-1) as an objective check on degree of anxiety aroused by a specific hierarchy in a chronically (trait) anxious client. A simultaneous evaluation can be made by the counselor using the BACL to corroborate the client's

self-reported anxiety. Certainly, the relationship between the STAI and BACL is encouraging enough to warrant further research. The present results suggested the BACL was an adequate measure for self-confrontation research.

To most researchers, initial interest in videotape feedback involved counseling application. The findings of this study are of interest to the counselor who uses this technique. The counselor should be aware that many clients (especially High and Middle Trait Anxious) may have an initial anxious reaction to videotape self-confrontation. He may want to use this period to help the client form an integrated, realistic self-concept. There is no evidence that subjects spontaneously do this, although it isn't ruled out. As Holzman (1971) suggested, this may be a time when advance or retreat is possible, depending on how the counselor helps the client deal with the experience. It appears that positive, focused feedback should accompany the use of videotape feedback in counseling. Since the client may be anxious for some time after self-confrontation, it might be best for the counselor to initially be facilitative towards the client. The counselor could later focus the client's attention on the aspects of his behavior which need changing as well as those which are satisfactory.

Another implication for counseling might be to use the

STAI (Form X-2) to identify anxiety-prone clients. These clients could then be treated by the "stress inoculation" approach developed by Meichenbaum (Meichenbaum & Turk, 1976). In this approach the client is trained to become aware of the negative self-statements he emits and produce incompatible self-statements and behaviors. According to Meichenbaum (1976) this approach has been effective at alleviating interpersonal anxiety, which as noted above the A-Trait Scale is purported to assess.

Similarly, the A-Trait Scale may be used in vocational counseling. Kimes and Troth (1974) suggest that High A-Trait subjects should be scheduled for personal counseling to assist them in dealing with their high level of A-Trait before they attempt making career decisions.

The study has further implications for counselor training. It seems important for supervisors to provide trainees with positive, focused feedback. Counselor trainees might be asked to complete A-Trait Scales, which could help identify anxiety-prone individuals. Special caution during initial videotape feedback sessions would follow, with the supervisors acting in a facilitative manner towards the trainees. Deleterious effects will also be minimized when trainees are not required to submit to playback alone, if they strongly object. The goal of

supervision would be to reduce the potential disruptive effects of videotape feedback, so that learning and behavior change can occur.

Videotape feedback in the clinical setting usually involves two forms of feedback. The actual playback of behavior allows the client to observe samples and also possibly the effects of his behavior; further feedback is then provided in the form of discussion or comments made by the counselor. The present study demonstrated that while videotape feedback alone may be harmful, its effect can be modified by counselor feedback. Thus, while the widespread use of videotape feedback in counseling training, etc. is impressive, it appears that the potential usefulness may necessitate it being accompanied by positive, focused, verbal feedback. This approach appears most relevant with anxiety-prone (e.g., High Trait Anxious) individuals in their initial self-confrontation experience.

The use of videotapes in both research and practice poses certain ethical problems. The psychologist should obtain the subject's (client's) consent, preferably in writing. Such consent, for legal, ethical and clinical reasons, should be based on the subject's complete understanding of the proposed recording and playback of his recorded behavior. This poses a difficulty: the playback

possibilities are not always easily specified, and consequently the subject does not know exactly what risks he is being asked to sanction. The recorded representation of a subject's behavior has ambiguous professional and legal status both as a record and as a communication, and this circumstance greatly complicates its professional use. Certainly the psychologist must take into account these considerations when using videotapes in research and/or practice. The APA ethical code makes it incumbent upon him to treat subjects with the respect and dignity they are entitled to. Thus, before commencing a study the psychologist should fully understand the ramifications of his treatments. The current study cautions against indiscriminant use of videotape feedback. It also suggests the necessity to debrief experimental subjects, especially those who have been exposed to potentially aversive stimuli.

Research Recommendations

The results of the study provide several future research possibilities. The analyses suggested that positive feedback simultaneously significantly decreased self-reported and behavioral state anxiety while increasing self-disclosing behavior in High and Middle Trait Anxious subjects. The results further illustrated that videotape

feedback alone appeared to increase self-reported and behavioral measures of A-State in High and Middle Trait Anxious subjects. This suggested that positive feedback modified the impact of videotape feedback, which could be more closely examined by extending the design to include three additional conditions. One group would neither receive verbal nor videotape feedback (no treatment control). A second group would receive positive verbal feedback, but would not receive videotape feedback (positive feedback only). The third group would receive positive feedback before, but not during videotape feedback (pre-positive feedback + videotape feedback). Comparisons among the six treatments (positive feedback, no feedback, placebo feedback, no treatment control, positive feedback only, and pre-positive feedback) should further clarify the verbal versus videotape feedback issue. It might provide evidence concerning the timing of verbal feedback (before versus before + during). Another advantage is that these comparisons could clarify which treatment is most efficacious in modifying performance (e.g., positive only versus pre-positive feedback versus positive feedback).

Another alternative design could employ a structured interview. This design would provide a higher level of simulation to counseling. The study could use a cognitive

anxiety measure which assesses verbal behavior in conjunction with the A-State Scale. This could then provide concurrent validation for the STAI A-State Scale as a possible measure of cognitive anxiety. It should be noted that the developers of the scale, Viney and Westbrook (1976) have reported significant correlations with other A-State instruments (e.g., Affect Adjective Checklist).

The results of the present study justify a replication with similar subjects and a similar task, as well as a replication in a different setting with different subjects. The same methodology could be employed in the other studies. One population of particular interest is Middle Trait Anxious subjects. Most investigators have exclusively relied on High versus Low comparisons, and comparatively little is known about Middle Trait Anxious individuals. Also of interest, would be a random sample. This might provide evidence to suggest at what point on the A-Trait Scale subjects are ego-threatened by videotape feedback.

A replication using different measures of A-Trait (e.g., S-R Inventory for Trait Anxiety) and A-State (e.g., Affect Adjective Checklist) would be of interest. The application of physiological indices of autonomic activity (e.g., heart rate, GSR) appears to be another

logical extension of the present design.

Future investigations should study additional parameters of self-disclosure to clarify the relationship between self-disclosure and anxiety. Some parameters that might be used are: depth or intimacy of the information disclosed, duration of disclosure; flexibility of disclosure pattern, affective manner of presentation, and self-revealingness of disclosures. This study's results are limited by the measure used (FPP), and could be further strengthened with future replications that included other parameters and other instruments (e.g., Jourard Self-Disclosure Scale). Descriptions of the above parameters and instruments to assess them are presented elsewhere (Cozby, 1973; Gitter & Black, 1976; Jourard, 1971).

Another direction for future research could be the study of immediate, intermediate and long term effects of different types and combinations of playback. It would also be interesting to determine the effect of videotape feedback presented for longer time intervals and over repeated sessions.

Appendices

Appendix A

State-Trait Anxiety Inventory

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you <u>feel</u> right now, that is, <u>at this moment</u>. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.	Not at all	Somewhat	Moderately so	Very much so
1. I feel calm.....	(1)	(2)	(3)	(4)
2. I feel secure.....	(1)	(2)	(3)	(4)
3. I am tense.....	(1)	(2)	(3)	(4)
4. I am regretful.....	(1)	(2)	(3)	(4)
5. I feel at ease.....	(1)	(2)	(3)	(4)
6. I feel upset.....	(1)	(2)	(3)	(4)
7. I am presently worrying over possible misfortunes.....	(1)	(2)	(3)	(4)
8. I feel rested.....	(1)	(2)	(3)	(4)
9. I feel anxious.....	(1)	(2)	(3)	(4)
10. I feel comfortable.....	(1)	(2)	(3)	(4)
11. I feel self-confident.....	(1)	(2)	(3)	(4)
12. I feel nervous.....	(1)	(2)	(3)	(4)

13.	I am jittery.....	(1)	(2)	(3)	(4)
14.	I feel "high strung".....	(1)	(2)	(3)	(4)
15.	I am relaxed.....	(1)	(2)	(3)	(4)
16.	I feel content.....	(1)	(2)	(3)	(4)
17.	I am worried.....	(1)	(2)	(3)	(4)
18.	I feel over-excited and "rattled".....	(1)	(2)	(3)	(4)
19.	I feel joyful.....	(1)	(2)	(3)	(4)
20.	I feel pleasant.....	(1)	(2)	(3)	(4)

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	Almost never	Sometimes	Often	Almost always
21. I feel pleasant.....	(1)	(2)	(3)	(4)
22. I tire quickly.....	(1)	(2)	(3)	(4)
23. I feel like crying.....	(1)	(2)	(3)	(4)
24. I wish I could be as happy as others seem to be.....	(1)	(2)	(3)	(4)
25. I am losing out on things because I can't make up my mind soon enough.....	(1)	(2)	(3)	(4)
26. I feel rested.....	(1)	(2)	(3)	(4)
27. I am "calm, cool and collected".....	(1)	(2)	(3)	(4)
28. I feel that difficulties are piling up so that I cannot overcome them.....	(1)	(2)	(3)	(4)
29. I worry too much over something that really doesn't matter.....	(1)	(2)	(3)	(4)

30.	I am happy.....	(1)	(2)	(3)	(4)
31.	I am inclined to take things hard.....	(1)	(2)	(3)	(4)
32.	I lack self-confidence.....	(1)	(2)	(3)	(4)
33.	I feel secure.....	(1)	(2)	(3)	(4)
34.	I try to avoid facing a crisis or difficulty.....	(1)	(2)	(3)	(4)
35.	I feel blue.....	(1)	(2)	(3)	(4)
36.	I am content.....	(1)	(2)	(3)	(4)
37.	Some unimportant thought runs through my mind and bothers me.....	(1)	(2)	(3)	(4)
38.	I take disappointments so keenly that I can't put them out of my mind.....	(1)	(2)	(3)	(4)
39.	I am a steady person.....	(1)	(2)	(3)	(4)
40.	I get in a state of tension or turmoil as I think over my recent concerns and interests.....	(1)	(2)	(3)	(4)

Appendix B: Instructions to Raters, re: First Person Pronoun (FPP)

FPP Coding Directions

Record each subject pronoun (nominative cash pronouns used as a subject of a predicate) in the appropriate column on the scoring sheet. Remember, only the pronouns that have a predicate can be counted. Both parts must be audible and neither alone can be counted.

Note that the pronouns you, they, it, are often used in a speech context other than as the subject (e.g., "I don't like it." In this case, it is serving as an objective case pronoun, a direct object and wouldn't be counted.)

The examples below will help to clarify the procedure. Pronouns underlined should be scored in the appropriate columns.

1. The subject begins a statement with a subject pronoun, but doesn't complete it with a predicate. No credit is given!
   e.g., "Oh, he ah...." (end of statement or sentence.)
2. When a subject stammers only one of the subject pronouns is counted providing it is with a predicate.
   e.g., I, I, I, I, I, I...I can not help him.

3. Subject pronouns used in an interrogative statement are counted.

   e.g., What are you seeing?

4. All subject pronouns with a predicate are scored, even if they appear in the context of a complete sentence, or as part of a verbal phrase.

   e.g., I do not think that I really know what he is trying. He won't say anything, and the others, they just keep telling everyone that it is false. I thought it over, and I said I wanted to wait before making a decision. It is quite a dilemna.

5. If the subject begins a sentence, and then interrupts it to insert a second subject pronoun as the subject of the predicate, only the second (inserted pronoun) is counted.

   e.g., I uh, oh,...he seems fine. I saw him, and he, uh, he will, I did say something.

After you have tallied the pronouns, add up the number for each column and write the total for each in the space provided at the bottom. Use a separate scoring sheet for each subject.

*FPP Scoring Sheet (sample)

FPP I	FPP We	You	He	She	They	It	
							Total
							Total FPP

*FPP = I, We pronouns

(Adapted from Myrick, 1969)

Appendix C: Behavior Anxiety Checklist, and Instructions to Rate It

BACL: Instructions to the Raters

Your task will be to determine the presence or absence of the fifteen behaviors during various segments (one minute timed segments). You are not to make judgments about the behavior, but only indicate its presence or absence. The behaviors are described below, which should be useful in detecting and accurately identifying the behaviors.

1. SWAYS. Rocks back and forth.
2. SHUFFLES FEET. Self-explanatory.
3. KNEES TREMBLE. Knees shake or move from side to side.
4. EXTRANEOUS ARM AND HAND MOVEMENT. Swings, toys with hands, scratches part of body, rubs ear, nose, etc.
5. ARMS RIGID. Arms held stiff, muscles tensed.
6. HANDS RESTRAINED. In pockets, behind back, clasped.
7. HAND TREMORS. Hand, or hands shaking, quivering.
8. NO EYE CONTACT. The subject does not look at the experimenter, or if he does, it is only for a few seconds (i.e., a quick glance).
9. FACE MUSCLES TENSE. Face is drawn, tics (repeated muscle contractions, twitches),

grimaces, etc.

10. MOISTENS LIPS. Uses tongue to wet lips.

11. SWALLOWS. Self-explanatory.

12. CLEARS THROAT. Self-explanatory.

13. BREATHES HEAVILY. Subject takes a deep breath before speaking, or stops to take a breath during his monologue.

14. VOICE QUIVERS. Voice shakes or "cracks".

15. SPEECH BLOCKS or STAMMERS. Stutters, or abruptly stops speaking in the middle of a sentence.

Put a number in the appropriate box to indicate the frequency of a behavior. Please note the columns represent various segments, and your ratings must reflect the actual segment.

BACL /

Rater..... Subject Number.....

Pre-Videotape Feedback..... Post-Videotape Feedback....

Behavior	Segment					
	1	2	3	4	5	Total
1. SWAYS						
2. SHUFFLES FEET						
3. KNEES TREMBLE						
4. EXTRANEOUS ARM AND HAND MOVEMENT						
5. ARMS RIGID						
6. HANDS RESTRAINED						
7. HAND TREMORS						
8. NO EYE CONTACT						
9. FACE MUSCLES TENSE						
10. MOISTENS LIPS						
11. SWALLOWS						
12. CLEARS THROAT						
13. BREATHES HEAVILY						
14. VOICE QUIVERS						
15. SPEECH BLOCKS STAMMERS						
TOTAL						

Appendix D: Instructions to Subjects at the Beginning of the Experiment

Come in. Please be seated. My name is _____. What is your name? And your age? Thank you. The first thing I would like you to do is to complete this form. The instructions are printed on it, but if you have any questions, feel free to ask. It will take a few minutes to complete. Work at your own speed, and let me know when you are done.

(After subject finishes form) Fine. As you were previously informed (from the description of the experiment) I am interested in studying self-concept. I will be asking you to do some things and fill out other forms. Basically, I would like you to talk to me for 5 minutes while being videotaped.

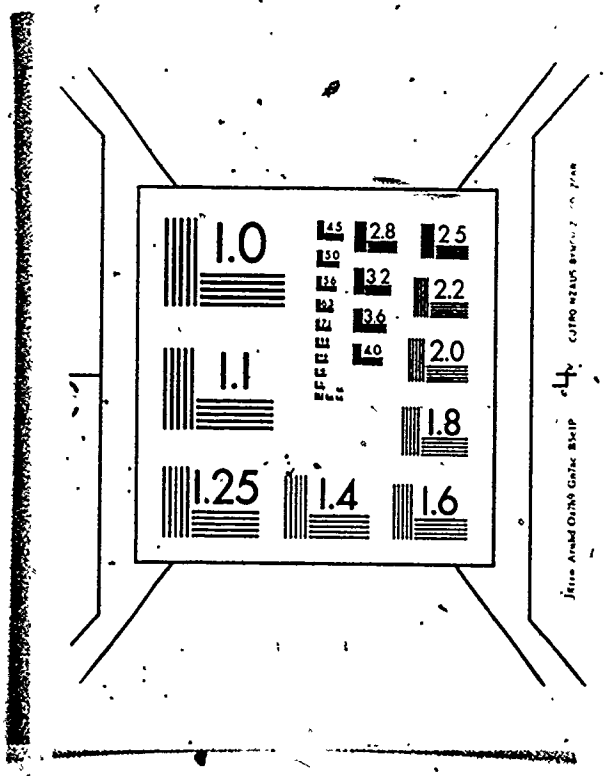
The experiment itself will be videotaped. Everything you say will be confidential, so I hope you will be as open and honest as you can. By confidential I mean that the record of your presentation will be available to myself and two research assistants, and will of course be erased after the experiment is finished. I would like you to talk about yourself for 5 minutes, during which time you will be taped. I will be here for you to talk to, but I will not say anything during your presentation. You will have about a minute to organize your thoughts. Topics I would prefer you to present are described on this sheet; give yourself

a few moments to read it, and organize your thoughts. Let me know when you are ready to begin.

Appendix E: Suggested Self-Presentation Topics

3 3

OF/DE



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L.1

Suggested Topics for Presentation

Present yourself as if you wanted someone to know you better. Talk about yourself. You are more likely to benefit from the experiment if you attempt to be as honest and free as you can. The following list contains a topic you may select. But, what you present is entirely up to you.

Some topics you might elect to speak on are:

Characteristics of yourself that give you cause for pride and satisfaction.

The event in your life when you were happiest.

The ways in which you are most maladjusted and/or immature.

Aspects about your daily life that please you.

Aspects about your daily life that displease you.

Your educational background, and your feelings about it.

Your hobbies, how you like to spend your leisure time.

The actions in your life that you have most regretted and why.

I want you to talk for about five minutes. You will have a few moments to organize your thoughts. Do you have any questions?

L. 11

Suggested Topics for Presentation

Present yourself as if you wanted someone to know you better. Talk about yourself. You are more likely to benefit from the experiment if you attempt to be as honest, open and free as you can. The following list contains a topic you may select. But, what you decide to present is entirely up to you.

Some topics you might elect to speak on are:

Your ways of dealing with depression.

Your likes in music, literature.

The unhappiest moment of your life.

What features about your appearance you are most proud of.

Your ways of dealing with anger.

Your unfulfilled wishes and dreams.

What kinds of outdoor activities you like to do.

On what occasion you have been most embarrassed and why.

I want you to again talk for five minutes. You'll have a few moments to organize your thoughts. Do you have any questions?

Appendix F: Feedback Messages

Feedback Messages

Positive Feedback Message

O.K. That completes the presentation for now. What did you think about your performance? (Pause for reply)

The interviewer then pointed out two specific aspects of the subject's presentation he did well. Some examples of interviewer messages were:

"From my work in the field I can tell you now that you delivered a polished presentation."

"Your enunciation, that is, how you articulated your words, was above average."

"What you said was quite interesting, and I feel I know you better now."

"I can also tell you from my past experience that you appeared quite at ease."

"Verbal as well as nonverbal cues pointed to this and suggested that you are generally pretty much in control. Verbal cues such as the tempo of your presentation, that is, how fast you spoke, reflects your self-confidence. By nonverbal cues I mean such things as your gestures. These are aspects that we are usually unaware of. You paused over a few words, but you recovered quite well. I could tell that you were sincere in what you said."

No Feedback Message-Videotape Feedback

O.K. That completes your presentation for now. What did you think of your performance? (Pause for reply)

No Feedback Message-Placebo Videotape Feedback

O.K. That completes your presentation for now. What did you think of your performance? (Pause for reply)

Appendix G: Interviewer Instructions

re: Feedback during Videotape Playback

Positive Feedback Message Group

The following represents verbal and nonverbal behaviors that you should emit to subjects who received positive feedback messages.

Nonverbal Behaviors

Sit beside the subject.

Watch and listen to the tape playback attentively.

Watch and listen to the subject's comments about his presentation.

Keep a relaxed body posture.

Maintain eye contact when the subject is speaking to you.

Show approval by nodding your head during the playback.

Smile at the subject.

Verbal Behaviors

Point out the two aspects of the subject's presentation that you had previously complimented. All verbal feedback should be directed at maintaining a consistent message. The flavor of your feedback should be positive. The objective is to have your feedback be both consistent and credible. It is important the subject is given the message that he did well.

No Feedback Message Group

Tell subject that during the videotape playback you will not speak with him. When viewing the tape try not to give nonverbal or verbal messages. Do not look at the subject. Just tell the subject when the time is up.

Placebo Feedback Group

Same as above.

Appendix H: Debriefing

Debriefing

The following points were covered:

1. What made you anxious during the experiment?
2. What was your reaction to viewing yourself on tape?
3. What did you focus on while watching the tape?
4. What did you think about the interviewer's comments before seeing the tape? After?
5. How do you feel now?
6. The feedback was fictitious, and simply an experimental manipulation.

All subjects were then thanked for participating in the experiment. The interviewers asked the subjects not to discuss the content or procedures with anyone other than them until at least January 1, 1977 (a date approximately one month after the experiment was to be concluded). All subjects were assured of the nonevaluative nature of the study, and the confidentiality of the taped material, and given a sheet describing the nature and purpose of the experiment. (see next page).

Debriefing

The purpose of this experiment was to study the effect that videotape feedback, and (in some instances) experimenter messages have on individuals with varying levels of trait anxiety. Trait anxiety is a relatively stable personality dimension reflecting individual differences in anxiety proneness, and it was measured by the questionnaire which you completed prior to the experiment. Subjects were chosen so that they could be divided equally into three groups: (a) High, (b) Middle and (c) Low Trait Anxiety.

It was hypothesized that subjects of the different levels of trait anxiety would exhibit varying levels of both self-disclosing behavior and reactions to videotape and experimenter feedback. The feedback messages given although seemingly plausible were planned.

The tapes will be rated anonymously, and then erased. Both the tapes and the questionnaires will be treated with complete confidentiality.

Your participation in the experiment is appreciated. I hope you had an interesting experience, and learned something about yourself which will be valuable to you. If you wish to discuss any facet of your experience in particular, the experimenter will be happy to do so with you. Many

subjects still have to participate, so please do not discuss the content or procedures of the experiment with anyone other than the experimenter until at least January, 1977.

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