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Telemediated self-confrontation: Effects of separation of channels social approval seeking and fear of negative evaluation on self-perception

Victoria Lynne Douglass
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TELEMEDIATED SELF-CONFRONTATION: EFFECTS OF SEPARATION OF CHANNELS, SOCIAL APPROVAL SEEKING, AND FEAR OF NEGATIVE EVALUATION ON SELF-PERCEPTION

By

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The purpose of this telemediated self-confrontation study was to investigate whether: (1) separation of channels of feedback, (2) time of presentation of feedback, or (3) concern with fear of negative evaluation and giving socially acceptable test responses would have differential impact on self-perception as measured by responses on equivalent forms of a semantic differential.

Forty-eight introductory psychology students, divided equally with regard to sex, were recorded while they talked for five minutes about things of importance to them. Then, their tapes were played back to them.

Channels of feedback were audio, audio-visual, visual, and filtered-audio (frequencies above 600 cps removed).

Self-perception of what each subject saw and/or heard was measured by responses to three equivalent forms of a semantic differential inventory loading on Activity, Potency, and Evaluation, administered at (1) pre-playback, (2) five-seconds post-playback, (3) five-minutes post-playback, and finally (4) a rating of how he felt others would perceive what he had seen and/or heard.

The Fear of Negative Evaluation scale and the Social Desirability Scale were used as covariates, since it was felt that the personality type which scored high on these measures would tend to react in a similar way to the self-confrontation experience.

An analysis of covariance was performed, and the semantic differential main effect was found to be significant for two factors, supporting predictions that Ss would react negatively on Semantic Differential II, return to baseline on Semantic Differential III, and rate themselves more negatively on Semantic Differential IV than on Semantic Differential I. The sex main effect was significant for the Potency factor, males rating themselves as strong, and females as weak. The channel by semantic differential interaction was significant for all three factors, and the relationship revealed is unsystematic.

Fear of Negative Evaluation and social desirability did not have the negative impact predicted on Semantic Differential II, since they did not account for much variance.

Three out of four of the major hypotheses of this study were supported, and these had to do with the overall semantic differential effect, or reaction sequence.
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Special thanks to my chairman, Dr. John R. Means, for tirelessly reading and rereading my thesis, offering valuable and creative suggestions for changes. Also, he has been a tremendous aid, by believing in me and my study.
A person may be said to have, or be in, or maintain face when the line he effectively takes presents an image of him that is internally consistent, that is supported by judgments and evidence conveyed by other participants, and that is confirmed by evidence conveyed through impersonal agencies in the situation. At such times the person's face clearly is something that is not lodged in or on his body, but rather something that is diffusely located in the flow of events in the encounter and becomes manifest only when these events are read and interpreted for the appraisals expressed in them.

... When a person is in wrong face or out of face, expressive events are being contributed to the encounter which cannot be readily woven into the expressive fabric of the occasion. ... Felt lack of judgmental support from the encounter may take him aback, confuse him, and momentarily incapacitate him as an interactant. ... The feeling, whether warranted or not, that he is perceived in a flustered state by others, and that he is presenting no usable line, may add further injuries to his feelings. ... I shall employ the term poise to refer to the capacity to suppress and conceal any tendency to become shamefaced during encounters with others. (Goffman, 1967, pp. 6-9).
INTRODUCTION

A fundamental basis for psychopathology, according to several psychological theorists, is a discrepancy between a person's self-concept and the way he actually is (Berne, 1961; Glasser, 1960, 1965; Harris, 1967; Rogers, 1951). In recent years, videotape playback has been used increasingly in clinical situations in the belief that it increases self-awareness and allows the client to see himself as others see him. Self-confrontation via videotape can offer the opportunity for self-observation, without the distortion and interpretation inevitably involved in social feedback; it tends to be perceived as a more neutral source of information, and one which cannot be as easily denied (Stoller, 1972).

Much of the evidence presented in this thesis indicates that videotape self-confrontation may be a potent therapeutic tool. However, several practitioners have found detrimental effects for some clients, and warn against possible negative consequences (Stoller, 1972). Berger (1972) advises caution in the use of videotape self-confrontation with patients who are suicidal, or "whose self-hate is narcissistically or
realistically based on their body image" (p. 258). Stoller (1972) stresses the importance of timing, saying that video feedback is most useful if introduced when the client is capable of "reflexive role playing," of being both subjective and objective, and of evaluating himself as others do (p. 248). Issues revolve around the content, length, manner of interpretation, and immediacy of feedback. In view of the possible harmful effects of video feedback, it is unfortunate that at present it is being employed by many therapists in a trial and error fashion.

This thesis reviews three possible theoretical bases for using videotape self-confrontation, summarizes and evaluates related experimental literature, offers suggestions for standardizing future studies, and reports the results of original research performed by this author.

The purpose of this study of telemediated self-confrontation was to investigate whether: (1) separation of channels of feedback, (2) time of presentation of feedback, or (3) concern with fear of negative evaluation and giving socially desirable test responses would have differential impact on self-perception as measured by responses on equivalent forms of a semantic differential.

It is hoped that the results of this research will help to improve therapeutic video-feedback technology.
Self-Confrontation

Self-confrontation, a term introduced by Nielsen (1964), involves internally- or externally-mediated feedback to oneself, which is ideally the subject's objective, true reaction to a previous action (Moore, 1972). In self-confrontation, the patient must be capable of "reflexive role playing," or being able to picture himself as an object of evaluation by another person (Berger, 1972; Nielsen, 1964; Stoller, 1972). He must be capable of being, to some extent, both therapist and client. Thus, he must view the self-confrontation experience as an impetus for therapeutic change.

It is possible that more inclusive and complete types of feedback may offer more opportunity for therapeutic change. This may be one of the advantages of videotape mediated feedback. Another advantage may be the fact that it is as clear and concrete as possible, unlike social feedback, which tends to be tinged by the personality of its originator. Stoller (1972) stated that video feedback cannot be easily defended against, and tends to be perceived as a more neutral source of information than social feedback.

The self-confrontation experience, as opposed to mere self-observation, must, as defined in this thesis, consist of self-evaluation and change. Various therapists have indicated that a client must have progressed to a certain point in therapy before he is capable of self-evaluation (Berger,
1972; Stoller, 1972). Other issues concern the content, length, manner of interpretation, and immediacy of feedback. Some practitioners recommend teaching the client to use the feedback in a self-confrontive manner (Stoller, 1972). If self-confrontation is employed with an unprepared client, it is possible that his defenses might be strengthened. Thus, there is a need for theoretical guidelines for practitioners to follow in utilizing self-confrontation for therapeutic purposes.

Theories of Self-Confrontation

Different theories contribute different, and yet similar, ways of viewing a unitary event, such as a person's reaction to hearing and seeing himself on videotape. Re­semblances between theories are often apparent--similar con­cepts with diverse labels. For instance, psychoanalysis postulates the existence of super-ego, ego and id in each of us; while transactional analysis conceptualizes Parent, Adult, and Child. But each theorist is also an individual, and helps us to learn something new about the infinite possibilities for human nature. Dissimilar value systems underlie various theories. The "Rogerian" would not think of trying to direct the self-actualizing tendencies of another human being; but the transactional analyst is much more directive. Theories also differ as to postulated
etiology of pathology, who should be in control, and what are the stated goals of therapy.

Several authors claim to have observed a certain progression in the reaction of some subjects (Ss) to audio and/or video self-confrontation experiences (Berger, 1972; Holzman, 1971; Holzman & Rousey, 1966; Holzman, Rousey, & Snyder, 1966; Stoller, 1972). Initially, Ss are described as being self-critical, then as undergoing self-image restoration, and finally, if they are not too overwhelmed with self-hate, they may begin to note and comment on some favorable aspects of themselves, which is, according to Berger (1972), a favorable prognostic sign (p. 258). This reaction sequence, one of several possibilities, will be stated in the terms of each of the three theories below. Then, the similarities between the theories will be delineated, as they apply to the self-confrontation experience.

Self-confrontation and client-centered theory.

The basic theory of client-centered therapy is: If the conditions of congruence, positive regard, and empathic understanding are present in the person labeled "therapist" in a relationship, then growth will occur in the "client" (Meador & Rogers, 1973). Rogerians postulate one motivational force in man, the tendency towards self-actualization. This force is often thwarted by significant others in the infant's life, who impose "conditions of worth" on him.
These "conditions of worth" tell him that he is lovable and worthwhile only when he follows their dictates. The child incorporates some of these conditions into his self-concept. Then, according to Rogers, "he values an experience positively or negatively solely because of these conditions of worth which he has taken over from others, not because the experience enhances or fails to enhance his organism" (1959[b], p. 209). A troubled individual is one "whose self-concept [has] become structured in ways incongruent with his organismic experience" (Rogers, 1959[a], p. 192).

Part of client-centered methodology involves making explicit the organismic experience of the client, which is comprised of his experience on various levels, from physiological to psychological, both verbal and nonverbal. If the conditions of therapy described above are present, "then the client gradually allows his self-actualizing capacity to overcome the restrictions he has internalized in the conditions of worth" (Meador & Rogers, 1973, p. 126).

Emphasis is on client, therapist, and the relationship between them. A series of studies by Barrett-Lennard (1959, 1962, cited in Meador & Rogers, 1973) revealed that clients who perceived more of the attitudes of congruence, accurate empathy and positive regard in their therapists showed more positive growth in therapy than a control group.

Videotape replay could possibly contribute to therapeutic success by helping both client and therapist to
become more aware of their organismic experiences, which are often signaled nonverbally, of each other, and of their relationship. If congruence, accurate empathy, and positive regard exist on the part of the therapist, it seems that this would become more apparent, and this could help the client to achieve further growth. Video replay is also non-judgmental, in that it is not selectively biased in what it attends to, as are the therapist and client.

Recorded and filmed interviews have been utilized in evaluation of the therapeutic process continuum which Rogers (1959[c]) said exists in therapy, and which he developed a rating scale to measure. This continuum extends from "rigidity and fixity of psychological function on the one hand to psychological flow and changingness on the other" (p. 96).

Taped interviews have been part of the research strategy used by client-centered therapists in assessing the client's progress on the therapeutic process continuum. However, self-confrontation has not been advocated as a possible means of augmenting therapeutic success, although it seems a direct extension of client-centered theory. Thus, it could potentially help to increase client-therapist understanding—to make each more aware of his own organismic experiences and of their relationship.

Client-centered explanation of one possible reaction sequence following videotape self-confrontation. If an
initial self-critical reaction occurred following self-confrontation, the client-centered theorist might view it as happening when the client felt that he had not lived up to the "conditions of worth" which admonished him to reveal only certain aspects of himself. When he viewed the tape, he might have seen characteristics of which significant others in his life would have disapproved. If expressed self-image restoration was the next step, it might have been either the result of giving in to conditions of worth which said that he should not reveal weaknesses; or else it might have occurred because the person had become more aware of himself, and enjoyed the reduction of uncertainty which took place, the feeling of "rightness" which accompanied increased self-knowledge, or some other positive aspect of the experience. The client might have tentatively commented upon positive self-attributes; and if the therapist was accepting of these, the third step in the reaction sequence had taken place.

Self-confrontation and transactional analysis.

In contrast to the non-directive approach of client-centered therapy is transactional analysis, which is more directive.

Transactional analysis (TA) is a rationalistic-actionistic approach to psychotherapy, originated by Eric Berne (1957), and carried on by Thomas A. Harris (1967),
among others. It assumes that man can select how he wants to be, and can change to become that way.

Berne first used the concept of "structural analysis" in his initial exposition of his viewpoint in "Ego States of Parent, Child, and Adult" (1957). He defined "structural analysis" as a process by means of which ego states were identified and clarified in a person. Ego states were defined as a "coherent system of feelings with its related set of behavior patterns" (1963, p. 241). Berne recommended that psychoanalysis be used for those forms of psychopathology for which it was designed, the transference neuroses; and that transactional analysis be used to fill in where psychoanalysis is too limited.

Berne alleged that the unconscious has largely disappeared from the theory of TA (Holland, 1973). However, he stated that psychopathology results from "anomalies of psychic structure," which include "exclusion" and "contamination." "Exclusion" involves the denial of entire ego states from direct and acknowledged expression in behavior and feelings. "Contamination" involves the intrusion of one ego state into another, without the client's awareness (1961, p. 44).

Videotape self-confrontation appears to possess great potential as a tool for remediation of the essentially unconscious pathological processes described above. It could
well augment and speed recognition and strengthening of excluded ego states; as well as aid in clarifying and energizing contaminated boundaries among ego states.

TA therapy sets the stage for a reappraisal of the reality-based alternatives which are available to the client; and an awareness of the possibility of altering earlier decisions once the options have been identified. It seems to this author that role-playing with video replay would be one means of logically implementing the above. The client would be given an opportunity to practice the options, and to see their effect upon himself and upon others. The repeated use of such techniques could probably help to reveal and strengthen excluded ego states, as well as energize contaminated boundaries among ego states.

Transactional analysis explanation of one possible reaction sequence following videotape self-confrontation. The first, self-critical response might have occurred because the person's "Not-OK" child was cathectected. For example, she might have said, "Oh no, that's not me! Shut it off!" If self-image restoration took place, it could have been because the Parent was cathectected, in attempting to protect the Child and transmitted an injunction like, "Don't make yourself vulnerable by admitting weakness, or that you may dislike something about yourself." Therefore say, "I was mistaken in my momentary discomfort. Now I realize how good my
voice sounds!" Then the Child would add, "I really like myself!" Or self-image restoration could have happened because the realistic Adult was cathected, "That doesn't sound bad! It's just different from what I usually hear!"

If the person progressed to finding positive aspects about himself, the Adult was probably in control.

**Self-confrontation and psychoanalytic theory**

Transactional analysis is deterministic-optimistic and present- and future-oriented; whereas psychoanalysis is deterministic-pessimistic and more past-oriented.

Psychopathology is postulated by psychoanalytic theory to be due to faulty maturation. Therapy attempts to remove unconscious blocks to maturity through corrected understanding, or insight. The goal is to increase conscious control over behavior. Various largely unconscious processes such as resistance and transference occur in therapy.

Free association and interpretation, the traditional techniques usually employed to increase cognitive control and improve reality testing are handicapped to some degree by the influence of unconscious identifications with evaluating others, including the therapist.

Kubie (1969) suggested the following possible solution to the above dilemma.

Perhaps if one could have had an opportunity to perceive one's moving, talking image on a TV screen . . . and to link this image to
the sound of one's own private and solitary ruminations and free associations, such a combination might have made the controlling identifications . . . impossible to bury or deny or distort (p. 306).

It is hoped that psychological insight and maturity will follow this revelation of the unconscious.

Studies specifically relating to aspects of Freudian theory, such as free associations, dream content, defensive reactions, affect, and psychophysiological responses, have been conducted under conditions of self-confrontation (Castaldo & Holzman, 1969; Holzman, 1971; Holzman, Berger, & Rousey, 1967; Holzman & Rousey, 1966; Holzman, Rousey, & Snyder, 1966).

Berger (1972, p. 304) utilized with his patients multi-image immediate impact video self-confrontation in which some of the images have been distorted. He found that seeing the distorted images alongside the clear image serves to elicit free associations about past or present self-concepts and introjections, which may then lead to significant clarification and insight into the self in the here and now (p. 304).

Nielsen (1964) found similar results with normal Ss and an undistorted television image. Both authors recommend that this technique be used as an adjunct to essentially psychoanalytic psychotherapy, in appropriate contexts.

The evidence for the usefulness of self-confrontation in psychoanalytically oriented therapy has been based on experience, such as that of Nielsen and Berger, and has not
yet been investigated empirically. They stated that therapeutic experience suggested that videotape replay could help to free the individual from the control of rigid, unconscious drives, such as distorted transferences and identifications; and could aid him in improving cognitive control of his behavior and reality-testing abilities.

A psychoanalytic explanation of one possible reaction sequence following videotape self-confrontation. Holzman's (1971; Holzman, Berger, et al., 1967; Holzman & Rousey, 1966; Holzman, Rousey, et al., 1966) studies were interpreted somewhat psychoanalytically. He found that Ss experienced an affective disturbance initially upon hearing their voices, followed by re-accommodation. The initial disturbance involved (a) awareness of the difference between Ss expectations as to how their voices would sound and how they actually sounded, (b) attention focused on vocal qualities rather than "lexical or personological qualities," and (c) a defensive negation of the confrontation experience.

Holzman & Rousey (1966) maintained that these results suggested the activity of a monitoring function that edited vocal expression (p. 79). They believed that when confrontation occurred, the client was aware of incompletely edited aspects of himself. The authors termed this the "return of the repressed." Following this was a defensive negation of the self-criticism, discomfort, and conflict just undergone,
as the S noted positive aspects of the experience (p. 81).

In summary, videotape self-confrontation can be used in psychotherapy by a therapist with any theoretical orientation which acknowledges the existence of nonverbal aspects of personalities and relationships, which are not automatically available to awareness. This would include emotion, behavior, and thoughts communicated through multiple levels and multiple channels in human relationships.

The theories and limited research discussed thus far offer some ideas and evidence as to what may be some of the guidelines for the use of videotape self-confrontation. It seems that externally-mediated feedback can be used to increase the client's awareness of essentially unconscious behaviors and attitudes. Possible results of this increased awareness are desirable behavior and attitude change. As scientific knowledge of self-confrontation increases, the trend will probably be towards a unified, systematic theory and guidelines for its use.

A review of the experimental literature relating to self-confrontation will help to define what the appropriate theory and guidelines for its utilization could be. Research will be presented and evaluated which is relevant to (1) self-confrontation, and (2) specific areas which were covered in this thesis, such as separation of channels, self-perception, sex differences, and progressive administrations of semantic differentials.
Research on Externally-Mediated Feedback

This section will present a review of the literature concerning externally-mediated feedback, with particular emphasis being placed upon videotape playback and self-confrontation. The scientific research on externally-mediated feedback is plagued with methodological inadequacies, incomplete reporting of the variables used and the relationship between variables, and a lack of continuity between studies in the definition of such concepts as self-esteem, self-confrontation, nonverbal communication, paralanguage, etc. These problems make interstudy comparison most difficult. The present thesis can only offer the general content of the studies, their results, and a few of the technical difficulties with them. In general, the research possessed certain faults in common, which will be discussed, along with suggestions for improving future inquiries.

Use of Telemediated Self-Confrontation with Various Clinical Populations

The use of videotape playback with certain clinical groups has sometimes been effective, sometimes ineffective, and sometimes even harmful. Often the results observed have been of questionable value, without utilizing the client-clinician discussion of the behavior viewed and its relevance for the problem at hand, which several studies have demon-
strated to be important (Cooper & Thompson, 1971; Eisler, Hersen & Agras, 1973; Seitz, 1971).

Investigations have shown that using videotape playback and focused instructions increased such target behaviors as nonverbal interactions, looking and smiling (Eisler, Hersen & Agras, 1973). Similarly, self-awareness has been extended in both stutterers (Cooper & Thompson, 1971) and neurotic depressed patients (Seitz, 1971). The effects of self-confrontation were often not consistent for different Ss. This calls for skill in the application of these techniques, in order to avoid precipitating negative results.

Berger (1973) presented case reports and accompanying discussion pertaining to the use of multi-image immediate impact video self-confrontation with patients diagnosed as "character disorder." In the future, his observations and interpretations should be proven empirically. In general, he found that viewing distorted images alongside a clear image produced free-associations about past and present self-concepts and introjects, which "can lead to catharsis, insight, and the surrender of psychosocial self-images or emotional fixations that retard growth and maturation" (p. 306). He recommended video playback as an adjunct to therapy, not a replacement for it. The only one of his patients who did not react to seeing herself was a depressive one, with lifelong suicidal tendencies. In another article, Berger
(1972) warned that caution must be used in utilizing this approach with "suicidal patients or those whose self-hate is narcissistically or realistically based on their body-image" (p. 258).

Several samples have exhibited either no response or a negative reaction to videotape self-confrontation. In studies with alcoholics, where the experimental group received video feedback, there was a large attrition rate, with few successes—seven out of twenty-four in a study by David (1972). Schaefer, Sobell, and Sobell (1972) found no significant differences in social functioning or drinking behavior for the experimental Ss; but a trend toward a higher degree of drunkenness and the use of therapeutic aids, such as Alcoholics Anonymous.

So far, the psychiatric groups upon which video playback seems to have an undesirable influence are those who are depressed, suicidal, and alcoholics. Alcoholics and depressed persons may well fit into Berger's category of those whose self-hate is based upon body-image. These patients could have low self-esteem, feeling that no one cares for them and that they can have no real effect upon the world. Audio-visual playback might augment their feelings of low self-esteem, ineffectualness, dependency and/or futility.
Several practitioners point to the importance of training in nonverbal skills for the aspiring therapist (Berger, 1972). Haase and Tepper (1972) found that nonverbal components accounted for twice the variability accounted for by verbal components in the communication of empathy. In an experiment by Strong, Taylor, Bratton, and Loper (1971), high frequencies of nonverbal movements led to more positive descriptions of interviewers by interviewees; while low frequencies yielded descriptions as cold, aloof, and analytic. This points out the importance of the nonverbal in the training of psychotherapists. Over time, such instruction also tends to increase the self-confidence of the therapist.

Berger said that by watching himself the therapist can learn to become more authentic, to project the image he wants to, and to become more aware of the "reciprocal regulating patterns" which exist between client and therapist (p. 279).

The Structure of Telemediated Feedback in Therapeutic Situations

Various experienced practitioners and investigators have contributed ideas as to how self-confrontation can best be structured in order to achieve the most therapeutic effects. Most of their suggestions are gleaned from exper-
ience, but not systematically studied, so some bias enters into the reporting. An almost universal recommendation is that verbal and nonverbal aspects must be integrated; and that some sort of potentially informative discussion should accompany and structure the playback experience.

Stoller (1972) offered specific suggestions which are quite helpful:

1. The equipment presents less of a threat if it is clearly visible.
2. The effectiveness of self-viewing of videotape "depends on the relevance of the data presented to what has transpired between the self-viewer and the other group members" [or therapist].
3. Videotape feedback has its greatest meaning for the individual when, because of extensive group struggle, he has clear-cut, emotionally heightened awareness of the consequences of his behavior.
4. The closer the videotape feedback to the behavior that is relevant, the more helpful it will be (p. 252).

In an interesting study, Storms (1972) found that differences in actors' and observers' visual orientation toward an event may account for attributional differences. Actors attribute their behavior more to the situation involved; whereas observers attribute the actor's behavior more to inner disposition. He had actors and observers imagine switching roles as they viewed a videotape, and found that they tended to reverse their attributions.

This study has relevance for how to interpret replay to patients so that they will place responsibility on
themselves, if, as is usually the case, this is the goal of therapy for them. Observing themselves on videotape may be an even better means than role-playing of getting them to assume the "observer role." And while they are watching themselves, the therapist can strengthen the idea that the "actor" they are watching is behaving in the way he is due to "inner disposition," thus having responsibility for his own behavior.

**Effects of Telemediated Self-Confrontation on Self-Perception and Self-Concept**

Berger (1973) claimed that by utilizing multi-image immediate video self-confrontation with his patients, he had elicited free associations related to self-concept, and had been able to bring about significant clarification and insight into the self in the present.

Sanford (1969) used programmed exposures to selective playback of one's own acoustic behavior, which he claimed reflected back to the patient ignored characteristics of his "mental mechanisms and resultant behavior." He said that this approach "appeared to be effective in enhancing a realistic self-perception with remarkable speed" (p. 695).

The quality of communication which exists in psychotherapy has tremendous impact on what achievements are able to be realized. Videotape self-confrontation seems to be a
potentially very valuable vehicle for improving therapeutic communication and self-awareness.

Research on Paralanguage

Another area of confrontation research is that of paralanguage. Investigators have disagreed as to the exact definition of "paralanguage." Usually, it has included innate and learned nonverbal properties of the voice, such as timbre, inflection, and stress (Kramer, 1963). Abercrombie (1968) included all culturally determined nonverbal communication which is part of conversational interaction, encompassing even posture in his definition. The present thesis limited its definition to nonverbal characteristics of one's voice. Research has shown that paralinguistic expression is sufficient to convey emotions (Scherer, 1972), as well as indexical information about the person, such as place of longest residence, social class, etc. (Laver, 1968).

Ostwald (1963) found that not only a person's changing emotional state, but also stable personality characteristics, could be judged from nonverbal properties of the voice. However he recognized that his criteria for the classification of emotions were poorly defined. In a review of the literature, Kramer (1963) pointed out results similar to Ostwald's. He admitted that no method of eliminating verbal content had been wholly successful, but evidence demonstrated
that some validity of judgment was possible. Unfortunately, acoustic analysis has been a little-used investigative technique. Particularly neglected areas of research which deserve more attention are individual differences among listeners and the relationship of the voice to psychopathology.

Separation of Channels of Feedback

The present thesis investigated the strength and direction of Ss reactions to feedback as measured by ratings on a semantic differential of what they saw and/or heard. Thus, prior research on separation of channels was relevant to this paper, particularly that relating to the direction and strength of response to the various channels as assessed by measures similar to those used in this study.

Daily we verbally transmit a tremendous amount of impersonal factual information. The above evidence suggests that emotions can be signaled via paralanguage. Haase and Tepper (1972) found that nonverbal cues accounted for twice as much variability as verbal cues in the communication of empathy; yet, paralanguage was included in their verbal category. Their evidence for the importance of the nonverbal in communicating empathy would have been strengthened if paralanguage had been placed in their nonverbal category.

Research on the effects of different channels of communication has been ambiguous. Studies have shown that the
visual channel, which is most importantly facial cues, is the most effective in communicating emotions, and the primary mode from which feelings are judged (Burns & Beier, 1973). The channels which Burns and Beier found to be most significant for communicating affect were, in decreasing order of influence: audio-visual, filtered audio-visual (frequencies above 550 cps filtered out), visual, audio, and filtered-audio. In their study there was a lack of correlation between judgments of the audio and visual channels, suggesting that the information conveyed was relatively independent. Also, "interactions across various mood states suggest that channels differ with regard to the amount of information they convey in various mood states" (p. 122). One problem with Burns and Beier's study is that the emotions communicated were acted out, as opposed to occurring naturally in a social situation.

In an examination of the responses of forty psychiatric in-patients, with various diagnoses (thirty female and ten male), Geertsma and Reivich (1965) reported that self-relevant information delivered via the auditory channel produced more cognitive and affective changes than visually channeled information. Their measures of change were the Multiple Affect Adjective Check List (MAACL), and fourteen bipolar personality items collated by Cattell (cited in Geertsma & Reivich, 1965). Their Ss reported changes in
the direction of discomfort reduction and positive self-
depiction, which they suggested implied a defensive reac-
tion to the experience.

Such a reaction may be associated with those personality operations causing people to favor socially desirable de-
scriptions of themselves on personality inventories (p. 220).

The type of defensiveness which Geertsma and Reivich speculated may be affecting the direction of response in their research was one of the measures utilized in this thesis by including the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) and the Fear of Negative Evaluation Scale (Watson & Friend, 1969).

Finally, Geertsma and Reivich found that items which received their impact primarily from the video channel involved feelings of increased responsible self-control.

Moore (1972) discovered that video feedback produced significantly larger change variances than other modes of feedback, in self-objectivity and self-esteem, as assessed by the Miskimins Self-Goal-Other Discrepancy Scale (Miskimins, 1967, 1968, cited in Moore, 1972). He hypothesized that this is because the video stimulus is more novel, saying that it is possible that the more unfamiliar stimulus might con-
tribute more to increased Self-Objectivity, cause a larger variation in changes of self-concept, and receive smaller identi-
fication ratings (p. v).
Moore assessed identification with feedback on a semantic differential with such items as "close-distant," "real-unreal." He found that Ss tended to identify most with audio feedback, then with audio-visual, and least with video. His research revealed sex differences in the effect of these stimuli on self-objectivity and self-esteem. "Males who identified closely with their feedback did not tend to become more self-objective [on the Miskimins Self-Goal-Other Discrepancy Scale], while males who did not identify closely with their feedback tended to become more self-objective" (p. 114). The differences in these groups were statistically significant.

On the other hand, the female trend ($r = .31; p = .10$) revealed a tendency for females who identified more with their feedback to gain more in terms of self-objectivity (p. 114).

Moore suggested that the difference between the sexes could result from conditioning in stereotypic sex roles, in which females were taught to identify more with external stimuli than were males. This area needs further research. A problem with this research is that the Identification with Feedback Scale was constructed by Moore for his study, and the reliability and validity of this measure have not been tested, nor has its appropriateness with regard to the concept measured.
It seems that the measures utilized in the present thesis involved ratings of the more peripheral concept of "what one saw and/or heard," which probably tapped the factors involved in identification with feedback more than those which contribute to deeper levels of self-concept. This led to the following tentative sub-hypotheses.

(i) Different channels will have "different impact" in that Semantic Differential II (a rating of what one saw and/or heard after five seconds of playback) will differ significantly from Semantic Differential I (a pre-measure of the same percept) in the following order: audio, audio-visual, visual, and filtered-audio.

(ii) Video feedback will produce shifts in semantic differential ratings in a more positive direction than the other channels (e.g., towards "good" as opposed to "bad" on the Evaluation factor) immediately following confrontation (i.e., on Semantic Differential II as compared with Semantic Differential I).

Osgood's Semantic Differential

Osgood, Suci, and Tannenbaum (1957) originated the semantic differential, which was the primary measure of subject response used in the present research. This measurement tool consists of pairs of bipolar adjectives on which the S is to rate various concepts which may be presented to him. For example, in this thesis some of the Ss were asked to rate how they felt their voice sounded on a semantic differential which
included the following bipolar items, among others:

GOOD : __:___:___:___:___:___:BAD (Evaluation factor)
FREE : __:___:___:___:___:___:CONSTRAINED (Activity factor)
STRONG: ___:___:___:___:___:__:WEAK (Potency factor)

The positive pole in the above examples, and in other pairs of adjectives presented will be the first one listed.

Osgood and his associates have performed research with the semantic differential, and have carried out orthogonal factor analyses on the ratings given. They presented results which showed largest factor loadings on three factors, in the following order of size and stability: Evaluation, Potency, and Activity (1957, pp. 36-38).

Osgood stated that the three factors mentioned above define themselves according to which adjective pairs they load highest on. The first factor was labeled "Evaluative," some of the scales with highest loadings (.75 or better) were: good-bad, beautiful-ugly, sweet-sour, and clean-dirty.

Osgood described the second factor as "Potency" and adjectives loading on it almost exclusively were: large-small (.62), strong-weak (.62), heavy-light (.62), and thick-thin (.44). The following scales were mainly Potency, but reflected considerable Evaluative meaning as well: hard-soft (P = .55, E = -.48), loud-soft (P = .44, E = -.39), deep-shallow (P = .46, E = .27), etc. In general loadings
on the Evaluative factor were higher than those for Potency even where "pure" scales, or those loading solely on one factor, were involved.

The third factor was labeled "Activity" by Osgood, and also had some relation to physical sharpness or abruptness. Scales loading highest on Activity were: fast-slow (.70), active-passive (.59), hot-cold (.46), sharp-dull (.52), and angular-rounded (.43).

Osgood noted the tendency for both Activity and Potency to be associated with positive evaluation (e.g., good, strong, and active tended to go together, as opposed to good, weak, and passive). He stated that this trend may be due to cultural semantic bias (p. 38).

Osgood concluded, "We can say that there appear to be independent factors operating, even though it is difficult to find many specific scales which are orthogonal with respect to evaluation" (p. 38).

Self-Concept and Self-Perception

In this thesis Ss rated what they saw and/or heard on equivalent forms of a semantic differential (see appendix 1). This was probably a measurement of self-perception as opposed to the more inclusive, deeper idea of self-concept.

There is little interstudy consistency about the definition of "self-concept" or "self-esteem." Also, the validity
and reliability of the measures used have often not been established.

Jacobson (1972) found that brief videotape self-confrontation with male undergraduates augmented positive affect, diminished negative affect, and reduced anxiety. He hypothesized that decreased anxiety occurred because confrontation offered uncertainty reducing feedback, "allaying negative fantasies about oneself, and providing a sense of pleasure at increased self-awareness" (p. vi).


Moore (1972) presented a discussion of several experimental results which are relevant to the present thesis. One measure of self-concept utilized by him was Three Equivalent Forms of a Semantic Differential Inventory based on those used by Holzman et al. (Coyne & Holzman, 1966; Holzman & Rousey, 1966; Rousey & Holzman, 1968). However, Moore had Ss rate "myself" instead of "my voice," as the original authors had done. He restandardized this measure on a college population, using his concept of "myself." His semantic differentials were to be subject to momentary changes in self-concept, and were designed to assess "attitudinal impact." During standardization of the
measure as newly formulated, Moore found that the Evaluation and Potency factors of the previous research did not maintain equivalence with his new population on his different forms. Instead, his semantic differentials were measuring variations in the Activity factor.

Moore's semantic differentials failed to register differences in "image impact" for any of the treatments or interactions. He admitted that it is possible that the "attitudinal impact" recorded in the literature did not occur in his study; or that his inventory did not assess the same phenomenon described by Holzman et al., which involved ratings of "my voice." The latter possibility seems feasible, since the concept of "my voice" is less inclusive and more peripheral than that of "myself."

Another important consideration is that the "impact" measured by Holzman et al. resulted from a seven-second audio stimulus, and Ss returned to baseline within five minutes. However, Moore pointed out that his presentation of feedback tape lasted for five minutes, and "that the Activity-Passivity scale measures [could have] come and gone during the time period between test administrations" (p. 110). The above findings suggested that Holzman et al.'s techniques and findings were more applicable to the present study, which assessed the concept of "what you saw and/or heard," and also presented feedback for both five seconds and five minutes.
Because video feedback had greatest impact on self-concept and perceived responses of others on the Miskimins Self-Goal-Other Discrepancy Scale, Moore suggested that the different channels may have differential "impact," and that these separate possibilities should be more clearly operationalized and assessed (p. 110). This is precisely what this thesis attempted to do.

One of the subscales of the Miskimins Self-Goal-Other Discrepancy Scale measures self-disclosure. Moore stated that his correlations suggested that persons who rated themselves as more active on the semantic differential scale rated themselves as possessing more self-esteem, as being less self-disclosing, less realistic, less self-objective, and therefore probably more defensive on the Miskimins Self-Goal-Other Discrepancy Scale (p. 112). It appears that high active Ss may have artificially inflated the report of their self-esteem.

Of course, the above speculations about "defensiveness" need to be verified empirically. Also, results need to be compared for the two sexes, because they could well rate themselves differently with regard to self-disclosure and activity. The evidence so far presents interesting possibilities.

In a finding consistent with Moore's results, Lamberd, Adamson, and Burdick (1972) reported that, after viewing themselves performing therapy, male student psychotherapists
rated themselves on a semantic differential as being better, less active, and colder. We can speculate that if, as Moore hypothesizes, self-ratings of more activity are associated with less self-disclosure and less self-objectivity, then the above findings offer hope that videotape self-confrontation can help to make student therapists more self-disclosing and self-objective in their views of themselves. On the other hand, reported self-esteem with the present group of Ss increased. Could this mean they became more defensive about rating themselves on such items as "Very good therapist- Very poor therapist" in the present situation? This seems like a fairly reasonable possibility under the circumstances.

Some studies (Blount & Pedersen, 1970; Moore, 1972) revealed a tendency for Ss to see others as perceiving them more negatively following videotape self-confrontation. These studies used measures and concepts which were only similar in some ways to those utilized in the present research, but they led to the first hypothesis.

1. Following the self-confrontation experience, Ss will rate how they feel others would perceive what they saw and/or heard (Semantic Differential IV) more negatively than their own rating of voice and/or visual-image prior to playback (Semantic Differential I).

These same studies usually disclosed at least a trend towards reporting that perception of one's "real" private self was more favorable following confrontation. One pos-
sibility is that Ss saw themselves more negatively, but defended against this feeling by projecting it onto others "out-there," and claiming a more positive self-image.

### Differential Sensitivity and Reaction to Nonverbal Stimuli

Certain groups have been found to be more aware of nonverbal communication than others; and/or to exhibit a more intense reaction to confrontation with nonverbal aspects of their own behavior, or that of other people.

Previously (pp. 16ff) we noted that audio-visual feedback can add to the already low self-concept and sense of futility which plague the lives of suicidal, depressed patients, alcoholics, and others whose dislike for themselves is based on body-image. These clients could be abnormally conscious of and susceptible to the impact of sight and sound.

Rosenthal (1974) has developed an 11-channel test, the Profile of Nonverbal Sensitivity (PONS), which measures one's ability to understand tones of voice and movements of the face and body. He had an actress (or actor) perform the various emotions which were to be communicated. A problem with this and many other studies in this area is that the portrayals were not authentic, and must of necessity involve a certain degree of stereotypy in the manner of performance.
Rosenthal found that females were better than males at deciphering nonverbal cues. However, another noteworthy result was that this difference between the sexes narrowed, and sometimes even reversed itself, among members of, or trainees for, occupations which are considered to require "nurturant, artistic, or expressive behavior" (p. 66). These professions include actors, artists, interior and industrial designers, psychiatrists, clinical psychologists and the staff of mental hospitals, college students in visual studies courses, and school teachers. The author states that he is unsure at present whether the convergence of nonverbally sensitive people in these occupations results from self-selection, screening, or training. Another result was that nonverbal sensitivity increased up until college age.

Nonverbal sensitivity may occur in most of the professions listed because it allows people to become closer to one another, and to mean more to each other. It may well facilitate interpersonal awareness and expression. One of Rosenthal et al.'s other findings was that people who are more perceptive of nonverbal cues have fewer, but more intimate friendships.

Various studies (Rothstein & Epstein, 1963; Wolff, 1943) have found that women react excessively favorably or unfavorably to playback of their voices. Holzman and Rousey
(1966) discovered an initial negative reaction, followed by hypothesized denial and return to the baseline level, which was more positive, among middle-class housewife Ss. If women are more sensitive to nonverbal behavior, they may be more likely to react in a quantitatively more extreme manner to it.

In line with Holzman and Rousey's (1966) findings, it appears that women may be more likely than men to react negatively following self-confrontation, or at least to admit this negative feeling. Several studies with male Ss (Jacobson, 1972; Lamberd et al., 1972) discovered that they rated themselves as "better," and experienced reported euphoria following self-confrontation.

Another possible explanation for these results is that the socially appropriate way for a woman to respond is by admitting negative feelings about herself, and for a man it is by reporting positive self-perceptions. Men could be claiming more positive feelings and self-perceptions as a defensive maneuver, as when Moore (1973) found increased reported self-esteem associated with decreased self-objectivity and self-disclosure.

The outcomes reported above led to the following hypothesis, and contributed to other hypotheses to follow.

2. Women will respond (a) more negatively and (b) more extremely than men on Semantic Differential II (a rating of what I saw and/or heard after five
seconds of feedback) as compared with Semantic Differential I (a measure of the same percept prior to feedback).

Fear of Negative Evaluation and the Social Approval Motive

Previously, the emphasis in research about nonverbal communication was on expressive meanings; but presently more emphasis is being placed on mechanisms of social interaction. The experimental situation is an interpersonal one, even if the S is alone in the experimental room. He is aware of other people "out there." The demand characteristics of certain social role expectations may well be maximized in the experimental setting, which is in many ways ambiguous, unfamiliar, and potentially evaluative. It seems that if a S is concerned with fear of negative evaluation and with seeking social approval, that this is one place in which these feelings are likely to be operative. Therefore, the Fear of Negative Evaluation Scale (Watson & Friend, 1969) and the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) were two of the measures used in the present study. These two scales were used as covariates in an attempt to survey two related kinds of defensiveness which may well be influencing behavior in the experimental situation following self-confrontation.

The Fear of Negative Evaluation Scale was developed by
Watson and Friend (1969) to measure a personality trait which involves apprehension about others' evaluations, avoidance of evaluative situations, distress over others' negative evaluations, and the expectation that others will evaluate oneself negatively. The relationship of this scale with social desirability has been minimized. Subjects who score high on the Fear of Negative Evaluation Scale tend to misperceive many situations as being evaluative, and are predisposed to worry about the kind of impression they may be making on others. (See appendix 2.)

The Marlowe-Crowne Social Desirability Scale was developed by Marlowe and Crowne (1964) to measure a response set to test items, which is characterized by trying to answer in the manner which will receive the most societal approval. (See appendix 3.) The reliability and validity of this scale are well established and it has stimulated much research.

Holzman's Studies of Reactions to Voice Recognition

Holzman has been one of the primary investigators in some studies of S's reactions to voice recognition, which are among the few systematic investigations in the area of externally-mediated feedback (Castaldo & Holzman, 1969; Holzman, 1971; Holzman, Berger, et al., 1967; Holzman &
Rousey, 1966; Holzman, Rousey, & Snyder, 1966; Rousey & Holzman, 1967, 1968). The study which inspired this thesis was done by Holzman and Rousey (1966), and was subsequently discussed in Psychology Today (1971). The researchers utilized three equivalent forms of a semantic differential, and had the middle-class, female Ss rate "my voice" prior to audio playback, after five seconds of playback, and after five minutes of playback.

Immediately following the audio feedback, Ss experienced an affective disturbance, which consisted of (a) awareness of a discrepancy between how they thought their voices would sound and how they actually sounded, (b) attention focused on superficial vocal qualities, as opposed to "lexical and personological" characteristics, and (c) a defensive negation of the voice confrontation experience.

The writers suggested that a monitoring function may exist, which edits vocal expression. They interpreted this function in an analytic fashion, as follows:

The voice-confrontation experience suggests that when we are given the opportunity to hear ourselves as others do, to regard the voice as a percept rather than as a mediator of expression, we may hear not only the results of the censoring process but what it is that we are attempting to censor. . . . What evades censorship . . . may be regarded as one way in which the repressed returns (p. 85).

Following this initial reaction, Ss defended against the disturbance, and most returned to baseline levels of rating.
The above research led to Hypotheses 3 and 4.

3. Subjects will react in a negative manner initially to the self-confrontation experience (on Semantic Differential II, after five seconds of feedback, as compared with Semantic Differential I, a pre-measure of the same percept).

4. Following their initial negative reactions (Semantic Differential II) subjects will return to baseline levels of rating (i.e., to the level of Semantic Differential I) after five minutes of feedback (on Semantic Differential III).

The items on the semantic differential utilized by Holzman et al. measure Osgood, Suci, and Tannenbaum's (1957) factors of Evaluation, Potency and Activity. Immediately following five seconds of playback, two-thirds of their female Ss shifted their ratings towards the negative pole of the Evaluation factor and towards the passive pole of the Activity factor. However, one-third of the Ss shifted their judgments towards positive evaluation and increased activity. The authors interpreted the negative part of this reaction as an experience of discrepancy and consequent disruption.

Rousey and Holzman (1967) performed an experiment which revealed that the frequency of hearing one's voice produced a marked increase in the recognition of it. Because of this finding, the present thesis limited confrontation experience to three hours within the last year, and none within the last two months.
Rousey and Holzman (1968) reported that women experienced a consistent and reliable "disruption and discrepancy effect" no matter what the degree of voice distortion on the audio-tape. Results for men were unreliable. They asserted that this "attitudinal impact" was probably due to physical and psychological differences between the recorded voice and the voice one heard when one spoke.

The present study utilized techniques similar to Holzman's, examining the concepts of "what you saw and/or heard," whichever was consistent with the mode of feedback employed with that subject.

Men have exhibited behavior which differed from that of women in some studies (Jacobson, 1972; Lamberd et al., 1972), reporting feelings of euphoria, and rating themselves as "better" following self-confrontation. One possible explanation for this dissimilarity could be that this behavior results from defensive maneuvers which occur because men in our culture are not supposed to admit feelings of inadequacy, decreased self-confidence, or increased passivity. The most socially appropriate way for men to respond may well be towards the Active-Positive pole. Contrarily, the most appropriate direction of response for women is very likely to be towards the Passive-Negative pole.

The present thesis investigated this phenomenon to some extent by using measures of social desirability and of fear
of negative evaluation. It was thought that such measures would probably be more useful in making behavioral predic­tions than would mere sex differences, which were also examined.

The above findings and speculations led to the follow­ing sub-hypotheses:

(iii). Women will report greater fear of negative evaluation and concern about achieving social approval than men, which will be associated with (a) a more negative and (b) a more extreme reaction to the self-confrontation experience (i.e., on Semantic Differential II after five seconds of feed­back as compared with Semantic Differential I, a pre-measure of perception of voice, visual-image, or voice and visual-image combined). This initial response will be followed by return to baseline levels of rating on Semantic Differential III, which will be given after five minutes of playback.

(iv). Fear of negative evaluation and concern with achieving social approval will possess more predictive power than mere sex differences. These personality characteristics will be associated with an immediate negative reaction following playback (on Semantic Differential II as compared with Semantic Differential I), and with subsequent return to baseline levels of rating on Semantic Differential III (after five minutes of playback).

Research Standards for This
and Future Studies

Systematic studies are needed of the effects of simpli­fied feedback variables on human behavior in a variety of
situations. The major purposes of the present thesis were
to:

1. attempt to expand the research on videotape self-confrontation, which can poten-
tially be a valuable tool for client and clinician.

2. present a well-controlled study, which can be expanded upon by future researchers.

In the future, studies should meet at least minimal
standards. The theoretical bases for the variables chosen
and presumed relationship between variables should be made
clear. There should be a continuity between studies. This
should include the use of standard measurement procedures,
whenever possible; and the utilization of a standard vocabu-
larv. Moore (1972) suggested that a minimum listing of
variables would include:

1. amount of delay of feedback
2. channels of feedback involved
3. the taping task and persons involved
4. hidden or open camera
5. structure of feedback (passive or a par-
ticular task)
6. number of interventions
7. length of feedback segments
8. type of feedback (discrepant, etc.) (p. 35).

This study attempted to comply with the above require-
ments. The experimental task was open-ended, the feedback
was somewhat structured, and the camera was open. How this
study fared as to the other variables above will be specified in the Methods section, where the rest of these factors are delineated.

**Research Goals**

In general, this research was exploratory, attempting to contribute to the meager store of knowledge concerning the effects of certain variables upon the self-confrontation experience. More specifically, this study attempted to determine:

1. how people would rate "what I saw and/or heard" as assessed by semantic differentials administered pre-confrontation, five seconds post-confrontation, and five minutes post-confrontation.

2. how people would rate what they saw and/or heard as others would perceive it, several minutes post-confrontation.

3. whether or not fear of negative evaluation and concern with achieving social approval, used as covariates could help to predict the direction and degree of change in semantic differential ratings, particularly after five seconds of feedback (Semantic Differential II).

4. whether or not the separation of channels of feedback would produce differential effects on the semantic differentials.

5. how sex differences would affect reactions to the self-confrontation experience.
Hypotheses

Since this investigation was largely exploratory in nature, many of the predictions offered were quite tentative. Thus both major "Hypotheses" and more speculative "Sub-hypotheses" were advanced.

Hypotheses

1. Following the self-confrontation experience, Ss will rate how they feel others would perceive what they saw and/or heard (Semantic Differential IV) more negatively than their own rating of voice and/or visual-image prior to playback (Semantic Differential I).

2. Women will respond (a) more negatively and (b) more extremely than men on Semantic Differential II (a rating of what I saw and/or heard after five seconds of feedback) as compared with Semantic Differential I (a measure of the same percept prior to feedback).

3. Subjects will react in a negative manner initially to the self-confrontation experience (on Semantic Differential II, after five seconds of feedback), as compared with Semantic Differential I (a pre-measure of the same percept).

4. Following their initial negative reactions (Semantic Differential II) Ss will return to baseline levels of rating (i.e., to the level of Semantic Differential I) after five minutes of feedback (on Semantic Differential III).

Sub-hypotheses

(i). Different channels will have "differential impact" in that Semantic Differential II, (a rating of what one saw and/or heard after five seconds of playback) will differ significantly from Semantic Differential I (a pre-measure of the same percept) in the
following order: audio, audio-visual, visual, and filtered-audio.

(ii). Video feedback will produce shifts in semantic differential ratings in a more positive direction than the other channels (e.g., towards "good" as opposed to "bad" on the Evaluation factor) immediately following confrontation (i.e., on Semantic Differential II as compared with Semantic Differential I).

(iii). Women will report greater fear of negative evaluation and concern about achieving social approval than men which will be associated with (a) a more negative and (b) a more extreme reaction to the self-confrontation experience (i.e., on Semantic Differential II after five seconds of feedback as compared with Semantic Differential I, a pre-measure of perception of voice, visual-image, or voice and visual-image combined). This initial response will be followed by return to baseline levels of rating on Semantic Differential III, which will be given after five minutes of playback.

(iv). Fear of negative evaluation and concern with achieving social approval will possess more predictive power than mere sex differences. These personality characteristics will be associated with an immediate negative reaction following playback (on Semantic Differential II as compared with Semantic Differential I), and with subsequent return to baseline levels of rating on Semantic Differential III (after five minutes of playback).
CHAPTER II

METHOD

Subjects

Subjects' amount of prior experience with self-confrontation via audio or audio-video media was limited to three hours or less within the past year, and no experience within the past two months. Six male and six female introductory psychology students were randomly assigned to each of the four playback groups: video, audio-video, audio and filtered-audio. The total $n$ was forty-eight undergraduate subjects.

Apparatus

Playback groups

Each of the four groups received playback consisting of a different set of cue components as stimuli for their semantic differential ratings. The various cue exposures were as follows:

AV: Audio-Visual Group--rated on the basis of audio-visual cues.

A: Audio Group--rated on the basis of audio cues only.
FA: Filtered-Audio Group--rated on the basis of audio cues only (filtered to remove frequencies above 600 cps).

V: Video Group--rated on the basis of visual cues only.

In this study, a filtered audio-visual group was not utilized, because in previous studies (Burns & Beier, 1973) the effects of this cue combination did not differ significantly from those for the unfiltered audio-visual group.

For the AV group, the experimental tape was shown on a Sony Videocorder screen with the sound and visual components turned on. The video group was exposed to the tape with the sound track off. The audio and filtered-audio groups were exposed to a tape on an audio tape recorder.

The filtering of the audio channel was investigated as a means of ascertaining the effects of paralinguistic factors as opposed to verbal content. Filtering was accomplished with a low-pass filter inserted in series with the audio input of the tape as it was recorded. The filter removed audio frequencies above 600 cps, leaving the predominance of paralinguistic cues intact in the lower frequencies while greatly reducing the intelligibility of the verbal content, which is dependent upon high frequency vowel sounds (Burns & Beier, 1973). A cutoff frequency of 600 cps was used because it was the lowest frequency which made the words unintelligible, but left other vocal qualities relatively intact.
Semantic differential

Three equivalent forms of a semantic differential were utilized, their order being randomly assigned. (See appendix 1.) Each S was asked to rate what he saw and/or heard on the semantic differentials--at pre-playback; after five seconds of playback, and after five minutes of playback. Finally, the first semantic differential was re-administered, with instructions to rate what he saw and/or heard as he felt other people would perceive it. (See Procedures for a full reproduction of the instructions used.) Below are some examples of the 7-point semantic differential which was utilized.

SOCIABLE :___:___:___:___:___:___:UNSOCIABLE (Activity factor)

RUGGED :___:___:___:___:___:___:DELICATE (Potency factor)

PLEASURABLE:___:___:___:___:___:___:PAINFUL (Evaluation factor)

The three equivalent forms of the semantic differential, each containing fifteen bipolar pairs of adjectives representing three factors (Activity, Potency, and Evaluation), had been shown by its originators to be sensitive to quick attitudinal shifts in response to audio feedback (Coyne & Holzman, 1966; Holzman & Rousey, 1966; Rousey & Holzman, 1968). The three forms contained approximately equal mean averages, factor loadings, and standard deviations, and were developed in an attempt to eliminate the problems of
repeat reliability and error variance that tend to cause repeated usages of the semantic differential to be relatively insensitive to momentary attitudinal changes.

Fear of Negative Evaluation Scale

The Fear of Negative Evaluation Scale (Watson & Friend, 1969) consists of thirty True-False items. It has considerable construct validity, and is very homogeneous--mean biserial correlation of selected items with the total score is .72; and KR-20 of .94 and .96. The product-moment test-retest of the Fear of Negative Evaluation Scale was .78 for one sample and .94 for a second, smaller sample. An example of one of the questions on this scale is:

I rarely worry about seeming foolish to others. (F)

(See appendix 2.)

Marlowe-Crowne Social Desirability Scale

This scale consists of thirty-three True-False items (Crowne & Marlowe, 1964). The reliability and validity of this measure are well-established (1964). The Social Desirability Scale consists of items of the following kind:

Before voting I thoroughly investigate the qualifications of all the candidates. (T)

(See appendix 3.)
Procedures

Subjects in Introductory Psychology classes were given the following instructions initially:

As part of my Masters degree requirements in clinical psychology, I am conducting a study which is concerned with how people perceive themselves. Please answer the following questions:

Name:
Section Number:
Section Leader:
Phone Number:
Times when you are available:
How many hours have you spent in the past two months listening to and/or watching audio- or audio-visual tapes of yourself?

How many hours have you spent in the last year listening to and/or watching audio- or audio-visual tapes of yourself?
You will receive one experimental hour of credit for completing this questionnaire.

I will be contacting some of you in the future, requesting that you spend another hour engaging in research with me at the Clinical Psychology Center. Your answers and name will be kept confidential.

Thank you for your cooperation.

Subjects with less than three hours of self-confrontation experience within the past year and no experience within the last two months, divided equally with respect to sex, were asked to engage in further experiments at the Clinical Psychology Center. There were forty-eight Ss altogether divided into four playback groups, with twelve Ss in each group.

In class, subjects were administered the Fear of Nega-
tive Evaluation Scale and the Marlowe-Crowne Social Desirability Scale, with the following directions:

This scale consists of numbered statements. Read each statement and decide whether it is "true" as applied to you, or "false" as applied to you.

You are to mark your answers on the sheet on which the questions appear. Following each question are the words, TRUE and FALSE. If a statement is TRUE or MOSTLY TRUE, as applied to you, circle the word, TRUE, which follows that statement. If a statement is FALSE or NOT USUALLY TRUE, as applied to you, circle the word, FALSE, following that statement.

Remember to give YOUR OWN opinion of yourself. Do not leave any question unanswered.

The Fear of Negative Evaluation Scale was the first one following the above directions. Additional instructions for the Social Desirability Scale were as follows:

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is TRUE or FALSE as it pertains to you personally.

When Ss came to the Clinical Psychology Center, they were once again informed of the confidentiality of the experiment, and asked to talk about themselves and things which were important to them for five minutes, while they were being recorded. These instructions were given verbally as well as in written form by the experimenter, since it was discovered that Ss had difficulty understanding the task if it was communicated only in writing.
Instructions for Semantic Differentials

The purpose of this questionnaire is to measure your feelings about several aspects of your (voice and/or visual-image). You will be asked to rate your (voice and/or visual-image) according to how you feel about it right now, on several items. Each item is simply a pair of opposite words, such as "good-bad," on which you will be required to give your present rating of your (voice and/or visual-image), by placing an "X" nearer to "good," nearer to "bad," or somewhere in between.

IMPORTANT: (1) Place your check-marks in the middle of the spaces, not on the boundaries, like this:

GOOD: __:__:__:__:X:__:BAD

(2) Be sure you check every scale for every concept--do not omit any.

(3) Never put more than one check-mark on a single space.

Make each item a separate and independent judgment. Work at fairly high speed throughout this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we are interested in. On the other hand, please do not be careless, because we want your true impressions.

After five seconds of playback, each S was asked to complete an equivalent form of the above semantic differential, with the following instructions:

Now, following a procedure similar to that used previously, rate what you (saw and/or heard), according to how you feel about it right now, on the following items. Give your present rating of what you (saw or heard) by placing an "X" closest to the descriptive word which best expresses your present feeling towards what you (saw and/or heard).
Make each item a separate and independent judgment. Also, rate these items independently from your ratings on previous scales. Once again, it is your first impressions, your immediate "feelings" about the items, that we want.

After five minutes of feedback, the instructions given were the same as those for five seconds of feedback.

Then, the following new directions were given for Semantic Differential IV:

Now, following a procedure similar to that used previously, rate how you feel other people would perceive what you (saw and/or heard). Give your present rating of how you feel other people would perceive what you (saw and/or heard) by placing an "X" closest to the descriptive word which best expresses what you feel their perception would be. For example, if you feel that they would perceive what you (saw and/or heard) as being "fairly good" place an "X" as follows:

GOOD: ___: X: ___: ___: ___: ___: BAD

Make each item a separate and independent judgment. Rate these items independently from your ratings on previous scales. Once again, it is your first impressions, your immediate "feelings" about the items, that we are interested in.

Instructions for Informational Items

Please answer the following questions as honestly as possible.

1. How would you describe your over-all reaction to your (voice and/or visual-image) and what you (saw and/or heard)?
2. Did your attitudes towards your (voice and/or visual-image) and what you (saw and/or heard) change?

3. To what specific aspects of your (voice and/or visual-image) and what you (saw and/or heard) were you reacting?
CHAPTER III

RESULTS

The measure of subject response utilized in the present investigation was a semantic differential with items loading on the factors of Activity, Potency and Evaluation. The various experimental results were tallied for each of these factors separately. The first step in the statistical analysis of the results involved performing analyses of covariance, using the Fear of Negative Evaluation Scale and the Marlowe-Crowne Social Desirability Scale as covariates. The analysis of covariance was chosen in an effort to eliminate any systematic variability due to the personality characteristics of fearing negative evaluation and seeking social approval since they would be partialled out.

Analyses of variance were performed in attempting to discern the direction of effects due to social approval and fear of negative evaluation. Statistical results with the effects of these factors minimized (Analysis of Covariance) were compared with those with these factors fully operative (Analysis of Variance). In general using the covariates increased the significance of results to a rather small extent, thus the results of the covariance analysis and of the
Analysis of Variance are essentially the same, suggesting that the covariates were not accounting for much systematic variance on the various semantic differential ratings. Therefore, only the Summary Tables for the Analysis of Covariance are presented (see tables 1, 2, and 3).

If the means for the Analysis of Covariance are compared with those for the Analysis of Variance (see figures 1 and 2), it becomes apparent that for the Evaluation factor without using the covariates of Fear of Negative Evaluation and Social Desirability Ss rated themselves more positively (i.e., towards "good" or "beautiful," as opposed to "bad" or "ugly") than when the covariates were taken into account. This biasing in a positive direction occurred for the Evaluation factor, but not for the Potency and Activity factors, for which a "positive" rating would be in the direction of "strong" and "fast" respectively, while a "negative" rating would be towards "weak" and "slow." When the variance attributable to Social Desirability and Fear of Negative Evaluation is partialled out (in the Analysis of Covariance), ratings are shifted downward on the Evaluation factor (i.e., towards "bad").

For both the Activity and Evaluation factors there is a significant main effect for the semantic differentials (see tables 1 and 3) and for the channel by semantic differential interactions (see tables 1, 2, and 3 and figure 3).
### TABLE 1

**SUMMARY OF ANALYSIS OF COVARIANCE ON RAW SCORES**

(Means from 3.0 to -3.0 on semantic differentials)

#### ACTIVITY FACTOR

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel (a)</td>
<td>2.290</td>
<td>3</td>
<td>0.763</td>
<td>0.349</td>
</tr>
<tr>
<td>Sex (b)</td>
<td>0.011</td>
<td>1</td>
<td>0.011</td>
<td>0.005</td>
</tr>
<tr>
<td>a x b</td>
<td>13.061</td>
<td>3</td>
<td>4.353</td>
<td>1.989</td>
</tr>
<tr>
<td>axb (S) (error 1)</td>
<td>83.166</td>
<td>38</td>
<td>2.189</td>
<td></td>
</tr>
</tbody>
</table>

(p < .15 = trend)

<table>
<thead>
<tr>
<th>Semantic Differential (c)</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>a x c</td>
<td>13.822</td>
<td>9</td>
<td>1.536</td>
<td>2.607*</td>
</tr>
<tr>
<td>b x c</td>
<td>2.224</td>
<td>3</td>
<td>0.741</td>
<td>1.258</td>
</tr>
<tr>
<td>a x b x c</td>
<td>1.816</td>
<td>9</td>
<td>0.202</td>
<td>0.343</td>
</tr>
<tr>
<td>a x b x c (S) (error 2)</td>
<td>67.148</td>
<td>114</td>
<td>0.589</td>
<td></td>
</tr>
</tbody>
</table>

| Total                     | 204.112| 183|

* p < .05   ** p < .01   *** p < .001
### TABLE 2

**SUMMARY OF ANALYSIS OF COVARIANCE ON RAW SCORES**

*Means from 3.0 to -3.0 on Semantic Differentials*

**POTENCY FACTOR**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel (a)</td>
<td>0.434</td>
<td>3</td>
<td>0.145</td>
<td>0.112</td>
</tr>
<tr>
<td>Sex (b)</td>
<td>23.485</td>
<td>1</td>
<td>23.485</td>
<td>18.240***</td>
</tr>
<tr>
<td>a x b</td>
<td>10.055</td>
<td>3</td>
<td>3.352</td>
<td>2.603</td>
</tr>
<tr>
<td>a x b (S) (error 1)</td>
<td>48.928</td>
<td>38</td>
<td>1.288</td>
<td></td>
</tr>
<tr>
<td>Semantic Differential (c)</td>
<td>0.407</td>
<td>3</td>
<td>0.136</td>
<td>0.209</td>
</tr>
<tr>
<td>a x c</td>
<td>15.476</td>
<td>9</td>
<td>1.720</td>
<td>2.647*</td>
</tr>
<tr>
<td>b x c</td>
<td>0.538</td>
<td>3</td>
<td>0.179</td>
<td>0.276</td>
</tr>
<tr>
<td>a x b x c</td>
<td>3.926</td>
<td>9</td>
<td>0.436</td>
<td>0.672</td>
</tr>
<tr>
<td>a x b x c (S) (error 2)</td>
<td>74.060</td>
<td>114</td>
<td>0.650</td>
<td></td>
</tr>
</tbody>
</table>

| Total                               | 177.309 | 183|         |          |

*p < .05  **p < .01  ***p < .001
TABLE 3

SUMMARY OF ANALYSIS OF COVARIANCE ON RAW SCORES
(MEANS FROM 3.0 to -3.0 ON SEMANTIC DIFFERENTIALS)

EVALUATION FACTOR

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel (a)</td>
<td>6.526</td>
<td>3</td>
<td>2.175</td>
<td>0.870</td>
</tr>
<tr>
<td>Sex (b)</td>
<td>1.831</td>
<td>1</td>
<td>1.831</td>
<td>0.732</td>
</tr>
<tr>
<td>a x b</td>
<td>10.628</td>
<td>3</td>
<td>3.543</td>
<td>1.417</td>
</tr>
<tr>
<td>a x b (S) (error 1)</td>
<td>95.005</td>
<td>38</td>
<td>2.500</td>
<td></td>
</tr>
<tr>
<td>Semantic Differential (c)</td>
<td>12.554</td>
<td>3</td>
<td>4.185</td>
<td>4.618**</td>
</tr>
<tr>
<td>a x c</td>
<td>17.275</td>
<td>9</td>
<td>1.919</td>
<td>2.118*</td>
</tr>
<tr>
<td>b x c</td>
<td>3.687</td>
<td>3</td>
<td>1.229</td>
<td>1.356</td>
</tr>
<tr>
<td>a x b x c</td>
<td>6.345</td>
<td>9</td>
<td>0.705</td>
<td>0.778</td>
</tr>
<tr>
<td>a x b x c (S) (error 2)</td>
<td>103.304</td>
<td>114</td>
<td>0.906</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>257.155</td>
<td>183</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05 \ **p < .01 \ ***p < .001
Figure 1. Means for sex by semantic differential (SmD) interaction

**Analysis of Covariance (ANOCOV)**

Covariates are Social Desirability and Fear of Negative Evaluation

---

**Activity Factor**

(+ = fast)

- Females
- Males

---

**Potency Factor**

(+ = strong)

- Females
- Males

---

**Evaluation Factor**

(+ = good)

- Females
- Males

---

SmDI = Semantic Differential I
SmDII = Semantic Differential II
SmDIII = Semantic Differential III
SmDIV = Semantic Differential IV
Figure 2. Means for sex by semantic differential (SmD) interaction

**Analysis of Variance (ANOVA)**
(without using covariates)

- **Activity Factor**
  - (+ = fast)
  - (- = slow)
  - Females
  - Males

- **Potency Factor**
  - (+ = strong)
  - (- = weak)
  - Females
  - Males

- **Evaluation Factor**
  - (+ = good)
  - (- = bad)
  - Females
  - Males

- SmDI = Semantic Differential I
- SmDII = Semantic Differential II
- SmDIII = Semantic Differential III
- SmDIV = Semantic Differential IV
Figure 3. Means for channel by semantic differential (SmD) interaction (all are significant)

Analysis of Covariance
Covariates are Social Desirability and Fear of Negative Evaluation

Activity Factor
--- Audio
--- Filtered-Audio
--- Video
--- Audio-Video

Potency Factor
--- Strong
--- Weak

Evaluation Factor
--- Audio
--- Filtered-Audio
--- Video
--- Audio-Video
For the Activity and Potency factors there is a trend towards significance for the channel by sex interaction (see figure 4, and tables 1 and 2). (The criteria used in determining trends was \(0.20 < p < 0.05\).) For the Potency factor, the overall sex main effect is significant, as is the channel by semantic differential interaction (see table 2 and figure 3).

The criteria used in determining trends, \(0.20 < p < 0.05\), was decided upon because it represents results with a one in five chance of occurring at random. (Such a probability level is useful in giving hints about possible directions for future research.)

The significant main effect for the semantic differentials on the Activity and Evaluation Factors (see tables 1 and 3), \(F_{\text{Activity}} (3, 114) = 11.643, p < 0.001;\)
\(F_{\text{Evaluation}} (3, 114) = 4.618, p < 0.01,\) indicates that there were significant differences overall between semantic differentials at each of the four successive times of administration, pre-playback, after five seconds of playback, after five minutes of playback, and "rate your voice and/or visual image as you feel others would perceive it."

The significant channel by semantic differential interaction (see tables 1, 2, and 3, and figure 3 for a plot of the means) for each of the three semantic differential factors of Activity, Potency and Evaluation, \(F_{\text{Activity}} (9, 114) = \)
Figure 4. Means for channel by sex interaction

**Activity Factor**

(+ = fast)

0.6

- Females

- Males

TREND (p < .15)

(- = slow)

A FA V AV

**Potency Factor**

(+ = strong)

0.6

- Females

- Males

TREND (p < .1)

(- = weak)

A FA V AV

**Evaluation Factor**

(+ = good)

0.6

- Females

- Males

- A Audio

FA = Filtered-Audio

V = Video

AV = Audio-Video

(- = bad)

FA V AV
2.607, \( P < .01 \); \( F_{\text{Potency}} (9, 114) = 2.647, \ P < .05 \); \( F_{\text{Evaluation}} (9, 114) = 2.118, \ P < .05 \), denotes that Ss responded in significantly different ways to feedback delivered via the different channels on the various semantic differentials administered at the four sequential times.

The significant main effect for sex on the Potency factor reveals that males rated themselves as more "strong," "rugged," etc., as determined by the means for the two sexes, males = 0.349; females = 0.351--females rated themselves consistently as more "delicate," "weak," etc., \( F_{\text{Potency}} (1, 38) = 18.240, \ P < .001 \) (see table 2).

There is a trend towards significance for the channel by sex interaction on both the Activity and Potency factors (see tables 1 and 2, and figure 4). This represents a difference between males and females in manner of responding to feedback presented via the various channels.

As a preliminary step in the analysis of covariance, a multiple regression analysis was performed for the various means for each of the three major semantic differential factors of Activity, Potency, and Evaluation. The assumption of additivity held for these data. Also, a multiple correlational analysis was calculated for the Marlowe-Crowne Social Desirability Scale (SoD) and Fear of Negative Evaluation Scale (FNE) used as covariates. From this
analysis it was found that social desirability accounted for much more of the variance than did Fear of Negative Evaluation (variance accounted for by FNE for the Activity factor was $FNE_A = .16\%$, $SoD_A = 15.44\%$; $FNE_p = .36\%$, $SoD_p = 7.26\%$; $FNE_E = 3.50\%$, $SoD_E = 9.81\%$). Because of the above differential findings, Fear of Negative Evaluation was eliminated from the succeeding correlational analyses.

Upon considering the results of the analysis of covariance, and also because of relevance to the general areas being investigated by this study, various questions naturally arose which led to the execution of correlational analyses and $t$-tests for uncorrelated data ($\overline{P} = 0$, $df = n-2$). Those analyses which proved to be most significant and/or meaningful in the present context will be presented here.

Inspecting the channel by sex interaction (see figure 4), revealed that the two sexes appeared to react differently to different channels of feedback. This observation led to the computation of correlations for the two sexes for each of the four channels. The significant correlations for this group are presented in table 4.

Sub-hypotheses (iii) and (iv) are directly concerned with sex differences in response which are associated with various degrees of social approval seeking, as well as the type of reaction associated with social approval when the sexes are combined and division into experimental groups is
### TABLE 4

**SIGNIFICANT CORRELATIONS FOR CHANNEL (C) BY SEX**

A1-4 are scores on the Activity factor for semantic differentials 1-4 (SmD's I-IV)
P1-4 and E1-4 are scores on SmD's I-IV for the Potency and Evaluation factors
N=6; df=4  Unless specified otherwise, 0.05 ≤ p ≤ 0.01; 0.81 = r = 0.917

**Audio Females**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td>0.98 A3**</td>
</tr>
<tr>
<td></td>
<td>0.95 A4**</td>
</tr>
<tr>
<td>A3</td>
<td>0.91 A4</td>
</tr>
<tr>
<td>E3</td>
<td>0.85 E4</td>
</tr>
<tr>
<td>A1</td>
<td>0.82 E1</td>
</tr>
<tr>
<td>P1</td>
<td>0.91 P3</td>
</tr>
<tr>
<td>E2</td>
<td>0.97 E4 (b)</td>
</tr>
</tbody>
</table>

**Audio Males**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td>0.87 P2</td>
</tr>
<tr>
<td>E1</td>
<td>0.87 A4</td>
</tr>
<tr>
<td></td>
<td>0.88 P4</td>
</tr>
<tr>
<td>P3</td>
<td>0.86 E4</td>
</tr>
<tr>
<td>A4</td>
<td>0.86 E4</td>
</tr>
</tbody>
</table>

**Filtered-Audio Females**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>0.85 P2</td>
</tr>
<tr>
<td>P1</td>
<td>0.86 P3</td>
</tr>
<tr>
<td>A3</td>
<td>0.97 A4** (b)</td>
</tr>
<tr>
<td></td>
<td>0.97 E4** (b)</td>
</tr>
<tr>
<td>A4</td>
<td>0.95 E4 (b)</td>
</tr>
</tbody>
</table>

**Filtered-Audio Males**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td>0.89 A2</td>
</tr>
<tr>
<td></td>
<td>0.91 E2</td>
</tr>
<tr>
<td>A1</td>
<td>0.82 P1</td>
</tr>
<tr>
<td></td>
<td>0.84 E1</td>
</tr>
<tr>
<td>P1</td>
<td>0.83 P4</td>
</tr>
<tr>
<td>E2</td>
<td>0.93 E4</td>
</tr>
<tr>
<td>A2</td>
<td>0.94 E2**</td>
</tr>
<tr>
<td>A3</td>
<td>0.83 E3</td>
</tr>
<tr>
<td></td>
<td>0.92 A4** (b)</td>
</tr>
<tr>
<td></td>
<td>0.84 E4** (b)</td>
</tr>
<tr>
<td>E3</td>
<td>0.97 A4***</td>
</tr>
<tr>
<td>A4</td>
<td>0.91 E4 (b)</td>
</tr>
</tbody>
</table>

**Video Females**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>P2 - 0.88</td>
</tr>
<tr>
<td>A2</td>
<td>0.93 E2**</td>
</tr>
<tr>
<td>E2</td>
<td>0.85 A3</td>
</tr>
<tr>
<td></td>
<td>0.88 E3</td>
</tr>
<tr>
<td>P3</td>
<td>0.89 E4</td>
</tr>
</tbody>
</table>

**Video Males**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2</td>
<td>0.87 P4</td>
</tr>
</tbody>
</table>

**Audio-Video Females**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td>0.92 E2</td>
</tr>
<tr>
<td>A1</td>
<td>0.84 P1</td>
</tr>
<tr>
<td>E3</td>
<td>0.92 E4</td>
</tr>
<tr>
<td>A4</td>
<td>0.95 E4**</td>
</tr>
</tbody>
</table>

**Audio-Video Males**

<table>
<thead>
<tr>
<th>Correlation of With</th>
<th>Positive Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>0.93 E1**</td>
</tr>
<tr>
<td></td>
<td>0.85 A2</td>
</tr>
<tr>
<td>P1</td>
<td>P2 - 0.88</td>
</tr>
<tr>
<td>A2</td>
<td>0.91 A3</td>
</tr>
<tr>
<td>E2</td>
<td>0.89 A4</td>
</tr>
<tr>
<td>A3</td>
<td>0.97 E3**</td>
</tr>
<tr>
<td></td>
<td>0.82 A4</td>
</tr>
<tr>
<td>E3</td>
<td>0.86 A4</td>
</tr>
</tbody>
</table>
made according to high versus low degrees of fear of negative evaluation and social desirability. For this reason, the following correlational analysis was computed: degree of social desirability (high vs. low SoD) by sex; significant correlations for this group are presented in table 5.

Statistical results which are most germane to the hypotheses under study will be presented below.

**Hypotheses**

1. The first hypothesis stated that Ss would rate themselves more negatively on Semantic Differential IV ("rate what you saw and/or heard as you feel others would perceive it") than on Semantic Differential I (a pre-measure of self-perception of "voice, visual-image, or voice and visual-image combined").

The analysis of covariance supports hypothesis 1, since the overall semantic differential main effect is significant for both the Activity and Evaluation factors, but not for the Potency factor (see tables 1, 2, and 3). Also, t-tests for uncorrelated data were carried out, and the difference between semantic differentials I and IV was found to be significant for the Activity factor ($t_{94} = 4.048, p < .001$) and the Evaluation factor ($t_{94} = 2.53, p < .025$). (See figure 5).
### TABLE 5

**SIGNIFICANT CORRELATIONS FOR DEGREE OF SOCIAL DESIRABILITY (SoD) BY SEX**

A1-4 are scores on the Activity factor for semantic differentials 1-4 (SmD's I-IV)
P1-4 and E1-4 are scores on SmD's I-IV for the Potency and Evaluation factors
N=12, df=10

#### High SoD Males

<table>
<thead>
<tr>
<th>Correlation of</th>
<th>With</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>0.61 A1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.61 A3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.58 E3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.74 E1**</td>
<td>0.85 A3**</td>
<td>0.60 E4</td>
<td></td>
</tr>
<tr>
<td>0.72 E2**</td>
<td>0.65 E3</td>
<td>0.69 A3</td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>0.59 E3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>0.75 E3**(b)</td>
<td>0.76 E4</td>
<td>0.65 A4**(b)</td>
</tr>
<tr>
<td>E3</td>
<td>0.86 A4**</td>
<td>0.71 E4**</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>0.81 E4**(b)</td>
<td></td>
<td></td>
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</tbody>
</table>

#### Low SoD Males

<table>
<thead>
<tr>
<th>Correlation of</th>
<th>With</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>0.57 P1</td>
<td></td>
<td>E2 -0.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E2** 0.88</td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>0.66 P4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>0.59 P4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>0.64 E3</td>
<td></td>
<td>0.79 E4**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>0.59 P4</td>
<td></td>
<td>0.80 E4**</td>
</tr>
</tbody>
</table>

#### Low SoD Females

<table>
<thead>
<tr>
<th>Correlation of</th>
<th>With</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td></td>
<td></td>
<td>E3 -0.58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A4** -0.79</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E4 - 0.58</td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td></td>
<td>0.63 P4</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>0.58 E2</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>0.64 P4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>0.58 P3</td>
<td></td>
<td>0.79 E3**(b)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.65 A4</td>
<td>(b)</td>
</tr>
<tr>
<td>E3</td>
<td>0.78 E4**(b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>0.62 A4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.68 E4</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.75 E4**</td>
<td>(b)</td>
<td></td>
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</table>

#### High SoD Females

<table>
<thead>
<tr>
<th>Correlation of</th>
<th>With</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td></td>
<td>P3 -0.67</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>0.61 E2</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.85 A3**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.76 A4**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td>0.66 A3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.83 E3**</td>
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</tr>
<tr>
<td>A3</td>
<td>0.61 E3</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.62 E4</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.86 A4**(b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E3</td>
<td></td>
<td></td>
<td>E4 -0.056</td>
</tr>
<tr>
<td></td>
<td>0.67 E4</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td></td>
<td>0.73 E4** (b)</td>
<td></td>
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</table>

(b) means present in both groups of correlations being compared

All of the above correlations are significant at at least the .05 level, .576 < r < .708
**p < .01, r = .708**
Figure 5. Means for semantic differential (SmD) main effect

**Activity Factor**  
(+ = fast)

<table>
<thead>
<tr>
<th>Activity Level</th>
<th>SmDI</th>
<th>SmDII</th>
<th>SmDIII</th>
<th>SmDIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slow</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Potency Factor**  
(+ = strong)

<table>
<thead>
<tr>
<th>Potency Level</th>
<th>SmDI</th>
<th>SmDII</th>
<th>SmDIII</th>
<th>SmDIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Evaluation Factor**  
(+ = good)

<table>
<thead>
<tr>
<th>Evaluation Level</th>
<th>SmDI</th>
<th>SmDII</th>
<th>SmDIII</th>
<th>SmDIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. The second hypothesis was that women would respond (a) more negatively and (b) more extremely than men on Semantic Differential II (rating of voice and/or visual image after five seconds of playback) as compared with Semantic Differential I (rating of the same, prior to any feedback).

(a) Whether or not women reacted more negatively than men on Semantic Differential II as compared with Semantic Differential I can be discovered by studying the plot of the means for the sex by semantic differential interaction (figure 1). From this figure it is clear that women's ratings were negative in comparison with men's on Semantic Differential II for all factors, and that the direction of their reaction was negative (from positive to negative) for the Activity and Evaluation factors. This part of hypothesis 1 is supported overall by these data.

(b) The "degree of extremity" of women's reactions meant that the difference between Semantic Differential I and Semantic Differential II would be larger for women than for men. To test this, \( t \)-tests for least square differences were performed. The difference between male and female responses was significant for the Evaluation factor, \( t \) (94) =
3.128, p < .005, but not for the Activity and Potency factors.

Hypothesis 2 is not supported overall.

3. Hypothesis 3 was that Ss would react in a negative manner initially to the self-confrontation experience (on Semantic Differential II, after five seconds of feedback, as compared with Semantic Differential I, taken prior to feedback). (See figure 5.) Data relevant to this hypothesis were analyzed using t-tests for least square differences, with the following results. Significant negative reactions occurred for the Activity, t (94) = 5.36, p < .001; and Evaluation, t (94) = 3.74, p < .001 factors, but not for the Potency factor.

Hypothesis 3 is supported overall.

4. Hypothesis 4 stated that, following their initial negative reactions to self-confrontation (Semantic Differential II), Ss would return to baseline levels of rating (i.e., to the level of Semantic Differential I) after five minutes of feedback (on Semantic Differential III).

For the Activity and Evaluation factors, the type of reaction described took place, although the level of return on Semantic Differential III is not all of the way back to that of Semantic Differential I (see
What can be observed is more of a leveling off between the extremes of Semantic Differential I and Semantic Differential II. The degree of difference here was assessed using t-tests, with the results being significant for Activity, \( t(94) = 2.41, p < .025 \), and exhibiting a strong trend for Evaluation, \( t(94) = 1.74; p < .1 \).

Hypothesis 4 is fairly strongly supported by these data.

(i). Sub-hypothesis (i) indicated that different channels would have 'differential impact' in that Semantic Differential II (a rating of what one saw, heard, or saw and heard after five seconds of playback) would differ significantly from Semantic Differential I (a pre-measure of the same percepts, before feedback) in the following order: audio, audio-visual, visual, and filtered-audio.

For the Activity factor, the order of impact, from most to least (difference between Semantic Differential I and Semantic Differential II), of the different channels was: filtered-audio, audio-video, audio, and video. These differences were significant at the .025 level or beyond \( (t[11]) \) for all but the video channel. (See figure 3 for a plot of the actual direction of these differences).
Statistical analysis of the impact of self-confrontation for the various channels (difference in Semantic Differential I and II across channels) for the various semantic differential factors of Activity, Potency, and Evaluation produced the data in table 6.

If the channels for the Activity factor are compared with each other in the order of impact discussed above, significant differences exist for the difference between filtered-audio vs. audio-video ($t_{(46)} = 3.27; p < .005$), and audio-video vs. video ($t_{(46)} = -5.36; p < .001$). (See table 6).

For the Potency factor the only significant difference between Semantic Differentials I and II occurred for the video channel ($t_{[11]} = -2.59; p < .05$), the other channels in order of impact were audio-video, audio, and filtered-audio. A $t$ analysis of the difference between each successive channel above revealed significant differences for video vs. audio-video ($t_{[46]} = -4.22; p < .001$). (See table 6.)

For the Evaluation factor significant differences took place for filtered-audio ($t_{[11]} = 6.5; p < .001$); and audio-video ($t_{[11]} = 2.4; p < .05$), other channels in order were video and audio. Analysis of the difference between these channels in sequential order dis-
### TABLE 6

COMPARISON OF ORDER OF IMPACT

DIFFERENCE IN SEMANTIC DIFFERENTIAL I (PRE)

AND SEMANTIC DIFFERENTIAL II (POST-5-SECONDS)

FOR THE DIFFERENT CHANNELS

---

Least Square Difference Analysis: \( df = 46 \)

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Activity</th>
<th>Potency</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>p</td>
<td>t</td>
<td>p</td>
</tr>
<tr>
<td>V-FA</td>
<td>-8.63</td>
<td>.001***</td>
<td>-2.63</td>
</tr>
<tr>
<td>V-AV</td>
<td>-5.36</td>
<td>.001***</td>
<td>-4.22</td>
</tr>
<tr>
<td>A-FA</td>
<td>-5.18</td>
<td>.001***</td>
<td>.43</td>
</tr>
<tr>
<td>V-A</td>
<td>-3.45</td>
<td>.005**</td>
<td>-3.06</td>
</tr>
<tr>
<td>FA-AV</td>
<td>3.27</td>
<td>.005**</td>
<td>-1.59</td>
</tr>
<tr>
<td>A-AV</td>
<td>-1.9</td>
<td>.1</td>
<td>-1.16</td>
</tr>
</tbody>
</table>

---
closes significance for filtered-audio vs. audio-video \( (t_{[46]} = 4.21; p < .001) \) and video vs. audio \( (t_{[46]} = 2.57; p < .025) \). (See table 6).

Sub-hypothesis (i) is not supported by these data. (ii). Sub-hypothesis (ii) said that video feedback would produce shifts in semantic differential ratings in a positive direction (e.g., towards "good" as opposed to "bad" on the Evaluation factor, etc.) immediately following confrontation (i.e., on Semantic Differential II as contrasted with Semantic Differential I). From figure 1 it is apparent that for Activity the direction of reaction which occurs from Semantic Differential I to Semantic Differential II is positive for the video channel and negative for the other three channels. Statistical analysis reveals that this difference is significant for the video channel as compared with the filtered-audio channel \( (t_{[46]} = -8.63, p < .001) \); video vs. audio-video \( (t_{[46]} = -5.36, p < .001) \); and video vs. audio \( (t_{[46]} = -3.45, p < .005) \).

For the Potency factor, video exhibits the most positive change (i.e., towards "strong"), while filtered-audio changes somewhat positively, with audio and audio-video shifting towards the negative pole (i.e., towards "weak"). Differences in these reactions are
significant for video vs. audio-video ($t_{[46]} = -4.22; p < .001$), video vs. audio ($t_{[46]} = -3.06; p < .005$); and video vs. filtered-audio ($t_{[46]} = -2.63; p < .025$) respectively. (See table 6).

For the Evaluation factor video, filtered-audio and audio-video all shift negatively, while audio changes in a positive manner. Comparison of direction and degree of reaction is significant for video vs. filtered-audio ($t_{[46]} = -4.89; p < .001$) and video vs. audio ($t_{[46]} = 2.57; p < .025$). (See table 6).

Sub-hypothesis (ii) is supported for the Activity factor and for the Potency factor (since the positive shift for filtered-audio is minute, only .02 semantic differential points), but not for the Evaluation factor, for which the predicted trend is reversed, since video shifts negatively.

(iii). Sub-hypothesis (iii) stated that women would report greater fear of negative evaluation and concern about achieving social approval than men, and that these personality characteristics would be associated with (a) a more negative and (b) a more extreme reaction to the self-confrontation experience (i.e., on Semantic Differential II after five seconds of feedback, as compared with Semantic Differential I, a pre-measure of perception of voice, visual-image or voice
and visual-image combined). This initial response was to be followed by return to baseline levels of rating on Semantic Differential III, which was given after five minutes of playback.

(a) Whether or not women scored higher on the Fear of Negative Evaluation Scale and the Social Desirability Scale can be easily discerned by comparing the means for the two sexes on these scales.

\[ \bar{X}_{FNE} = 12.0 \text{ for females} \]
\[ \bar{X}_{FNE} = 14.0 \text{ for males} \]
\[ \bar{X}_{SoD} = 15.0 \text{ for females} \]
\[ \bar{X}_{SoD} = 13.0 \text{ for males} \]

The means for the two sexes on these scales are essentially equal. Therefore, sub-hypothesis (iii) is not supported.

(iv). Sub-hypothesis (iv) proposed that fear of negative evaluation and concern with achieving social approval would possess more predictive power than mere sexual divisions. These personality characteristics were to be associated with an immediate negative reaction to the confrontation experience (on Semantic Differential II as compared with Semantic Differential I),
and with a subsequent return to baseline levels of rating on Semantic Differential III (after five minutes of playback).

Fear of negative evaluation accounted for an insignificant amount of the variance attributable to the two covariates, so its effects were not considered to be important in the way proposed (see p. 73 for the actual percentages of variance accounted for by Fear of Negative Evaluation and social desirability). The variance accounted for by social desirability was more substantial, although still not overwhelmingly important, and the effects were not large enough to bring about the reaction described in sub-hypothesis (iv); therefore sub-hypothesis (iv) is not supported by the data.

Other Findings of Interest and Importance

The most important and significant results of the correlational analyses occurred for the degree of social desirability (high versus low social desirability) by sex group, and the sex by channel group. The significant correlations ($p < .05$) for these experimental groups are presented in tables 4 and 5.

It was found that for the channel by sex group females varied from males in exhibiting a negative reaction to the
audio type of feedback, as evidenced by negative correlations between initial semantic differential ratings (which were most often positive) and subsequent ones (which tended to be negative), following the self-confrontation experience. Males showed positive correlations between semantic differential ratings, which were positive initially and following self-confrontation. This sex difference in reaction was significant ($X^2 [1] = 11.57; p < .005$).

For the video channel females showed a trend in the direction of more positive correlations than males, who had more negative correlations ($X^2 [1] = 3.2; p < .1$). Females tended to rate themselves positively across subsequent semantic differentials for this channel, while males tended to change the direction of their ratings in an unsystematic fashion from one semantic differential to another. This trend for the video stimulus is in an opposite direction to that for the audio stimulus.

One other finding which approaches statistical significance for the Activity and Potency factors is the channel by sex interaction (see figure 4). Upon viewing the plot of the means for these groups some strong trends in essentially opposite directions to each other can be seen. For instance, males rated themselves as more active on the Activity factor for the channels which have an audio component (audio and filtered-audio) while females rated themselves as more
passive. Then, this trend was reversed for channels with a visual component (video and audio-video), females rating themselves as more active, and males as more passive.

For the Potency factor, males rated themselves as more potent, and females rated themselves as less potent, except that the scores converged for the audio-video combination.

The previous discussion of the results relevant to sub-hypothesis (iv) pointed out that neither sex was more concerned with social approval seeking, as indicated by their mean scores on the Social Desirability Scale. It is interesting to note that high social approval females showed three significant negative correlations with social approval (see table 5), these being for Evaluation III (rating of "badness" of voice and/or visual-image after five minutes of feedback) and on Activity and Evaluation IV (rating of "inactivity" and "badness" of voice and/or visual-image as they felt others would perceive them). High social approval males showed three significant positive correlations with social desirability for Activity I (pre-measure--rated as more active), and Evaluation and Activity III (self-ratings after five minutes of feedback--rated as "better" and "more active").

Low social desirability males and females showed no significant correlations with social desirability (see table 5).
Important observations based upon the tables (tables 4 and 5) of significant correlations for degree of social desirability (SoD) by sex and channel by sex are as follows: Activity and Evaluation were overwhelmingly positively correlated \( (X^2 [1] = 36.1; p < .005) \), and significant correlations occurred in many of the groups for Activity on Semantic Differential III with Activity on Semantic Differential IV (A3-A4), as well as Activity III with Evaluation IV (A3-E4), and Activity IV with Evaluation IV (A4-E4). These results were directional, but not statistically significant. Potency and Evaluation were most often significantly negatively correlated, and Activity and Potency were usually significantly positively correlated \( (X^2 [1] = 9.14; p < .005) \).

Observations based upon the correlations of various factors with social desirability reveal (see tables 4 and 5) that there were more significant correlations for Semantic Differential IV (rate as you feel others would perceive what you saw and/or heard) than there were for the other semantic differentials. This difference is not statistically significant, but is interesting. Semantic Differential IV also had many more negative correlations with social desirability than the other semantic differentials \( (X^2 [1] = 3.66; p < .1, a \text{ trend}) \). More positive correlations with social desirability occurred for the Activity factor than for the Evaluation or Potency factors, although this result is relatively mild and not statistically significant.
CHAPTER IV

DISCUSSION

The major findings of this study were that (1) subjects rated themselves differently on the semantic differentials administered at four successive times, pre-feedback, post five seconds of feedback, post five minutes of feedback, and rate how you feel others would perceive what you saw, heard, or saw and heard (which was given last), (2) males rated themselves as strong overall on the Potency factor, while females rated themselves as weak, (3) subjects reacted in significantly different ways to the various channels of feedback on each of the four semantic differentials. Fear of Negative Evaluation and seeking social approval, as assessed by the Marlowe-Crowne Social Desirability Scale did not have the systematic, negative effect which was predicted would occur after five seconds of self-confrontation, i.e., $S$s scoring high on these scales did not react towards the passive, negative, weak pole any more than did $S$s in general, since these covariates accounted for little of the variance. It was found that Fear of Negative Evaluation accounted for almost none of the variance attributable to the covariates,
therefore social desirability will be the primary scale of the two discussed in this thesis and worthy of further research in this area. The effects of social desirability in the present study were still somewhat unclear, since they were largely correlational and fairly unsystematic; they need further study.

For the semantic differential main effect, the results of this study have in part replicated the findings of earlier work (Holzman, 1971; Holzman & Rousey, 1966; Nielsen, 1964) which described the progression which occurred in the reaction to self-confrontation, termed "attitudinal impact" or "image impact," from initial self-criticism, to self-image restoration, and finally to commenting on favorable aspects of oneself. Findings which were somewhat discrepant from those of the present thesis were those by Holzman and Rousey (1966) who presented data showing a negative reaction for female Ss after five seconds of playback, and a return to baseline levels of rating after the Ss had waited five minutes since hearing the playback. A difference between Holzman and Rousey's study and the present one is that they did not play back five minutes of self-confrontation tapes to their Ss, they only played back five seconds of feedback.

The present thesis had Ss listen to five seconds of feedback and fill out a semantic differential, then listen
to five minutes of feedback and fill out another semantic differential. It found a negative reaction at five seconds and a leveling-off tendency at five minutes and for rating "what I saw and/or heard as others would perceive it."
The reaction sequence described occurred for the Activity and Evaluation factors in the present research, but not for the Potency factor, which is in agreement with the findings of Holzman and Rousey (1966).

The reaction sequence, or the relationship of the semantic differentials to each other, changed with such factors as sex and channel. The semantic differential effect was not simple and ratings on Semantic Differential II (five-seconds post-feedback) were sometimes positive in relation to Semantic Differential I, depending on which cells were considered. For example, for the channel by sex interaction, the video channel was positive on Semantic Differential II in relation to Semantic Differential I for the Activity factor, not negative, as would seem to follow logically from Holzman and Rousey's (1966) research.

What is the meaning of the fact that the semantic differentials produced significant changes for the Activity and Evaluation factors, but not for the Potency factor? Perhaps the stable sex difference which exists for the Potency factor can give us a clue as to what may have been occurring. Women rated themselves negatively on
Potency and men rated themselves positively. This is a statistically significant effect which existed even for the sex by semantic differential interaction. It seems that Potency may represent a fairly stable personality characteristic, a rather immovable trait, as opposed to a more malleable state. One logical reason for this difference is that men are usually taught to want to wield force, authority, or influence, and to be powerful, while women are instructed not to wish for power and often to actively avoid it. Of course, there is also the biological dimension of this concept, since men are usually stronger and women weaker. But there seems to be more to the notion than simple physical differences, since physical strength is not as important in our automated society as it used to be, and is thus probably not the only significant determinant of response in this category. Some examples of words in this category are "hard-soft," "strong-weak," "mature-youthful," "profane-sacred," "masculine-feminine." It seems obvious that both culture and biology are influencing reactions which fall within this factor.

The Activity and Evaluation factors seem to tap more mutable aspects of the subjects' self-concepts. Osgood, Suci, and Tannebaum (1957) report that the Evaluation factor is highly correlated with standard attitude-measuring instruments and can therefore be considered an index of attitude (pp. 193-194). Some examples of items for this
factor are "beautiful-ugly," "clean-dirty," "good-bad," and "rich-poor." The Activity factor taps impressions of the psychological characteristics, bearing, stance, or conduct of that which is being judged. Words in this category are "successful-unsuccessful," "wide-narrow," "free-constrained," and "fast-slow."

Holzman and Rousey (1966) integrate the above speculations in a meaningful way as follows:

If attitude toward the voice is affected by changes in the amount of bone-conducted sound, and if the evaluative factor of the semantic differential measures that attitude, then shifts in the evaluative factor would reflect changes of attitude towards one's voice wrought by changes in the bone- to air-conduction ratio. If changes in the activity scale, however, reflect changes in impressions of the voice and therefore of the behavioral characteristics of the speaker conveyed by voice qualities, then shifts in the activity factor would reflect changed awareness of those voice qualities. The evaluative factor could be considered a measure of discrepancy and the activity factor a measure of disruption (1966, p. 84).

The present study broke new ground in comparing the sexes for the particular concept of "what I saw and/or heard," which is similar to Holzman and Rousey's concept of "my voice," for which they used just female Ss, but different from Moore's (1972) concept of "myself" for which he used both sexes as Ss, and found that no "attitudinal impact" occurred.

Moore performed research on self-confrontation using the same division of channels as the present thesis, except
that he did not use the filtered-audio channel, which is another innovation of the present research. He utilized three equivalent forms of the semantic differential, but not the fourth form of "what you saw and/or heard as you feel others would perceive it." Moore assessed this concept, but not by using a semantic differential.

Using four equivalent forms of the semantic differential for the four channels as separated in the present investigation was novel in another way, because Moore's feedback tape lasted five minutes and he did not administer a semantic differential after five seconds of playback. He failed to find the "attitudinal impact" reported by Holzman. The reason for this can be judged from the present research, which administered semantic differentials pre-playback, after five seconds of playback, and after five minutes of playback. It is clear, upon examining the plot of the means for the semantic differential main effect that a leveling-off occurred on Semantic Differential III. Ss apparently "got used to" what they heard. The semantic differential effect could well have been insignificant if Semantic Differential II had not been so negative overall. Thus, with additional time-sampling we were able to see an effect which Moore did not pick up.

The significant channel by semantic differential interaction for all three factors, Evaluation, Potency, and
Activity indicates that Ss reacted in significantly different ways to the different channels of feedback on the four successive semantic differentials. If one studies the graph of the means for this group, it becomes apparent that it is very difficult, and indeed inappropriate, to generalize in discussing something like a channel effect. Because of the various differences which are evident, it is necessary to go further, and to specify which factors are involved, which channel, which semantic differential, and depending upon your purpose, which sex. For example, if one generalizes he can say that the direction of reaction revealed on Semantic Differential II (five-seconds post-feedback) was negative. But if one scrutinizes the channel by sex interaction, he can see that the overall reaction for the video channel was positive on Semantic Differential II for Activity and Potency, two out of three of the semantic differential factors.

Also apparent for the channel by sex interaction is that the various channels are independent, particularly on the first three semantic differentials, which were the ones of primary interest in this investigation. This is in line with similar findings by Burns and Beier (1973) who discovered a lack of correlation between judgments of affect conveyed via the audio and video channels, suggesting that the information delivered through these channels is relatively independent. This means that people's judgments of
how they look and/or sound are different depending on whether they are responding only to cues from listening, or to those from viewing.

Other examples of the differences in the effects of audio and video based on my study are that for the channel by semantic differential interaction, the video channel was the only one which had a primarily positive direction of effect on Semantic Differential II, and the audio channel had a negative effect, except on the Evaluation factor, for which this tendency was reversed.

Previous research relating to differences in these two channels has reported that, with psychiatric patients, information delivered via the auditory channel produced more cognitive and affective changes than visually channeled information, but that items which received their impact primarily from the video channel involved feelings of increased responsible self-control on the Multiple Affect Adjective Check List and fourteen bipolar items collated by Cattell (Geertsma & Reivich, 1965). Moore (1972) found that video feedback produced significantly larger change variances than other modes of feedback in self-objectivity and self-esteem, as assessed by the Miskimins Self-Goal-Other Discrepancy Scale (Miskimins, 1967, 1968, cited in Moore, 1972). He hypothesized that this greater impact was due to the greater novelty of the video stimulus.
Since the present thesis had no direct measures of "responsible self-control," self-esteem, self-objectivity, or "affective and cognitive changes," it is difficult to compare with previous research along these lines, and what is said is largely speculative.

In the present research video produced positive ratings on Activity and Potency, and negative ratings on Evaluation. Some of the items on these scales could be indices of an increased feeling of a kind of rational-cognitive self-responsibility and self-esteem. Some of these items were: for the Activity factor, successful-unsuccessful, sharp-dull, active-passive, optimistic-pessimistic, graceful-awkward, and interesting-boring. Potency scale items (on which video was significantly a positive experience) produced shifts towards the potent pole of strong-weak, deep-shallow, mature-youthful, etc. Video produced changes on Evaluation which could fit into a category of decreased affective self-esteem: towards the negative pole of pleasurable-painful, beautiful-ugly, clean-dirty, formed-formless, etc. These ratings fit into the categorizations of previous investigations to some degree, although certainly not very well.

For Audio, the present investigation found a negative reaction on the Activity factor, essential stability on the Potency factor, and an increase in rating for the Evaluation
factor. Is this evidence for the "cognitive and affective" changes reported by previous researchers (Geertsma & Reivich, 1965)? There is a problem in the definition of "cognitive and affective" since this seems to include all kinds of change which could occur, thus perhaps meaning that most change of any kind took place for audio. This was not the case for the present thesis, since most change took place for video. There is a discrepancy in definitions and results between these other investigations and the present one.

Previous findings said that video produced greater changes than audio in self-objectivity and self-esteem. For the present research, it produced greater changes for the Potency and Evaluation factors, and audio produced greater changes for the Activity factor. Thus, video produced more change overall than did audio. The difference in the degree of impact for these two channels was significant for all three semantic differential factors, meaning that Ss reacted to these channels in significantly different ways, as mentioned previously.

It is apparent from the graph of the channel by semantic differential interaction that audio is independent from video. As discussed previously, this was also one of Burns and Beier's results (1973). Thus, the effects of these channels cannot be very well related to each other, their meanings are divergent. People's impressions of how they
look or sound vary according to whether they are reacting to video or audio stimuli.

For Activity, it seems natural that Ss would rate themselves as more active after seeing video, and as less active after hearing audio, since "actions speak louder than words." Actions seem to be more tied to the visual stimulus than to the auditory one.

After confrontation, Ss in the audio group rated themselves on Potency as neither more rugged nor more delicate, neither more hard nor more soft, neither more strong nor more weak. But they evaluated themselves as more pleasurable, beautiful, clean, cautious, good and formed. In short, their affective self-esteem had increased, if that is part of what this factor is assessing. But they felt less active. Perhaps their feeling of responsible self-control had decreased, since they felt more passive, pessimistic, awkward, boring, unsociable, unsuccessful, etc.

Moore (1972) also found that Ss tended to identify most with audio feedback, then with audio-visual, and least with video. His research revealed sex differences in response to confrontation in terms of self-objectivity and self-esteem. Males who identified more with their feedback did not become more self-objective, while males who identified less closely with their feedback tended to become more self-objective.
These trends were in the opposite direction for females, those who identified more with their feedback tending to gain more in terms of self-objectivity. He interpreted these results as possibly due to training in stereotypic sex roles in which females are trained to identify more with external stimuli. He did not analyze the results separately for the two sexes as to which channels were identified with most, which could be an important omission.

Two findings of the present study strongly suggest that the different channels mean different things to the two sexes. The channel by sex interaction, which reaches a trend towards significance for the Activity and Potency factors, reveals that males tended to rate themselves higher on audio and females rated themselves more positively than males on video.

Correlational analyses were performed in trying to look further into the nature of this relationship. From these computations it was discovered that for differences which occurred in reactions for the two sexes (i.e., for positive versus negative correlations between the various semantic differential ratings) females had significantly more negative correlations for the audio channel, while males had significantly more positive correlations. The video channel produced a trend towards the opposite type of effect, females exhibiting positive correlations and males negative correlations.
One possible implication of these findings is that, if identification with feedback is in fact an element which is involved in determining the kind of impact a channel will have on a person, sex differences may be important here. It is possible that Ss could have higher mean ratings for the channels with which they identify more. This is an area which needs further research.

As reported previously, Fear of Negative Evaluation and social approval seeking, as assessed by the Marlowe-Crowne Social Desirability Scale, failed to be any more systematically related to any particular reaction sequence than were sex differences. Contrary to expectation, both sexes scored about the same on these scales, but those Ss for each sex who were more concerned with social approval as revealed by the significance of the correlations of their responses with social desirability showed manners of responding which were in line with stereotypic sex roles in some ways. For example, high social approval females showed three significant negative correlations with social approval, these being Evaluation III, Activity IV, and Evaluation IV. This means that they evaluated themselves as bad after five minutes of confrontation, and thought that others would see them as less active and as bad.

High social approval males had three significant correlations with social desirability, these being Activity I, Activity III, and Evaluation III. On Semantic Differential I
(a pre-measure) they classed themselves as "active," while on Semantic Differential III (after five minutes of feedback), they said they felt more active and better.

Low social approval males and females had no significant correlations with social desirability. These results suggest that for high social approval Ss, more of a relationship exists with social desirability, i.e., that for high social approval Ss social desirability could have some predictive power in certain areas, which were not necessarily those tapped by the present study. This may well be an area in which future research will show that some significant and useful relationships exist.

The fact that high social approval males and females responded in the positive and negative ways described above may well result from the fact that females are often taught in our society that the most acceptable behavior is admitting feelings of discomfort and weakness, i.e., responding negatively, whereas males are usually trained to appear strong and in control of themselves, i.e., to respond positively. High social approval Ss are the ones who are the most worried about what others may be thinking. That they would react in the most socially defined and acceptable way to the self-confrontation experience lends further validity to the results of this study.

Further support for the idea that Ss who are more pre-
occupied about social approval are, as revealed by the results of the present investigation, more worried than others about how others perceive them and more likely to see others as perceiving them negatively, comes from the fact that there were more significant correlations with social desirability for Semantic Differential IV than for any of the other semantic differentials. Semantic Differential IV was a rating of how Ss felt others would perceive what they had seen and/or heard. Also, Semantic Differential IV had more negative correlations with social desirability than any of the other semantic differentials, meaning that Ss who scored high on social desirability were more likely than other Ss to view others as perceiving their voices and/or visual-images negatively.

The results of this thesis revealed significant correlations of Evaluation with each of the other two factors in directions to be discussed below. These findings are in line with those of Osgood, Suci and Tannebaum (1957) to the effect that Activity and Potency were not orthogonal with respect to Evaluation, but varied with it.

The fact that Evaluation and Activity were so often positively correlated could well mean that people in general evaluate themselves more positively when they perceive themselves as being more active. Just looking at some of the factors on the Activity scale gives one the impression that
the Activity pole is usually considered a more positive attribute, for example, sociable-unsociable, successful-unsuccessful, spacious-constricted, positive-negative. However, negative correlations did exist for these factors, although they were not usually significant in this study, with the small number of Ss which were in most of the correlational groups (n = 6). Although Activity and Evaluation are related, they still are not measuring the same factor, the utility of each concept still exists and is important.

The fact that Potency and Evaluation were most often significantly negatively correlated implied that Ss tend to view themselves more negatively if they see themselves as being too potent. It is interesting that, for the degree of social desirability group only low social desirability males and females showed this negative relationship between Evaluation and Potency, so the most socially desirable way to be would seem to be influential and powerful. Our society probably emphasizes this more as a positive attribute worth possessing.

The significant positive relationship between Activity and Potency may mean that Ss view themselves as potent if they see themselves as active. This, too, seems to make common sense.

On the Evaluation factor Ss rated themselves more
positively when social desirability was taken into account, as is apparent if the means are compared with and without the covariates being used. Ss concern with social approval revealed itself in more systematic, positive ratings on Evaluation as compared with Potency and Activity. This finding makes sense, since both social desirability and the Evaluation factor are measures of attitude, and a good deal of evaluation occurs in response to the social desirability items.

Wilmot (1975) presented some ideas which seem relevant to the self-confrontation experience. He said that people develop self-concepts or generalized views of themselves by their ability to think about themselves. The self-concept is many-faceted and primarily social in nature. The prime determinants of one's self-concept are, according to him, (1) the perceptions others have of him, (2) the comparisons he makes between himself and others, and (3) the social roles with which he is identified. In the self-confrontation situation any one or all three of these determinants of self-concept could be altered, thus affecting him. For instance, he may feel that others' perceptions of him have changed, perhaps they will watch his tape. He may compare his image as played back to him with how he perceives others, thus changing his self-perception. Social roles may also be changed, since he may well perceive himself in a detached
way as more of an object. Any of these ways of responding to the self-confrontation situation could lead to the various reactions exhibited by the Ss in the present research.

The social role aspect of this experience was emphasized by some Ss in their responses to the qualitative questions at the end of the experiment. There was some evidence that some Ss may have been switching from a participant role to that of an observer, thus feeling detached and viewing themselves as objects. For example, a high social desirability male in the video group wrote as follows in response to question 1, "How would you describe your overall reaction to what you saw?"

> I thought it was kind of humorous to see all the little unconscious actions I made while I was talking or thinking of something to say. I was also surprised to see myself as if I were someone else. I acted differently than I thought I did, and noticed a lot of little things I didn't know I did.

What might the self-confrontation experience signify for different Ss? Wilmot (1975) presented some interesting ideas which offer some clues as to what this experience may be like. He pointed out that each person's self-concept is subjective primarily because (1) there are differing degrees of awareness of the self, and (2) we each have "multiple selves" from which to choose. Novel situations which promote reflexive thinking about oneself are quite disparate. Of
course, novel situations can be either negative or positive in effect, depending on the person's reaction to it.
"Whether you become entangled in personal remorse or spend your time trying to rationalize your behavior, your concept of yourself will undergo some degree of self-examination" (p. 36).

The self-confrontation experience which occurred for the Ss in the research presented here was obviously a novel situation. Holzman (1966) described this type of experience as one of "discrepancy and disruption," largely because of its novelty and unexpectedness. This situation is one with enough impact and novelty to alter the Ss self-concept temporarily, or perhaps permanently. And each S will react in ways which are in line with his or her past experience, which self is executive going into the self-confrontation situation, which self becomes executive in this unfamiliar set of circumstances, and how they have been taught to respond to such an experience. Arguing from a traditionalistic standpoint one might claim that because of prior training, females could be more "remorseful" and males more "rationalizing." This is the type of encounter of which changed self-perceptions are made.

The present study contributes to self-confrontation research by filling in some of the gaps which exist in this area because of a paucity of sound research. No contradictions of other studies were found which could not be ex-
plained by subtle differences in technique.

This investigation proceeded further than previous ones in using four semantic differentials instead of three, and found that this fourth semantic differential, rate "what you saw and/or heard as you feel others would perceive it" was a valuable one, especially in relation to social desirability, since more significant and negative correlations with social desirability occurred for this semantic differential than for any of the others. Also, the overall semantic differential main effect was duplicated for other channels besides the original audio one. The channel by semantic differential interaction demonstrates the complexity of the data, as does the channel by sex interaction. In order to really understand what is occurring in the self-confrontation situation, it is necessary to go beyond simple main effects to what were interactions in this study. Many of these can use individual scrutiny in the future, and at this more precise level is where predictions will become really meaningful in future research.

The investigation of sex differences in response for the specific factors used in this research is also new, and the overall significance of the main effect for sex (males positive and females negative) for the Potency factor is understandable in terms of the way men and women are taught to view themselves in our society, as well as bio-
logical differences in strength. This finding offers some validation of the Potency scale used.

Future research can profitably proceed into some of the facets of the present investigation, looking more closely and specifically at what were just parts of the present research. For example, sex differences are a fertile area for research, the ways of responding exhibited by high social approval versus low social approval people of the two sexes to the self-confrontation situation can still use more research, since its effects are not yet well-defined.

The area of identification with feedback can use further study, since Moore's (1972) scale has not been validated, and since he did not take into account sex differences in identification with specific channels, which may well exist. Sex differences in response to various channels is another potentially fruitful area which could bear further examination.

Finally, the effects of fear of negative evaluation and social approval seeking as personality characteristics were not that clearcut in this experiment, possibly because they were not producing that much of an effect, or because the wrong effect was predicted. New experiments could be performed looking into how these variables affect other behavior in the self-confrontation situation. Also, how other personality characteristics operate in the self-confrontation experience could be investigated.
This thesis contributes both answers and questions to the self-confrontation literature; and the questions point the way to future research directions as discussed above.
CHAPTER V

SUMMARY

Forty-eight introductory psychology subjects, divided equally with regard to sex, participated in this study of telemediated self-confrontation to find out whether: (1) separation of channels of feedback, (2) time of presentation of feedback, or (3) concern with fear of negative evaluation and giving socially desirable test responses would have differential impact on self-perception as measured by responses on equivalent forms of a semantic differential.

Introductory psychology students were administered the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) and the Fear of Negative Evaluation scale (Watson & Friend, 1969) in class. Also, they were asked about experience within the past year with self-confrontation via audio or video tapes. Ss who had heard themselves for more than three hours within the past year or for any time at all within the past two months were not included in this study, since previous research (Rousey & Holzman, 1967) had shown that frequency of having heard one's voice produced a marked increase in recognition of it and familiarity with
it, which could well obscure the immediate impact of feedback which the present investigation was attempting to study.

Six male and six female Ss who met the above qualification were randomly assigned to one of four playback groups: audio-visual--rated on the basis of audio-visual playback of themselves; audio--rated on the basis of audio self-playback; filtered-audio--rated on the basis of filtered-audio self-playback, with frequencies above 600 cps filtered out so that paralinguistic cues were present, but not verbal content; and finally, video--rated on the basis of video self-playback.

Each S was instructed to talk for five minutes about things he considered to be important to him, while he was being recorded. Then, these tapes were played back to him; he was confronted with himself.

Self-perception of what each S saw and/or heard, or expected to see and/or hear, was measured by responses to three equivalent forms of a semantic differential inventory, the order of which was randomly assigned (Coyne & Holzman, 1966; Osgood, Suci & Tannebaum, 1957). Each semantic differential contained fifteen bipolar pairs of adjectives representing three factors (Activity, Potency, and Evaluation). Some examples of these adjectives for each factor are: Activity--fast-slow; Potency--strong-weak; and Evaluation--good-bad.
These semantic differentials were used in assessing S's self-perception at four sequential times, (1) pre-playback; (2) post-five-seconds of playback; (3) post-five-minutes of playback, and finally (4) "rate how you feel others would perceive what you saw and/or heard."

The Fear of Negative Evaluation scale (Watson & Friend, 1969) and the Social Desirability Scale (Crowne & Marlowe, 1964) were used as covariates, since it was felt that the personality type which scored high on these related measures would tend to react in a similar way to the self-confrontation experience (i.e., negatively). This type of person is one who is overly concerned with how others may be perceiving him, avoids evaluative situations, becomes distressed over others' negative evaluations, and expects them to evaluate him negatively.

Analyses of covariance and variance were carried out on the four semantic differentials for each S, the covariates being Fear of Negative Evaluation and social desirability, so that the direction of effects of the covariates could be more specifically looked into. Social desirability influenced the results in making S's ratings more positive for Evaluation, but not for Activity or Potency.

Fear of Negative Evaluation accounted for an insignificant amount of the variance attributable to the covariates. Social desirability had more of an effect on S's responses,
but this was still not very large. Neither sex scored higher on these scales, and they did not create the effect predicted, of a negative impact after five seconds of playback.

For Potency, the overall sex main effect was significant, males rating themselves as "strong," and females as "weak."

The overall semantic differential effect was significant for Activity and Evaluation, but not for Potency. These results support three of the hypotheses which predicted a negative reaction on Semantic Differential II, a return to baseline levels on Semantic Differential III, and that Semantic Differential IV would be negative in relation to Semantic Differential I.

The channel by semantic differential interaction was significant for all three semantic differential factors, and those effects appear to be independent, since the plot of these means is different for each channel and semantic differential.

A posteriori correlational analyses, least square difference analyses, and $X^2$ analyses produced other significant results, but only the most important results have been discussed in this Summary. These statistical tests produced support for sub-hypothesis (ii), that video would produce more positive reactions than other channels, which it did for Activity and Potency.
Three out of four of the hypotheses were confirmed, and one out of four of the exploratory sub-hypotheses was supported.
REFERENCES


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Seitz, F. C. The impact of videotape confrontation and/or discussion on depression. *Psychology*, 1971, 8(2), 77-81.


APPENDICES
APPENDIX I

SEMANTIC DIFFERENTIAL-FORM I

<table>
<thead>
<tr>
<th>Factor I--Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sociable-unsociable</td>
</tr>
<tr>
<td>2. Positive-negative</td>
</tr>
<tr>
<td>3. Successful-unsuccessful</td>
</tr>
<tr>
<td>4. Fresh-stale</td>
</tr>
<tr>
<td>5. Wide-narrow</td>
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<tr>
<td>6. Believing-skeptical</td>
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<tr>
<td>7. Public-private</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor II--Potency</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Rugged-delicate</td>
</tr>
<tr>
<td>9. Hard-soft</td>
</tr>
<tr>
<td>10. Strong-weak</td>
</tr>
<tr>
<td>11. Dark-light</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor III--Evaluative</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Pleasurable-painful</td>
</tr>
<tr>
<td>13. Beautiful-ugly</td>
</tr>
<tr>
<td>14. Clean-dirty</td>
</tr>
<tr>
<td>15. Cautious-rash</td>
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</tbody>
</table>

SEMANTIC DIFFERENTIAL-FORM II

<table>
<thead>
<tr>
<th>Factor I--Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sharp-dull</td>
</tr>
<tr>
<td>2. Free-constrained</td>
</tr>
<tr>
<td>3. Blatant-muted</td>
</tr>
<tr>
<td>4. Clear-hazy</td>
</tr>
<tr>
<td>5. Near-far</td>
</tr>
<tr>
<td>6. Spacious-constricted</td>
</tr>
<tr>
<td>7. Tangible-intangible</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor II--Potency</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Heavy-light</td>
</tr>
<tr>
<td>9. Deep-shallow</td>
</tr>
<tr>
<td>10. Mature-youthful</td>
</tr>
<tr>
<td>11. Severe-lenient</td>
</tr>
</tbody>
</table>
### SEMANTIC DIFFERENTIAL-FORM II (Cont.)

**Factor III--Evaluative**

12. Good-bad  
13. Sweet-sour  
14. Important-unimportant  
15. Formed-formless

### SEMANTIC DIFFERENTIAL-FORM III

**Factor I--Activity**

1. Active-passive  
2. Bright-dark  
3. Optimistic-pessimistic  
4. Graceful-awkward  
5. Refreshed-weary  
6. Fast-slow  
7. Interesting-boring

**Factor II--Potency**

8. Masculine-feminine  
9. Large-small  
10. Bitter-sweet  
11. Profane-sacred

**Factor III--Evaluative**

12. Nice-awful  
13. Calm-agitated  
15. Reputable-disreputable
APPENDIX II
FEAR OF NEGATIVE EVALUATION (FNE)

1. I rarely worry about seeming foolish to others. (F)
2. I worry about what people will think of me, even when I know it doesn't make any difference. (T)
3. I become tense and jittery if I know someone is sizing me up. (T)
4. I am unconcerned even if I know people are forming an unfavorable impression of me. (F)
5. I feel very upset when I commit some social error. (T)
6. The opinions that important people have of me cause me little concern. (F)
7. I am often afraid that I may look ridiculous or make a fool of myself. (T)
8. I react very little when other people disapprove of me. (F)
9. I am frequently afraid of other people noticing my shortcomings. (T)
10. The disapproval of others would have little effect on me. (F)
11. If someone is evaluating me I tend to expect the worst. (T)
12. I rarely worry about what kind of impression I am making on someone. (F)
13. I am afraid that others will not approve of me. (T)
14. I am afraid that people will find fault with me. (T)
15. Other people's opinions of me do not bother me. (F)
16. I am not necessarily upset if I do not please someone. (F)
17. When I am talking to someone, I worry about what they may be thinking about me. (T)
18. I feel that you can't help making social errors sometimes, so why worry about it. (F)
19. I am usually worried about what kind of impression I make. (T)

20. I worry a lot about what my superiors think of me. (T)

21. If I know someone is judging me, it has little effect on me. (F)

22. I worry that others will think I am not worthwhile. (T)

23. I worry very little about what others may think of me. (F)

24. Sometimes I think I am too concerned with what other people think of me. (T)

25. I often worry that I will say or do the wrong things. (T)

26. I am often indifferent to the opinions others have of me. (F)

27. I am usually confident that others will have a favorable impression of me. (F)

28. I often worry that people who are important to me won't think very much of me. (T)

29. I brood about the opinions my friends have about me. (T)

30. I become tense and jittery if I know I am being judged by my superiors. (T)
APPENDIX III
THE MARLOWE-CROWNE SOCIAL-DESIRABILITY SCALE

Personal Reaction Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates. (T)
2. I never hesitate to go out of my way to help someone in trouble.
3. It is sometimes hard for me to go on with my work if I am not encouraged. (F)
4. I have never intensely disliked anyone. (T)
5. On occasion I have had doubts about my ability to succeed in life.
6. I sometimes feel resentful when I don't get my way. (F)
7. I am always careful about my manner of dress. (T)
8. My table manners at home are as good as when I eat out in a restaurant. (T)
9. If I could get into a movie without paying and be sure I was not seen, I would probably do it. (F)
10. On a few occasions, I have given up doing something because I thought too little of my ability. (F)
11. I like to gossip at times. (F)
12. There have been times when I felt like rebelling against people in authority even though I knew they were right. (F)
13. No matter who I'm talking to, I'm always a good listener. (T)
14. I can remember "playing sick" to get out of something. (F)
15. There have been occasions when I took advantage of someone. (F)
16. I'm always willing to admit it when I make a mistake. (T)
17. I always try to practice what I preach. (T)

18. I don't find it particularly difficult to get along with loud mouthed obnoxious people. (T)

19. I sometimes try to get even, rather than forgive and forget. (F)

20. When I don't know something I don't at all mind admitting it. (T)

21. I am always courteous, even to people who are disagreeable. (T)

22. At times I have really insisted on having things my own way. (F)

23. There have been occasions when I felt like smashing things. (F)

24. I would never think of letting someone else be punished for my wrongdoings. (T)

25. I never resent being asked to return a favor. (T)

26. I have never been irked when people expressed ideas very different from my own. (T)

27. I never make a long trip without checking the safety of my car. (T)

28. There have been times when I was quite jealous of the good fortune of others. (F)

29. I have almost never felt the urge to tell someone off. (T)

30. I am sometimes irritated by people who ask favors of me. (F)

31. I have never felt that I was punished without cause. (T)

32. I sometimes think when people have a misfortune they only got what they deserved. (F)

33. I have never deliberately said something that hurt someone's feelings. (T)