THE EFFECTS OF PERCEIVED AUDIENCE RESPONSE ON SPEAKER ATTITUDES

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ABSTRACT

THE EFFECTS OF PERCEIVED AUDIENCE
RESPONSE ON SPEAKER ATTITUDES

by

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Purpose: This thesis was concerned with: a) investigating the effects of Expected Audience Response (EAR) and Perceived Audience Response (PAR) on speaker attitudes, b) testing the predictability of cognitive balance theory in a communication feedback setting, and c) providing a comprehensive review of the experimental literature on feedback.

Hypotheses: a) There will be an interaction between expected and perceived audience response on audience and performance ratings by the speaker. b) Speakers who perceive positive audience response will rate the audience and their own performances higher than speakers who perceive negative audience response.

Design: The hypotheses were tested in a 2x2 experimental design. Speakers were first given an expectation of the response they might receive from the

audience (positive or negative). As they delivered persuasive messages, they were administered either positive or negative nonverbal responses by 13 trained audience members. After the experimental induction, the speakers' attitudes toward the audience and toward their performances were measured with semantic differential scales. The results were submitted to a 2x2 factorial analysis of variance.

Results: a) There was a significant interaction between EAR and PAR on performance ratings by the speakers: speakers in the negative EAR, negative PAR condition rated their performances significantly higher than speakers in the positive EAR, negative PAR condition. b) There was no significant interaction between EAR and PAR on audience ratings by the speakers. c) Speakers who perceived positive audience response rated the audience and their own performances significantly higher than speakers who perceived negative audience response.

Discussion: Balance theory was generally successful in predicting attitudinal outcomes in a communication feedback setting. Speakers who expected positive response but perceived negative response restored balance by devaluing their performances. Speakers who expected negative response but perceived positive response restored balance by rating the audience positively. It

was concluded that speakers must realize the impact that audience response may have on their attitudes and be prepared to cope with this eventuality. The communication receiver must also understand the potential negative or positive effects his responses can have on the communication source.

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By

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CHAPTER I

INTRODUCTION

Communication theorists in the past two decades have begun to place more emphasis on feedback as a variable in the communication process. Beginning with the Leavitt and Mueller study in 1951, over 50 experimental studies have investigated the effects of receiver response on the attitudes and behavior of communication sources.

This study was concerned with three major purposes: a) investigating the effects of Expected Audience Response (EAR) and Perceived Audience Response (PAR) on speaker attitudes, b) testing the predictability of cognitive balance theory in a communication feedback setting, and c) providing a comprehensive review of the experimental literature on feedback.

Answers to the above questions will be presented by discussing the following: 1) The theoretical literature on feedback. 2) A model of communication feedback. 3) The experimental literature on feedback. 4) Balance theory as it leads to the hypotheses of this study. 5) The methodology used to test the hypotheses.

6) The results of the experimental study. 7) The implications and limitations of the results.

Feedback Conceptualized

> Integration of physical and human components at the technical level has led, in recent years, to analogies which compare the theory of machines and human behavior. In human communication research . . . useful machine-human analogies have been applied to the feedback function. Still further applications might be profitably encouraged for human communication research. (Johnson and Klare, 1962)

The purpose of this section is to develop a communication feedback model that is analogous to feedback as developed by cybernetics, consistent with the process view of communication, and heuristic in nature. A selected portion of the theoretical literature from speech, communication, and cybernetics will be drawn upon to accomplish this purpose.

Perhaps the earliest modern theorist to deal with a phenomenon called "circular response" was Overstreet (1925). He described the sensitive speaker as one "who is so mindful of what is happening in his audience--he gets it from their facial expression, their nods, their blankness, their scowls, their interrupting questions--that his own thought and expression are influenced (p. 77)."

More recently, Johnson and Klare (1962) note that feedback, as applied to communication theory, is an

analogy that compares the process of receiver response and consequent source adaptation to feedback as applied in mechanical engineering. Before proceeding further, a brief explanation of feedback as it has found its way from control engineers to human behaviorists via cybernetics is necessary.

Cybernetics, as developed by Norbert Wiener (1954), deals with "techniques that. . .enable us. . .to attack the problem of control and communication in general." Wiener states his main thesis as follows: "The physical functioning of the living individual and the operation of some of the newer communication machines are precisely parallel in their analogous attempts to control entropy through feedback." He defines feedback as "a method of controlling a system by reinserting into it the results of its past performance (p. 61)."

Feedback, in its pure mechanical sense, is a regulating function for a mechanical system. When the system departs from its course, negative feedback restores it to its intended pattern of behavior. An example of this is the "cruise control" option available on most modern automobiles. The driver simply selects a desired speed, sets a control at that speed, and allows the automobile to automatically regulate the speed. When the automobile encounters a gravitational disruption such as a hill, the governing mechanism informs the

acceleration system to increase the power. The automobile is able to maintain a constant speed because of its feedback system. Wiener calls this function "negative" feedback, since the feedback function operates only when the system departs from its designated pattern of operation. Consequently, there is no need for a "positive" function in feedback. Johnson and Klare (1962) point out that "the engineer works, for the most part, with negative feedback for controlling servosystems, and tries to keep positive feedback from disrupting the system."

With the above ideas in mind, it is difficult to apply the feedback principle, in its true mechanical sense, to communication behavior. In the communication setting, the feedback mechanism possesses a positive-negative dimension, whereas the cybernetic concept of feedback does not. Recognizing this, Wiener (1954) expanded feedback to include systems that are not as tightly regulated as machines. "Feedback may be as simple as that of the common reflex, or it may be a higher order feedback, in which past experience is used not only to regulate specific movements, but also whole policies of behavior (p. 32)." He goes a step further by stating that "if. . .the information which proceeds backward from the performance is able to change the general method and

pattern of performance, we have a process which may well be called learning (p. 61)."

While Wiener has expanded the concept of feedback to include higher order policy-regulating functions as well as simple corrective functions, he has not abandoned the idea that feedback adjusts future conduct through the influence of past performance. Many contemporary communication theorists, however, have weakened the feedback analogy by diluting the essential function of the feedback system. Johnson and Klare (1962) point out that some of the more recent communication literature does not follow the basic principles of cybernetic feedback.

An example of the above is Bettinghaus' (1968) discussion of feedback. He defines feedback as "any information that the source gains from his receivers about the probable reception of his message (p. 207)." While this definition is correct in describing the receiver response portion of the feedback process, it fails to include the corrective process that results from the receiver's response.

Berlo (1960) deals with feedback differently than Bettinghaus by stressing that "feedback provides the source with information concerning his success in accomplishing his objective. In doing this, it exerts control over future messages which the source encodes

(pp. 111-112)." While discussing the shortcomings of feedback as a concept, Berlo warns against taking a source-oriented viewpoint, rather than a receiver-process-oriented view. The communicator, he stresses, must not concentrate too heavily on "getting feedback" and thus ignore the interdependence that the concept of feedback correctly implies.

McCroskey (1968) also defines feedback as a message from a receiver to a source. He emphasizes, however, the role the source must play in correctly interpreting the receiver's reaction, and adjusting his subsequent communicative behavior according to that interpretation.

The intent at this point is not to play semantic games or quibble with terminology. Rather it is to point out that the cybernetic formulation of feedback is a broader concept that mere audience response. The only danger in using the term "feedback" synonymously with "receiver response" is that the reader may miss the process implications of the concept of feedback. This writer, therefore, shall employ the term feedback only to refer to the total response-adjustment cycle.

A Model of Communication Feedback

Definition of Feedback. Feedback is defined as an adaptive process in which the source adjusts his

input (attitudes, purpose, strategy, message and performance) as a result of output (observed response) from a receiver.

The above definition and subsequent feedback model, shown in Figure 1, are in keeping with the requirements stated at the outset of this section. First, the model is analogous to feedback as discussed by Wiener. It features the function of feedback in changing future communication behavior. The model is consistent with what Wiener calls higher order feedback, or "feedback of policies."

Second, the model is consistent with the process view of communication. It is dynamic, in that it stresses continuous changes in the source, receiver, purpose, strategy, message, and performance.

Third, the model is heuristic. It features variables and relationships that are operable and experimentally testable. For example, it is possible to control receiver output and observe the subsequent effect on such source variables as attitude toward the receiver or change in communication strategy.

While many of the features of the model are self-explanatory, a number of aspects need special consideration. The primary elements of the model are as follows:

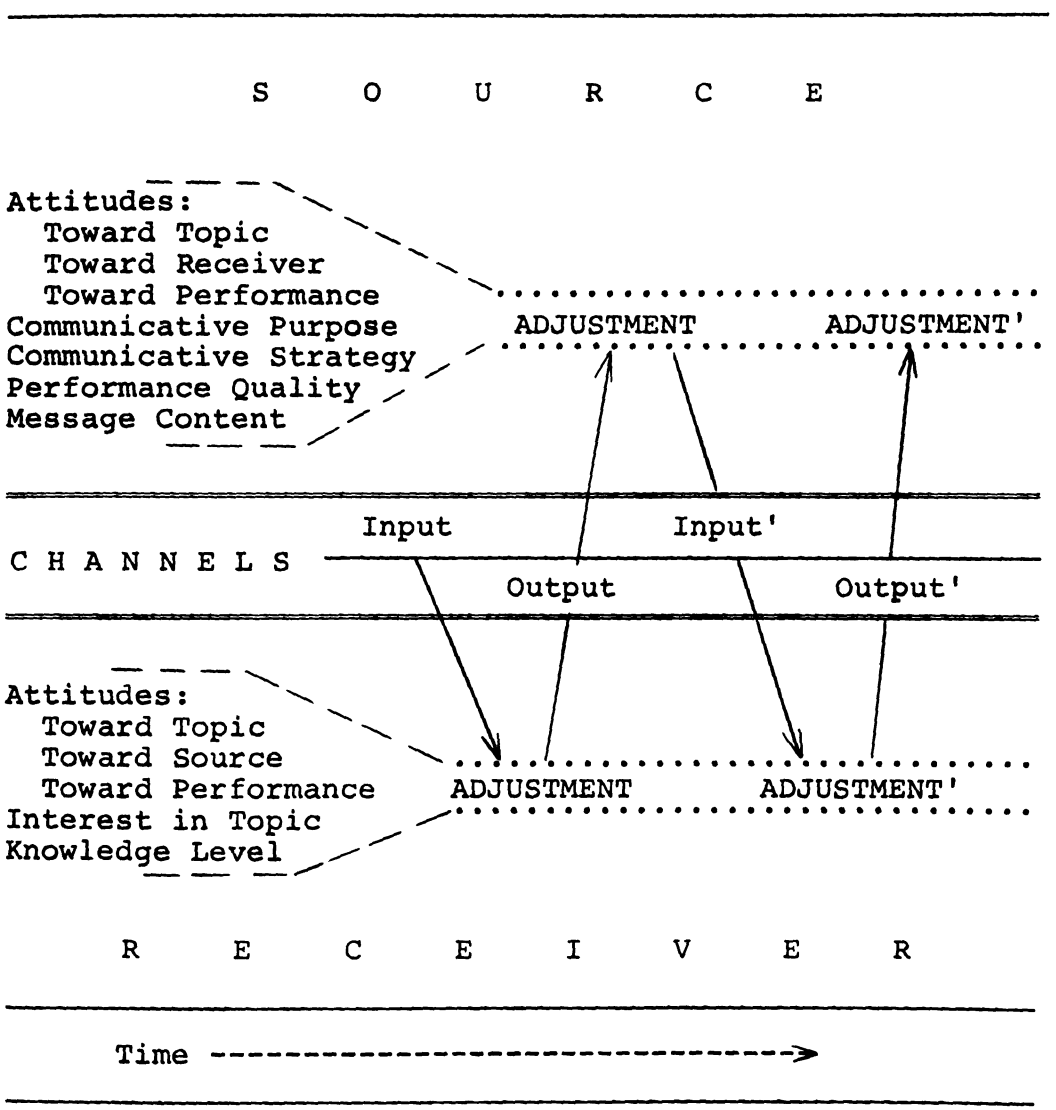


Figure 1. A Model of Communication Feedback

1. The source is the purpose-generating element of the model. He initiates the communication process, and is responsible for the inputs. The source develops the communicative purpose, the strategy, and the message content. He possesses attitudes toward his topic, toward his ability as a communicator, and toward the receiver of his message.

2. The receiver is the recipient of the communicative purpose. He initiates the feedback output. Important to the model are the various attitudes the receiver possesses. These attitudes are directed toward the source (credibility), as well as toward the topic of the communication. Two other important variables the receiver adds to the communication model are interest in the topic and level of knowledge about the topic.

3. Adjustment is the primary feature of the model. It stresses the adaptation made by both the source and the receiver as a result of the inputs and outputs of the communication event. The source can adjust his attitudes, his communicative purpose and strategy, the quality of his performance, or his message content. The receiver can also adjust his attitudes, as well as his interest and knowledge of the topic. Adjustment is a continuous, process variable.

4. The input-output feature of the model represents the messages sent in the communication process.

The source encodes a message (input) and sends it to the receiver. The receiver adjusts to the message, then reacts by returning a message (output). Perceiving the output, the source adjusts his future inputs as a result of the receiver's reaction. Input-output is also a continuous variable. The source does not normally give input, stop, wait for output, adjust, give more input, etc. The source may be continually giving input, continually receiving output, continually adjusting, etc. Also, the receiver may be continually receiving input, adjusting, and giving output.

5. The channels shown in the model are the various media through which the input-output messages are transmitted. Three dimensions of the channel concept are important to this discussion of the feedback process. These dimensions are time (immediate vs. delayed), proximity (face-to-face vs. interposed) and manner (verbal vs. nonverbal vs. mixed).

In summary, this chapter has briefly reviewed a selected portion of the theoretical literature on feedback. It has proposed a theoretical model of feedback behavior that is consistent with cybernetic definitions of feedback, in keeping with the process view of communication, and heuristic in nature.

CHAPTER II

A SUMMARY OF EXPERIMENTAL LITERATURE ON FEEDBACK

The purpose of this chapter is to provide a major summary of the experimental studies dealing with communication feedback. Two types of studies have been selected for this review. First, all studies which focus on communication receiver response and its effect on the communication source have been included. Second, the reviewer chose for consideration several studies from the areas of verbal conditioning, small group interaction, psychology of success and failure, and task performance. Each of the studies chosen has a direct bearing on feedback as it relates to communication behavior.

This review of experimental literature on feedback will be divided into the following seven sections: 1) The theoretical bases used to study the effect of feedback on human behavior. 2) The methodologies used in the studies, including the response agents employed, the recipients of the responses, the channels through which the responses were administered, and the experimental settings. 3) The independent variables (IVs)

studied in connection with feedback. 4) The dependent variables (DVs) measured in the studies. 5) The methodological problems observed by the writer. 6) The results of the studies reviewed. 7) The conclusions that can be drawn from the results.

For convenient reference, the first four sections mentioned above, the theory, methodology, independent variables, and dependent variables, are summarized in greater detail in Appendix A. The 61 studies reviewed are arranged in chronological order.

Theoretical Bases

Thirty-eight of the 61 studies reviewed reported using a theoretical basis for predicting the experimental outcome. Of these 38, 28 employed learning-reinforcement theory as a model (e.g., Greenspoon, 1955, or Verplanck, 1955). Ten studies reported using a particular type of consistency theory as a basis. Five used cognitive dissonance theory (e.g., Wallace, 1966), four employed cognitive consistency theory (e.g., Harvey, Kelley, and Shapiro, 1957), and one study reported using cognitive balance theory (Engbretson, 1964). The particular studies using each of these theories are noted in Appendix A.

Methodology

The Response-Administering Agents

Response in the feedback studies was administered by two types of agents: a single experimenter, or an audience.

Experimenter as response agent. The response-administering agent appeared as experimenter in 25 of the studies reviewed (e.g., Lucas, 1963). There were several variations of this role, however. In a number of studies the experimenter posed as an interviewer (e.g., Gergen, 1965). In others he appeared as a class instructor (e.g., Cameron, 1963). In the Verplanck (1955) study, the experimenter was a participant in a casual conversation.

Audience as response agent. The remaining 36 studies introduced the response-administering agent as an audience containing one or more individuals. This type of agent was varied four ways:

First, four studies used fictitious audiences. The responses were controlled by the experimenter. This type of audience was used in the Berger (1968) study, where Ss wrote essays that were read by a "group of students down the hall," and judged as persuasive or not persuasive. The response of that "group" was manufactured by the experimenter.

Second, 17 studies employed live audiences that were trained to administer a predetermined response. The Hylton (1968) experiment involved an audience trained by E to give either positive or negative responses, according to the assigned condition.

Third, eight studies administered response through a live, untrained audience, with the response manipulated by the experimenter. This technique was used by Scott (1957), who staged debates in which the audience voted on the winners. The experimenter then "rigged" the results according to pre-assigned win or lose conditions.

Fourth, seven experimenters used an untrained audience in order to utilize free, natural feedback. An example of this is the Leavitt and Mueller (1951) study, which observed the effects of free feedback on the effectiveness of message transmission.

The Response Recipients

This section will categorize the experimental Ss by the roles they played in the various feedback studies. The largest category of response recipients was a source encoding a continuous message. This category involved 29 studies. Twenty-five of these were oral encoding (e.g., Ring and Kelley, 1963) and four were written (e.g., Bostrom, Vlandis, and Rosenbaum, 1961). In 12 studies the Ss functioned as members of a group,

either in a social or task situation (e.g., Smith and Knight, 1959). Eleven experiments involved Ss as interviewees (e.g., Insko, 1965), four involved individuals performing a task (e.g., Frye, 1966), three involved classroom teachers (e.g., McNeil, 1962), and two used participants in a casual conversation (e.g., Cieutat, 1962).

The Response Channels

The channels used to administer the responses can be separated into verbal and nonverbal.

Verbal channels. The majority of the studies reviewed employed a verbal-oral channel to administer the responses. An example is the Miller (1964) study, which employed a single E to reinforce each S's behavior either positively ("good") or negatively ("no"). Another variation of the verbal channel is the verbal-written. The Videbeck and Bates (1966) study utilized a computer to administer a written response to Ss. Finally, in three cases the telephone was used as a verbal-interposed channel (e.g., Insko, 1965).

Nonverbal channels. Twelve studies used nonverbal channels in a face-to-face situation. An example of this is the Sarbin and Allen (1964) study, where a trained audience administered nonverbal cues to speakers delivering a belief-discrepant message.

In seven studies, nonverbal response was administered through interposed channels. Lott, Schopler, and Gibb (1955) presented task progress reports in graph form to Ss. Amato and Ostermeier (1967) and Combs and Miller (1968) trained audience members to signal responses with colored cards. The "General Electric Opinion Meter" was employed by Stolz and Tannenbaum (1963), and various light arrangements were used to signal audience reactions in studies by Huenergardt (1967a), Cahn (1966), and McNeil (1962).

The Experimental Settings

Eight different experimental settings were used for administering feedback responses. In 24 studies, a public speaking situation was used (e.g., Barwind, 1969). Twelve experiments placed the Ss in a small group setting (e.g., Molof, 1963). Eleven studies used interviews to administer the responses (e.g., Krasmer, Knowles, and Ullman, 1965). Four studies involved individual task performance (e.g., Hill, 1965), four involved essay writing (e.g., Berger, 1968), three were conducted in a classroom atmosphere (e.g., Leavitt and Mueller), two were staged as casual conversations (e.g., Verplanck, 1955), and one was an oral examination (Stolz and Tannenbaum, 1963).

Independent Variables Studied with Feedback

Two classes of independent variables were studied in connection with feedback. First, a number of categorized variables were measured and Ss were divided into groups according to certain observed characteristics. Second, a number of manipulated variables were used, in which Ss were assigned to different types of experimental treatments. The discussion below will list the categorized and manipulated variables used in the experimental feedback studies.

Categorized Variables

The category variables studied with feedback were test anxiety (Hill, 1965), number of years of teaching experience (Tuckman and Oliver, 1968), type of motivation: self, feeling, task, interaction (French, 1965; Frye, 1966; Gibb, Smith, and Roberts, 1955; Lott, et. al., 1955), personality types (Lucas, 1963), need for affiliation (Mikawa, 1963), need for influence (Berger, 1968), need for social influence (Sarbin and Allen, 1964), familiarity with the individual administering the response (Harvey, et al., 1957), attitude toward the topic (Mattox, 1967), self-esteem (Marshall, 1958), sex of the experimenter (Cieutat, 1962), skill level of the speakers (Barwind, 1969).

Manipulated Variables

The manipulated IVs studied with feedback were task responsibility treatments: individual, group, observer, group leader (Lewin, 1968), order of argument presentation: primacy, recency (Rosnow, 1966), expertise of the audience (Stotland, 1956; Huenergardt, 1967a), type of self-description given by S: accuracy hypocracy (Jones, Gergen, and Davis, 1962; Gergen, 1965), type of argument: same as belief, opposite to belief, off-neutral Scott, 1959b), publicness of failure (Stotland, 1956), intensionality of audience (Welke, 1967), order of reinforcement: superior, inferior (Sereno, 1964), type of feedback: continual vs. terminal (Molof, 1963), type of feedback: personal vs. impersonal (Gergen, 1965), type of speech: informative, persuasive (Bostrom, 1963), effort in message preparation (Gardiner, 1968), expectancy: high, low (Cohen, 1960), audience credibility: high, low (Engbretson, 1964), expected audience response (Goldstein and McGinnies, 1964), differential reward to a confederate and the subject (Miller, Zavos, Vlandis and Rosenbaum, 1961; Miller, 1964), and incentive magnitude (Berger, 1968).

Dependent Variables Measured

Four distinct categories of DVs have been measured in the feedback studies: the performance of the

source, the attitudes of the Ss receiving the response, the attitudes of the communication receivers, and various group measures. The following sections will expand each of the four categories, citing examples of studies where the various DVs have been measured.

Performance of the Source

The largest single category of DVs in the studies reviewed measured various performance characteristics of communication sources, including both delivery and content measures. The delivery measures observed the following: fluency (e.g., Miller, et al., 1961), utterance rate (e.g., Miller, 1964), voice loudness (Stolz and Tannenbaum, 1963), nervousness, eye contact, and bodily movement (Amato and Ostermeier, 1967), delivery ratings by a speech judge (e.g., Miller, et al., 1961), delivery ratings by an audience (e.g., Combs and Miller, 1968), and speaker estimates of speaking time (Miller, et al., 1961).

The content measures dealt with changes in speech content (Karns, 1964), ratings of content (Combs and Miller, 1968), quantity of content (Cieutat, 1962), ratings of language (Combs and Miller, 1968), frequency of opinion statements (Verplanck, 1955), frequency of plural nouns (Greenspoon, 1955), frequency of sentences beginning with first person pronouns (Videbeck and Bates,

1966), accuracy of message transmission (Leavitt and Mueller, 1951), and ratings of overall effectiveness (Combs and Miller, 1968).

Attitudes of the Source

The various measures dealing with attitudes of the source in the feedback studies were: attitude toward the topic under consideration (e.g., Hildum and Brown, 1956), attitude toward the communication receiver (e.g., Gardiner, 1968), attitude toward self: as a public speaker (e.g., Bostrom, 1963), self-credibility (Engbretson, 1964), self-ratings (Harvey, et al., 1957), self-evaluations (Stotland, 1956), self-hostility (Mikawa, 1963), self-esteem (Frye, 1966), self-report (Welke, 1967); concealment of opinion (Ring and Kelley, 1963), and attitude toward task performance (Engbretson, 1964).

Attitudes of the Receiver

The DVs dealing with receiver attitudes measured the following: attitude toward the topic about which the source communicated (e.g., Hylton, 1968) and attitudes toward the source (e.g., Mehrley and Anderson, 1968).

Group Measures

The various group measures observed in the

feedback studies were: defensive feelings (e.g., Gibb, et al., 1955), task efficiency (e.g., Lott, et al., 1955), group productivity (Smith and Knight, 1959), group ratings (e.g., Molof, 1963), group hostility (Mikawa, 1963), group attractiveness (Frye, 1966), openness of group relationship (Lucas, 1963), and empathy measures (Reddy, 1968).

A complete summary of the dependent variables used in the 61 studies reviewed can be found in Appendix A.

Methodological Problems

The studies involving feedback have not, for the most part, been hallmarks of methodological excellence. Even before examining the methodological issues, it was noted that over one-third of the studies reviewed offered no theoretical basis for predicting the results. Also, over one-fourth of the studies failed to state hypotheses. Without a theoretical or predictive base, it is difficult to establish sound methodological procedures for scientific investigation. Several of the weaknesses that appeared in the methods will be discussed below.

Control of Feedback Response

One of the primary concerns in experimental

feedback research should be the manipulation and control of receiver response. In a number of the studies reviewed, the response was not well controlled. In several experimental designs where the response was administered through verbal channels, the accompanying non-verbal channels were not controlled. Consequently, nonverbal cues may have confounded the results. Studies by Verplanck (1955), Miller (1964) and Vlandis (1964) are examples in which response was administered to the Ss through verbal-oral channels without controlling the non-verbal channels.

Conversely, a number of studies have controlled the feedback response so tightly that the manipulation may have lost its intended effect on the Ss. An example of this possibility is the Huenergardt study (1967a), where the S was told that 20 audience members were listening over an intercom in the next room, and that their responses would be signalled via a panel of 20 lights. While this setup eliminated all verbal cues the Ss may have doubted whether an actual audience was present.

Probably the best control of feedback was displayed in the Videbeck and Bates (1966) study. In the experimental setting, Ss were reinforced by printing on a computer console, which flashed "very good" each time the desired response was produced.

The solution to the problem of adequate control is to choose a response channel that Ss will believe, yet is capable of being controlled. A promising possibility is the isolated verbal-oral channel (e.g., Engbretson, 1964). The speaker can be briefly introduced to his audience, then taken to an isolated room where he is connected to the audience by an intercom. He can speak to them and hear their responses through an interposed verbal-oral channel, eliminating the nonverbal confounding possibility. This procedure, however, may make generalization of the results more difficult.

Manipulation checks

A manipulation check on feedback is necessary to confirm that each S has perceived the response (positive, negative, neutral, task-oriented, feeling-oriented, etc.) as the experimenter intended. Few studies that manipulated feedback have reported such a check. Examples of studies were careful manipulation checks have been made and reported are those by Huenergardt (1967a), Karns (1964), and Lucas (1963).

Other Methodological Weaknesses

Other weaknesses appeared in the experimental designs of the studies and the measurement techniques employed. A gross example of design weakness is the

Amato and Ostermeier (1967) study, which employed a trained audience to both administer the predetermined response and rate the speakers on delivery. Combs and Miller (1968) argue that Amato and Ostermeier's findings deserve a "response role" interpretation, and cannot be considered accurate audience ratings. Combs and Miller conducted a study which provides support for their assertion. The Combs and Miller criticism seems well founded, except for two points: first, the Amato and Ostermeier data do not bear out a "response role" pattern, and second, the Combs and Miller study was enough unlike the Amato and Ostermeier study to raise serious doubts about any comparisons made between the two studies.

Another example of design weakness can be found in the Verplanck (1955) study, in which the feedback channels were mixed. A number of interview situations were face-to-face, verbal and nonverbal, while others were interposed and verbal only. Yet, these different conditions were not separated in the statistical analysis.

The Goldstein and McGinnies (1964) study provides another example of faulty design control. Since Ss in this study both spoke to an audience, and discussed the issue with them, it was impossible to determine whether reinforcement was mediated by the speaking experience or the discussion experience.

Finally, weaknesses in measurement were observed

throughout the studies reviewed. In many studies, new measuring techniques were developed. Yet, there were few instances where the issues of reliability and validity were met.

The methodological problems in the communication feedback research have centered around operationalizing feedback, controlling the experimental design, and measuring the effects of feedback manipulations. Before these problems can be eliminated, researchers will have to meet such issues as manipulation checks, design control, and reliability and validity of measurement.

Results Found in the Feedback Studies

Performance of the Response Recipient: Delivery

Fluency. Of the 11 studies dealing with fluency, seven report that feedback produced a significant effect on fluency. Vlandis (1964) found that nonfluencies significantly increased when punishment was introduced in a speaking situation. Stolz and Tannenbaum (1963) report that negative feedback produced a significant increase in relative frequency of unfilled pauses. Blubaugh (1968) also found that total nonfluency was significantly greater with negative audience response than with positive. Miller (1964) reports that when a speaker received the same response as a speaker immediately preceding him, his nonfluencies differed

significantly from those of a speaker who received better or worse responses than the speaker preceding him. Miller, et al. (1961) report that when a speaker perceived that the speaker immediately preceding him was rewarded, he produced significantly more nonfluencies than if the speaker preceding him was not rewarded. In a study by Sereno (1964), approval from a listener produced a decrease in nonfluencies, while disapproval produced an increase. Amato and Ostermeier (1967) report that fluency was the speaking characteristic demonstrating the greatest change due to unfavorable response.

Results contrary to those cited above are reported by Karns (1964) who found that "aversive stimuli" (negative responses) were not highly related to nonfluency. Similarly, Mehrley and Anderson (1968) found that a speech receiving negative reactions did not contain significantly more nonfluencies than a speech receiving positive reactions. However, the fact that the speakers in the Mehrley and Anderson study were experienced academic debaters may account for this result. Miller, et al. (1961) found no difference between negative and positive response when measuring total fluency count means. In a finding somewhat related to audience response, Welke (1967) reports that verbal nonfluency did not increase as the degree of audience intensionality (closeness) increased.

In summary, support is offered for the two opposite views that fluency is and is not affected by audience response. However, a greater amount of evidence supports the view that audience response does have an influence on speaker fluency.

Utterance Rate. Studies measuring utterance rate in connection with feedback generally report that rate decreased with negative response and increased with positive response. Welke (1967) found that speakers spoke significantly slower as audience intensionality increased. Vlandis (1964) reports that total utterance was significantly decreased when the speaker received negative treatment. Sereno (1964) found that giving a speaker less favorable reinforcement for a second speech than for a first, produced a significant decrease in total utterance during the second speech. He also reports that approval produced a significantly higher total utterance, and that superior treatment (when reinforcement for speech two was more favorable than reinforcement for speech one) produced a nonsignificant increase in total utterance. Blubaugh (1968) found that rate of speaking and verbal output were significantly lower under negative audience conditions that under positive conditions.

Two studies report that feedback had no significant effect on utterance rate. Miller, et al. (1961)

found that utterance rate means were not significantly different in positive and negative conditions. Also, Karns (1964) reports that utterance rate was not highly related to aversive stimuli. A majority of the studies, however, report that utterance rate was significantly influenced by positive and negative audience response.

Time Measures. Stolz and Tannenbaum (1963) found that negative feedback significantly impaired both relative pause times and qualitative and quantitative production rates. Testing for the Ss' ability to judge the amount of time used in speaking, Miller, et al. (1961) found that speakers who received reward perceived the time of the speech as significantly longer than speakers who were not rewarded.

Voice Loudness. In the only study measuring voice loudness in connection with feedback, Stolz and Tannenbaum (1963) discovered that negative responses exerted a negligible influence on loudness, whereas positive responses produced a significant incarese in loudness.

Stage Fright. Stolz and Tannenbaum (1963) found that positive responses influenced stage fright only slightly, negative feedback produced a pronounced disruptive effect.

Nervousness, Eye Contact, Bodily Movement. Amato and Ostermeier discovered that unfavorable audience

responses produced lower audience ratings of speaker delivery, nervousness, eye contact, and bodily movement.

Delivery Ratings by a Speech Judge. In a study by Mehrley and Anderson (1968), judges did not rate speeches that received positive feedback significantly better than speeches that received negative feedback.

Performance of the Response Recipient: Content

Changes in Content. Karns (1964) reports that aversive stimuli produced noticable changes in speech content. "Essential changes," he reports, occurred significantly more often under aversive audience conditions.

Accuracy of Message Transmission. Leavitt and Mueller (1951), who tested communication effectiveness in varying feedback conditions, found that when no feedback was allowed, message transmission was significantly less accurate than when free feedback was allowed.

Frequency of Opinion Statements. After reinforcing opinion statements in a conversation setting, Verplanck (1955) found an increase in the frequency of opinion statements during positive reinforcement and a reduced frequency of opinion statements during extinction.

Frequency of Plural Responses. Reinforcing only plural responses in an experimental situation, Greenspoon (1955) found that "mm-hm" increased the frequency of

plural responses, and "huh-uh" decreased the frequency of plural responses.

Attitudes of the Communication Source

Attitude toward the Topic under Consideration.

Studies dealing with attitude toward the topic under consideration can be divided into three categories: a) situations in which sources encoded belief-discrepant messages, b) situations in which sources encoded belief-congruent messages, and c) situations in which sources responded to questionnaires.

Results from studies involving belief-discrepant messages are in general agreement. Scott (1957, 1959b), who studied attitude change in winners and losers of counter-attitudinal debates, found that winners changed their attitudes toward the side they debated more than losers or controls. He also noted that the effects of response reinforcement were preserved up to periods of at least ten days. In another study by Scott (1959a), Ss who were rewarded for arguing a position contrary to their initial opinions altered their attitudes in the direction of the expressed arguments.

Bostrom, et al. (1961) report that Ss who received "A's" for writing counterattitudinal essays changed their attitudes significantly more than those who received "D's."

In a recent study by Wallace (1966) Ss were rewarded for their performances after presenting counter-attitudinal arguments. Results showed that Ss rewarded for their performance showed greater attitude change toward the belief-discrepant view than Ss who were not rewarded.

Buckhout and Rosenberg (1966) found that Ss who were given positive reinforcement for agreeing with belief-discrepant statements and negative reinforcement for agreeing with belief-congruent statements, has significantly more affective and cognitive changes than Ss who were not reinforced, or Ss who were only positively reinforced for agreeing with belief-discrepant statements.

Goldstein and McGinnies (1964), who studied the effects of reinforcement on speakers who delivered belief-discrepant speeches to favorable and unfavorable groups and then discussed the issues with the groups, found that all speakers showed attitude change consistent with the arguments they delivered. However, speakers who discussed the issues with groups agreeing with their belief-discrepant speeches changed more in attitude than those speakers who discussed the issues with groups who disagreed with the position they presented.

Berger (1968) reports that after taking a belief-discrepant position, Ss with a high need-influence who successfully persuaded an audience to adopt that position

reported greater attitude change in the belief-discrepant direction than Ss with a low need-influence. However, there was little difference in amount of attitude change between high and low need-influence Ss who failed to persuade the audience.

Rosnow (1966) studied the contiguity effects of reward and punishment. As Ss delivered belief-discrepant arguments, he administered reward or punishment either immediately following a belief-discrepant agrument, or immediately following a belief-congruent argument. He found that when the two opposing arguments preceded and followed reward, the Ss' opinions changed in the direction advocated in the arguments closer in time to the reward. When the two opposing arguments preceded the followed punishment, Ss' opinions changed in the direction advocated in the arguments further in time from the punishment. He reports, however, that the effects were not long-lasting.

Sarbin and Allen (1964) report a unique finding, in which Ss who were given negative reinforcement for encoding belief-discrepant arguments changed in the belief-discrepant direction more than Ss who were given positive reinforcement. All Ss who were reinforced changed more than the Ss who received no reinforcement.

Turning to studies in which sources encoded belief-congruent arguments, Huenergardt (1967a) reports

that with speakers who argued in favor of their beliefs, reward strengthened their attitudes toward the topic, while punishment produced a weakening effect. Huenergardt also varied the expertise of the reinforcing agents. He found that punishment had a weaker effect on the speakers' attitudes when the reinforcing agents were low in expertise than when they were high.

In a study by Gardiner (1968) Ss were positively or negatively reinforced for encoding belief-congruent arguments. It was found that negative reinforcement strengthened attitudes already held by the speakers.

Mattox (1967) reports that speakers who strongly supported or strongly opposed a highly controversial proposition did not reverse their attitudes after receiving negative feedback. He states that "listener feedback does significantly shift strongly held convictions toward a strengthening of the initial opinion."

Cahn (1966), who studied the effects of simulated audience feedback, found no differences in attitude change among groups of speakers receiving positive, negative, or no reinforcement. Barwind (1969) also found that positive and negative audience responses had no significant effect on speaker attitudes toward the topic.

Finally, a number of studies were conducted that reinforced attitudes in telephone interviews. Hildum

and Brown (1956) report that "good" effectively reinforced both positive and negative attitudes. Insko (1965) found that opinions reinforced by telephone were still in force when measured a week later.

In summary, the results seem to indicate that when a source receives positive response for encoding a belief-discrepant position, he will change his attitude in the direction of his stated position. However, if the source receives negative response for encoding a belief-discrepant message, or receives positive or negative response for encoding a belief-congruent argument, his initial attitude will either not be affected at all or will be strengthened.

Attitude toward the Communication Receiver. Studies dealing with feedback and the source's attitude toward the receiver nearly all report that positive response induces positive receiver ratings, while negative response induces negative receiver ratings.

Engbretson (1964) found that positive feedback produced an increase in perceived credibility of the response agent, and that negative feedback generally produced a decrease in S's perceived credibility of the response agent.

Harvey, et al. (1957) report that as the evaluation of a source became more negative, the source tended to devaluate the initiator of the evaluation. The above

researchers also studied evaluations of the Ss by peers. They found that extremely negative evaluations from acquaintances were handled in different ways, depending on how positively the acquaintance was valued at the outset: if he was highly valued, his evaluations were distorted; if he was less well regarded, he was devaluated.

Marshall (1958) found that attitudes toward others were not changed by Ss after receiving favorable appraisals. However, less favorable attitudes toward others were observed when the Ss were subjected to unfavorable appraisals.

Huenergardt (1967), who varied reward (10% to 90%) from an audience to a speaker, found that increased reward from the audience resulted in higher audience ratings by the source.

In a recent study, Gardiner (1968) found that speakers who received negative audience response rated the audience significantly lower than speakers who received positive audience response.

Closely related to attitude toward audience are two studies that measured empathy and social approval. Reddy (1968) reports that Ss' levels of empathy were increased as a consequence of receiving immediate feedback. Faules (1967) found that interviewers with a high need

for social approval were low in ability to predict interviewee attitudes.

The research results on speaker attitudes toward the receiver (response agent) are in strong agreement: sources who receive positive response will develop a favorable attitude toward the receiver, whereas sources who elicit negative response will develop a more negative attitude toward the receiver.

Attitude toward Self. Researchers studying the self-attitudes of communicators have used a variety of measures; self-evaluation, self-credibility, self-ratings, attitude toward self, attitude toward performance, self-esteem, etc. Most research studies dealing with self attitudes report that a favorable response will elicit a positive self-attitude, and that an unfavorable response will elicit a negative self-attitude.

Marshall (1958) reports that Ss showed no change in self-attitudes after receiving favorable appraisals. However, unfavorable appraisals of the Ss elicited less favorable self-attitudes.

Cohen (1960) and Stotland (1956) both studied self-evaluation under experimentally-induced success and failure conditions. Cohen reports that success led to increases in self-evaluation and failure led to decreases in self-evaluation. Stotland found that public awareness

of failure generated lower self-evaluations by Ss than private failure.

Engbretson (1964) studied self credibility under varying conditions of experimentally induced self credibility, source credibility, and type of response from a task partner. He found that perceived self credibility increased under conditions of: a) high self credibility and positive response from a high credible source, b) high self credibility and positive response from a low credible source, and c) low self credibility and positive response from a high credible source. He also found that self-credibility decreased under conditions of low self-credibility and negative feedback from a high credible source. Engbretson reports that self-credibility was a relatively stable variable, and that three of the four significant changes in self-credibility occurred under positive feedback conditions.

Two studies have reported using self-ratings as a dependent measure. Harvey, et al. (1957) found that Ss who received unfavorable evaluations tended to shift their self-evaluations in an unfavorable direction. Jones, et al. (1962) asked interviewees to describe themselves either accurately or falsely. They found that Ss described themselves more favorably under hypocracy conditions than under accuracy conditions. Also, the Ss became more self-deprecatory after receiving negative feedback than after receiving positive feedback.

Huenergardt (1967) reports that a high percentage of approval from the audience resulted in high ratings by speakers of their own speaking ability.

Frye (1966), who studied self-esteem and its relation to an individual's influence on his group, reports that self-esteem was dependent on the degree of successful influence of the group member. If the group member successfully influenced the group decision, his self-esteem increased regardless of the effect of his influence.

Gergen (1965) reports that Ss' self-descriptions became more positive during feedback than in conditions where no feedback was present.

The single study reporting results contrary to the above group of studies was conducted by Mikawa (1963). He reports that significantly higher self-hostility scores were obtained when Ss were given approval feedback than when they were given rejection feedback.

Attitudes toward Task Performance. Two studies have dealt specifically with attitudes toward task performance. Lewin (1968) induced conditions of success and failure and observed the effects on each S's level of aspiration. He found that levels of aspiration under failure lagged behind levels of achievement, whereas no such lag was observed under induced success conditions.

Engbretson (1964), who studied source credibility,

self credibility, and perceived task difficulty, reports that perceived task difficulty increased under conditions of a) high self credibility and negative feedback from a high credible source, b) high self credibility and negative feedback from a low credible source, and c) low self credibility and negative feedback from a high credible source. He also found that perceived task difficulty was decreased under conditions of a) high self credibility and positive feedback from a low credible source, b) low self credibility and positive feedback from a high credible source, and c) low self credibility and positive feedback from a low credible source.

Attitudes of the Communication Receiver

A very limited amount of research has investigated the effects of audience response on the attitudes of other audience members. Only two studies have been reported on this issue. Hylton (1968) explored the effects of a trained group of listeners (one-half of the audience) on the remaining half of the audience, who were naive listeners. He found that when naive Ss were mixed with confederates who gave positive responses to the speaker, the naive Ss' attitudes toward the topic and toward the speaker were significantly more positive than the attitudes of Ss mixed with confederates who gave negative responses.

Mehrley and Anderson (1968), who also studied the effects of audience response on other audience members, attempted to separate the audience effects from the speaker effects. They accomplished this by videotaping speeches that received positive and negative responces from a trained audience. The videotapes were played to naive Ss, in order to observe the effects of positive and negative responses administered by a former audience. Mehrley and Anderson report that speeches having received positive response from a former audience did not produce a significantly greater amount of attitude change than speeches having received negative audience response.

Group Measures

Several studies have explored feedback and its effects on group behavior. Variables that have been measured in connection with feedback are attitude toward the group, defensive feelings, and group productivity.

While studying Ss' attitudes toward the group, Mikawa (1963) observed significantly higher group-hostility scores with rejection feedback than with approval feedback.

Three studies report the effects of feedback on defensive feelings of group members and group productivity. Gibb, et al. (1955) report that positive

feedback produced significantly fewer defensive feelings and significantly greater task efficiency than negative feedback. They also found that feeling feedback produced significantly fewer defensive feelings and significantly higher task efficiency than task feedback. Lott, et al. (1955) also report that positive feedback produced significantly greater task efficiency than negative feedback. A third study by Smith and Kight (1959) reports that personalized feedback consistently improved group problem-solving efficiency.

Molof (1963) investigated the effects of success and failure on judgments in small decision-making groups. He found that experimentally induced success-failure and continual-terminal feedback variables did not provide differential contexts for predicting judgments.

Cieutat (1962), who studied social conversation in a small group situation, found it possible to alter the quantity of social conversation with nonverbal reinforcement.

From the experimental results involving feedback and group measures, it can be concluded that feedback has pronounced effects on individual attitudes, defensive feelings, and task efficiency. Positive feedback improves attitudes, feelings, and efficiency, while negative feedback produces a deteriorating effect.

Conclusions about Feedback

From the results cited above, it is possible to draw a number of general conclusions about feedback as a communication variable. This section will present seven such conclusions.

1. There is strong evidence that negative audience response inhibits speaker delivery. This effect has been observed in fluency, utterance rate, voice loudness, nervousness, stage fright, eye contact, and bodily movement.

2. Studies investigating the effects of feedback on speech content demonstrate that certain message characteristics can be strengthened by reinforcement, that free feedback increases the accuracy of message transmission, and that "essential changes" in content are effected by aversive receiver responses.

3. Feedback's impact on a source's attitude toward his topic depends on whether he presents a belief-consistent or a belief-discrepant message. When the source receives positive responses for defending a belief-discrepant position, he will likely change his attitude in the belief-discrepant direction. When he receives negative responses for defending a belief-discrepant position, he will likely maintain his initial position. However, if the source argues from a

belief-consistent position, both positive and negative audience response may have either a strengthening effect or no effect on his original attitude.

4. Sources who receive positive audience response will develop more favorable attitudes toward themselves and toward the audience than sources who receive negative audience response.

5. Negative feedback will cause Ss to raise their perceptions of task difficulty and to lower their levels of aspiration.

6. Studies investigating the effects of audience feedback on other audience members report that positive feedback presented in the presence of naive audience members will move their attitudes in a favorable direction, while negative feedback presented in their presence will influence them in the opposite direction. Other results suggest that the effects of one audience member's response on another audience member's attitude is direct in nature, and does not depend on modifications produced in a speaker's behavior for mediation.

7. From studies investigating feedback and group behavior, it can be concluded that positive feedback reduces group hostility, produces fewer defensive feelings among group members, and increases group task efficiency, while negative feedback produces the opposite effects.

CHAPTER III

THEORY AND HYPOTHESES

The purpose of this chapter is to develop a theoretical rationale, based on cognitive balance theory, for predicting attitude change in varying feedback situations. A definition and theoretical rationale will be presented first, followed by the hypotheses tested in this study.

For the purposes of this study, feedback is defined as an adaptive process in which the source adjusts his attitudes as a result of expected and perceived output from a receiver.

The communication source brings a number of salient cognitions into the communication situation. First, he has an attitude toward the topic about which he plans to communicate. Second, he has a number of expectations toward his performance, based on the extent to which he has prepared and the success or failure of his previous performances. Third, he has an attitude toward the receivers. The salience of this third attitude depends on the source's knowledge about the

receivers, particularly knowledge of their attitudes toward the issue about which he intends to communicate.

While the communicator enters the situation with the above attitudes, it is highly unlikely that they will remain unchanged during the communication process. It is likely that the situation will add new cognitions. Important among these are the receivers' dynamic reactions, which express their acceptance or rejection of the message. The receivers' responses will likely affect the source's attitude toward the receivers, his expectations of success or failure, and his attitude toward the concept about which he is communicating. In the Scott studies (1957, 1959a, 1959b) reviewed above, it was hypothesized that the receivers' reactions to the message would significantly affect the source's attitude toward the topic. The results supported this prediction.

Another important cognition added by the communication situation is the source's judgment of the success or failure of his communicative effort. This judgment is influenced by the source's expectations of success or failure and by the receivers' responses. Selectivity also plays an important role in determining the source's judgment of his success or failure. The source may receive a negative response from a receiver and perceive it as positive, or vice versa. The Amato

and Ostermeier (1967) study provides an example where selectivity was likely in operation. A speaker who had received negative responses from the audience reported getting a positive reaction.

Three particular types of selectivity were dealt with in the study reported here. Selective exposure was controlled by assigning Ss to either positive or negative audience conditions. Selective attention was controlled by placing the audience around a large table with each audience member directly facing the speaker. This minimized the chances of the speaker "tuning out" the audience response. Finally, selective perception was measured in the study by asking each speaker what type of responses he had received while speaking. The speakers' responses were compared to the type of reactions the audience actually gave. Any discrepancies found in the comparisons were considered to be evidence of selective perception.

Once the communication event has taken place, the source will likely emerge with the following salient cognitions: 1) An attitude toward the concept about which he communicated. 2) An attitude toward his performance. 3) A perception of the receivers' attitudes toward his performance. 4) A perception of the receivers' attitudes toward the concept about which he communicated. 5) An attitude toward the receivers.

Whether or not the source's attitude twoard the concept (item one above) is changed during the communication event depends a great deal on the source's initial attitude toward the topic. Studies by Scott (1957, 1959a, 1959b) and Bostrom, et al. (1961) have found that when the source is initially opposed to the concept he advocates, there is potential for a significant amount of attitude change. However, when the source is initially favorable toward the concept about which he is communicating, as in the Gardiner (1968) study, no significant attitude change may take place. Since the study described here involved a source encoding a belief-congruent message, no attitude change toward the topic was expected.

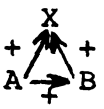
The major focus of this study was on the source and his attitudes toward his performance and toward the recievers. These two attitudes were measured as the dependent variables of the study.

A secondary concern was placed on the source's attitudes toward the topic, along with the source's perceptions of the receivers' attitudes toward his performance and toward the topic.

Balance Theory Predictions

Cognitive consistency theory posits that an individual is in a natural cognitive state when all salient

cognitions are consistent (Festinger, 1957). When two or more inconsistent ideas become salient, the cognitive state becomes unbalanced. The individual then behaves in a manner designed to restore balance.

Balance theory, a type of consistency theory, predicts cognitive outcomes in relations between individuals and events. Newcomb (1953), who adapted balance theory to communication events, developed "systems of orientation," consisting of the orientation of A (a communication source) toward B (a communication receiver) and X (the object communicated about), as well as A's perception of B's orientation toward X. Each of the three orientations in the system can vary from positive to negative. An orientation can be described as an attitude, a predisposition, or an evaluative judgment. Such a system of orientation can be depicted as follows 

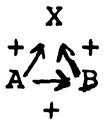
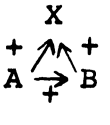
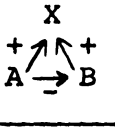
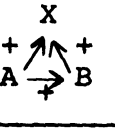
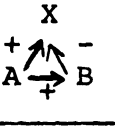
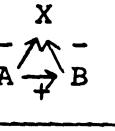
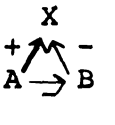
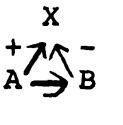
. In the system just shown, A has a positive orientation toward both B and X. Also, according to A's perceptions, B has a positive orientation toward X. This is a balanced system, as will be explained below.

According to Heider (1946, 1958), systems with three positive relations, or with one positive and two negative relations, are balanced. Conversely, systems with one negative and two positive relations, or with three negative relations, are not balanced. As a type of consistency theory, balance theory predicts that when

the system is in a state of imbalance (i.e., it has one negative and two positive relations, or three negative relations), the individual will change one or more of the orientations in order to restore balance.

The reader is asked to recall the communication situation mentioned above, in which a source delivers a message, perceives a dynamic response from the receivers, and emerges with a number of new cognitions. It is possible to view the above situation in a balance theory paradigm, where A represents the communication source, B represents the receiver, and X represents A's performance. The A→B relationship corresponds to the source's attitude toward the receiver. The A→X relationship represents the source's attitude toward his performance. Finally, the B→X orientation is the source's perception of the receiver's attitude toward his performance. These variables will be operationalized in more detail in Chapter IV.

Figure 2 presents four balance theory paradigms that were tested in this study. The chart will include the following: 1) The manipulation of expected audience response (EAR). 2) Perceived audience response (PAR). 3) The experimental inductions, expressed as balance theory systems. 4) The predicted experimental outcomes, also expressed as balance theory systems. 5) The specific predictions which led to the study's hypotheses.

Condition	Expected Audience Response	Perceived Audience Response	Initial Experimental Induction	Predicted* Cognitive Outcome
1	Positive	Positive		
2	Negative	Positive		
3	Positive	Negative		
4	Negative	Negative		

* Specific Predictions:

1) Attitude Toward Audience (A→B): 3 and 4 < 1 and 2
   1 = 2
   4 < 3

2) Attitude Toward Performance (A→X): 3 and 4 < 1 and 2
   1 = 2
   3 < 4

Figure 2. Balance Theory Predictions

Condition One describes a situation where a source with a positive attitude toward his performance and a positive attitude toward the receiver, perceives that the receiver also has a positive attitude toward his performance. According to balance theory as developed by Heider (1958), Condition One represents a balanced system. Therefore, in this study it was predicted that individuals performing under positive EAR and positive PAR conditions would emerge with positive attitudes toward their performances and toward the receivers.

Condition Two represents a situation where the source has a positive attitude toward his performance, a negative attitude toward the receiver, and perceives that the receiver has a positive attitude toward his performance. The above system, according to balance theory, is cognitively inconsistent, and a change in one or more of the attitude states is expected. Two possible changes can be made. First, A can change his attitude toward B from negative to positive, creating a balanced state. Second, A can change his attitude toward X from positive to negative, and restore consistency. As shown in Figure 2, it was predicted that the source, perceiving a receivers' positive reactions to his performance, would develop a more positive attitude toward the receivers, rather than a more negative attitude toward his performance. It was reasoned that the

speaker's attitude toward his performance was more ego-involved than his attitude toward the audience. Since the audience, which was initially negative, displayed a positive attitude toward his performance, it would be easier for the speaker to increase his esteem of the audience than to devalue his performance. Also, since it was evident to the speaker that he had been a success (i.e, he had convinced a hostile audience), he would not likely derogate his performance. Therefore, positive audience ratings and positive performance ratings by the speaker were predicted in Condition Two.

Condition Three describes a situation where the source has positive attitudes toward both his performance and the receivers. However, the receivers are perceived as having negative reactions toward his performance. According to balance theory, this state is cognitively inconsistent. Again, two possible changes can be made. The source can develop a more negative attitude either toward his performance, or toward the receiver. As shown in Figure 2, it was predicted that the source would devalue his performance, rather than the audience. It was reasoned that since the speaker knew the audience was favorably disposed toward his topic before the performance, he would blame his performance for the negative response. While the source's attitude toward the

audience in Condition Three was expected to be positive, it was predicted to be significantly less positive than the attitudes of the sources in Condition One, who expected positive response and received positive audience response. The reason for this seeming contradiction is that two personality types were operating in all conditions. However, in Condition Three personality differences become crucial. It was reasoned that speakers with high self-esteem would restore balance in Condition Three by devaluing the audience, while speakers with low self-esteem would resolve the imbalance by derogating their performances. In the present study, a lack of Ss kept these personality differences from being measured and observed. Nevertheless, as stated above, the predictions made allowances for both personality types to function.

In summary, it was predicted in Condition Three that some of the speakers (those with low self-esteem) would restore cognitive balance by devaluing their performances, while the high self-esteem speakers would restore balance by derogating the receivers. It was predicted that the results would produce strongly negative performance ratings and weakly negative audience ratings.

Condition Four represents a situation where the source has a positive attitude toward his performance, a negative attitude toward the receiver, and perceives

that the receiver has a negative attitude toward his performance. According to balance theory, this state is cognitively balanced. As shown in Figure 2, it was predicted that the source would develop a highly negative attitude toward the receivers, while his attitude toward his performance would remain positive. It should be noted that although the source's attitude toward his performance was predicted as positive in Condition Four, it was expected to be significantly less positive than the source's attitude toward his performance in Condition Two. In summary, two attitudes were predicted for the speakers in Condition Four: 1) A highly negative attitude toward the receiver. 2) A weakly positive attitude toward the performance.

From the above rationale and the predicted cognitive outcomes shown in Figure 2, the following hypotheses were formulated for this study:

Hypotheses

I. There will be an interaction between EAR and PAR on performance ratings by the speaker, to the effect that: Speakers in the negative EAR condition who receive negative PAR will rate their own performances higher than speakers in the positive EAR condition who receive negative PAR.

II. Speakers who receive positive PAR will rate their own performances higher than speakers who receive negative PAR.

III. There will be an interaction between EAR and PAR on audience character and authoritativeness ratings by the source, to the effect that: Speakers in the positive EAR condition who receive negative PAR will rate the audience higher in character and authoritativeness than speakers in the negative EAR conditions who receive negative PAR.

IV. Speakers who receive positive PAR will rate the audience higher in character and authoritativeness than speakers who receive negative PAR.

CHAPTER IV

METHOD

This chapter will discuss in detail, the method used to test the hypotheses of this study, including the experimental design, the subjects (Ss) and confederates (Cs) involved, the procedures by which the above methodological elements were implemented, the techniques of measurement employed, and the methods of statistical inference used.

Experimental Design

Kerlinger (1964) describes research design as a strategy of scientific investigation, formulated for two purposes: a) "to provide answers to research questions" and b) "to control variance (p. 275)." According to Kerlinger, an adequate design will aid the researcher in deciding which observations to make, which variables to control and observe, and which types of statistical tests to use.

The design employed for this study was a 2x2 factorial. Winer (1962) points out that "factorial experiments permit the evaluation of interaction effects (p. 140)."

The evaluation of an interaction enables the researcher to observe how experimental variables operate in combination with one another, as well as how they operate in isolation. By utilizing a 2x2 design in this study, it was possible to observe the main effects for PAR and the predicted interaction effects between PAR and EAR.

According to Kerlinger (1964), the second purpose of experimental design is to control variance. The adequate research design, he notes, will maximize the variance of the variables in the substantive research hypothesis, control the variance of extraneous or unwanted variables, and minimize the error or random variance.

In the present study, two variables (Expected Audience Response and Observable Audience Response) were manipulated as a part of the design, two variables (prior attitude toward the topic and sex) were controlled, and three variables (attitude toward the receiver, attitude toward the performance and PAR) were measured. The major purpose of the design was to maximize the variance produced by EAR and PAR, and control the variance caused by attitudes toward the topic. The following section will offer an operational definition of the variables involved in the study.

Operational Definitions

Expected Audience Response (EAR): The Ss' expectations of the audience's response, based on information given the Ss by the experimenter (E) regarding the audience's attitudes toward their topics.

Positive EAR: A condition in which the Ss were informed that the audience held a favorable attitude toward their position.

Negative EAR: A condition in which the Ss were informed that the audience held an unfavorable attitude toward their position.

Observable Audience Response (OAR): The nonverbal response given by the receivers as the S delivered his message.

Positive OAR: A pre-determined set of favorable receiver reactions which included smiling, agreeing with the source, listening attentively, applauding at the end of the message, etc.

Negative OAR: A pre-determined set of unfavorable receiver reactions which included frowning, head-shaking, slouching, looking around the room, disagreeing with the source, etc.

Perceived Audience Response (PAR): The Ss' post-communication perceptions of the responses given by the audience as they delivered their messages.

Positive PAR: The Ss' postcommunication perceptions that the responses given by the audience were favorable.

Negative PAR: The Ss' postcommunication perceptions that the responses given by the audience were unfavorable.

Attitude toward the receiver: The Ss' postcommunication responses to semantic differential credibility scales directed at evaluatively describing the receiver of their messages.

Attitude toward performance: The Ss' postcommunication responses to evaluative semantic differential scales describing the relative quality of their performances.

Attitude toward topic: The Ss' evaluative predispositions toward the topics of their messages. This variable was presumably controlled by asking each S to choose a topic toward which he was strongly favorable.

To review the design, sex and prior attitude toward the S's topic were controlled. EAR and OAR were manipulated to form four experimental conditions:

1. Positive EAR and Positive OAR: Each S had been informed that his receivers favored his position, and while encoding a persuasive message he was provided with favorable OAR.

2. Negative EAR and Positive OAR: Each S had been informed that his receivers opposed his position, but he was given positive OAR during the performance.

3. Positive EAR and Negative OAR: Each S had been informed that his receivers favored his position, but he was provided negative OAR while encoding the message.

4. Negative EAR and Negative OAR: Each S had been informed that his receivers opposed his position, and he was provided negative OAR.

Subjects and Confederates

Subjects

The Ss involved in this study were 53 students enrolled in Communication 305--Persuasion, at Michigan State University during the winter quarter of 1969. There were certain advantages to using this particular group as Ss. First, the students were not, for the most part, beginning public speakers. The majority of them had taken as a prerequisite, Communication 101--Public Speaking, where they had given six speeches.

Second, it was possible to introduce the experimental study as a course assignment. The students were not aware of the experimental nature of the project until debriefing took place.

Third, Communication 305 met as a mass group. The researcher did not have to settle for "sampling of convenience" by taking intact sections. Dealing with only one group enabled E to randomly assign the Ss to conditions,

keep all instructions constant, and debrief the group in a single session.

The nature of the experiment enabled the experimenter to make it a valuable educational experience for the S. In the debriefing, many Ss expressed that they considered participation in the project a worthwhile endeavor.

The Ss were assigned to the four experimental conditions by stratified random sampling, according to sex. "Stratified sampling," according to Anderson (1966), is used to "stratify, or classify, the population on the variable one wishes to control (p. 68)." As noted earlier, sex was a variable the experimenter wished to control in the design.

Thirty-two males and 27 females were originally included in the design. However, one male and three females failed to appear for the experimental session. Also, two female Ss who participated had to be discarded from the results. One reported that she perceived the purpose of the project and could not give a true reaction. A second accidentally overheard one of the experimental assistants talking about the nature of the experiment. After attrition, the total number of Ss was 53, including 31 males and 22 females.

Confederates

Along with the Ss in the experiment, it was necessary to employ a number of confederates (Cs) to serve as an audience and administer negative and positive response to the Ss. Thirteen students from Inquiry and Expression 102--Speech, at Michigan State University's Justin Morrill College served as the audience for all experimental conditions, and administered the appropriate response to each S involved. Since the Cs were his own students, E had ample occasion to train them for the task of administering response to the speakers.

The following steps were taken to insure that the audience, a critical element in the experiment, was a constant variable:

1. During two one-hour sessions prior to the experiment, E trained the Cs to administer both positive and negative response to speakers.

2. Each C was given two specific assignments:[1] one set of instructions indicated his role in administering positive response, and the other indicated his negative response role. There were 13 different sets of positive and negative roles,--one for each C. Each C was trained to perform an identical role for each positive condition and an identical role for each negative condition.

[1]For a summary of the assignments, see Appendix B.

3. Cs were seated in the same order for all experimental sessions.

4. Each C was instructed to wear the same clothing to each session.

5. A triple check was made, to insure that the Cs administered the correct OAR induction:

a. Each C had a list indicating the type of response assigned to each S.

b. One C was designated as leader. She signaled the proper response before each speech began, and was instructed to signal the group if any improper responses were given.

c. E viewed each persuasive performance from outside the room through a small window directly behind the speaker. All responses, according to the judgment of E, were consistent with the assigned responses.

Procedures

The procedures of the experiment were carried out as follows:

Week 1. The experimenter was introduced to the Communication 305 class as the instructor in charge of the first speaking assignment. At this time, E announced that each student was to prepare a five-minute persuasive speech on a topic he strongly believed in. A handout was given the students, entitled "Persuasive Assignment #1: Speaking

to a Live Audience."[2] At this time two ideas were introduced to the class. First, it was stressed that innovative methods of teaching communication skills would be introduced, and that student reactions to these new methods would be measured. Second, it was pointed out that the first speech would be given to a live audience, arranged by the instructor. E promised to help the class analyze the audience by providing a profile of the audience's attitudes, social makeup, professional goals, etc.

Week 2. Ss handed in a statement of their topic and purpose to the instructor. He promised to test the prospective audience's attitudes toward each topic, and report the results a week later. The Ss were also instructed not to change their speech topics.

Week 3. The Ss were handed a profile[3] of the audience. The information concerning the audience attitudes was manipulated according to the experimental condition to which each S had been assigned. The Ss were instructed to complete their message preparation, utilizing the audience information. Also during the third week the Cs were trained to administer audience responses to the Ss.

Week 4. The speeches were delivered during four three-hour evening sessions. Each S signed up for a

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[2]For a copy of the assignment, see Appendix C.

[3]For a copy of the profile, see Appendix D.

specific time to speak. At his assigned time, the S reported to E's office. The S was then ushered to a nearby classroom where the audience was waiting. Ss were not allowed to observe the experimental treatment being administered to other Ss. E introduced each S to the Cs and promptly left the room. When the S had finished, he was led to another classroom. There he was administered the dependent measures, which were presented as a "Speaker Reaction Inventory."[4] Once each S had completed the questionnaire, he was dismissed.

Measurement

In order to test the hypotheses of this study, four separate measures were necessary: 1) a manipulation check on EAR, 2) a manipulation check on OAR (i.e., a measure of PAR), 3) a measure of the Ss' attitudes toward the audience, and 4) a measure of the Ss' attitudes toward their performances.

Manipulation checks

The purpose of a manipulation check is to determine whether a given value of a variable has been perceived by the Ss as E intended. For example, the E who approaches Ss with a strong fear-arousing message will need to measure whether or not the Ss perceived the message as fear-arousing.

[4]For copies of the dependent measures, see Appendix E.

In this experiment, two manipulation checks were needed. First, it was necessary to observe whether the Ss had built the expectation of audience response that E had intended. The following scale measured the Ss' perceptions of EAR:

What type of attitude did your audience have toward your topic before you spoke to them?
___ Favorable
___ Neutral
___ Unfavorable

Second, and even more crucial, was the check on each S's perception of OAR. Amato & Ostermeier (1967) reported finding that a speaker who had been given obvious negative responses reported receiving positive response. The manipulation check on OAR was used to expose any instances of selective perception in the study. The scale used to check OAR was as follows:

What type of response did you receive from the audience as you spoke?
___ Highly positive
___ Moderately positive
___ Slightly positive
___ Neutral
___ Slightly negative
___ Moderately negative
___ Highly negative

Dependent Measures

The first DV measured the Ss' attitudes toward the audience, which can also be termed "audience credibility." Therefore, a credibility measure was employed as an index of the Ss' attitudes toward the receivers.

Berlo, Lemert, and Mertz (1966) developed a measure for determining the acceptability of message sources. In their two factor analytic studies they found three "meaningful and statistically independent dimensions" for source credibility (p. 18). These dimensions are safety, qualification, and dynamism. Berlo and his researchers worked primarily with semantic differential scales. They suggest 15 scales, five for each dimension, as a reliable measure of source credibility.

McCroskey (1966) also tested a number of semantic differential and Likert-type scales for measuring source credibility. After testing for validity, he concluded that his scales are a representative sampling of the universe of items pertaining to ethos (source credibility). Unlike Berlo, McCroskey found only two dimensions of source credibility: authoritativeness and character. Lately, however, he has reported finding weak evidence of another dimension which he, like Berlo, calls dynamism.

For the purpose of measuring the source's attitude toward the receiver (audience credibility) it was decided to combine the scales developed by Berlo, et al., and McCroskey. The scales used were as follows:

Character: (Safety)	Cruel--Kind, Valuable--Worthless, Just--Unjust, Unpleasant--Pleasant, Selfish--Unselfish, Awful--Nice, Honest--Dishonest, Reliable--Unreliable, Virtuous--Sinful, Safe--Unsafe, Unfriendly--Friendly.

Authoritativeness: (Qualification) Skilled--Unskilled, Qualified--Unqualified, Expert--Inexpert, Uninformed--Informed, Trained--Untrained, Intelligent--Unintelligent, Experienced--Inexperienced

Dynamism: Active--Passive, Energetic--Tired, Timid--Bold, Emphatic--Hesitant, Aggressive--Meek.

Since the above scales had not been tested as a measure of "audience credibility," they were submitted to a factor analysis to determine whether the same dimensions held as when Berlo, et al. (1966) and McCroskey (1966) tested them on sources. The number of Ss being small (53) made the factor analysis a questionable procedure. However, it was decided that proceeding with the analysis would be better than using only subjective judgment to group the data.

The second DV measured the Ss' attitudes toward their performances. Fifteen semantic differential scales were constructed for this purpose by the experimenter. Eight of the scales were evaluative, and the others were employed as distractors. In order to determine which scales to use as the dependent measure, the 15 scales were submitted to factor analysis. The scales used to test the Ss' attitudes toward their performances were:

Evaluative: Good--Bad, Fearful--Fearless, Well Delivered--Poorly Delivered, Beneficial--Harmful, Perfect--Imperfect, Unfriendly--Friendly, Poor in Content--Good in Content, Adaptive--Nonadaptive.

Distractors: Forceful--Forceless, Self-Conscious--Confident, Direct--Indirect, Strong--Weak, Timid--Bold, Speaker Centered--Audience Centered, Message Centered--Audience Centered.

Statistical Inference

It was necessary to complete the statistical analysis of the data in two phases. First, a preliminary analysis was run. Second, the data were submitted to a major statistical analysis.

Preliminary Analysis

Manipulation checks.--The purpose of the first manipulation check was to determine whether the Ss had perceived the EAR variable as the E had intended. The method used to analyze this check was simply looking at each S's results and comparing his perception of EAR with his assignment to an EAR condition.

The purpose of the second manipulation check was to determine whether the Ss had perceived OAR as the Cs had administered it. The results of the OAR check were submitted to a chi square analysis for significance of difference. Also, the experimenter checked each S's response by comparing his PAR with his assignment to OAR.

Factor Analysis.--The individual scales for each of the DVs were submitted to a factor analysis. Twenty-three items were analyzed from the audience credibility DV, and 15 items were analyzed from the attitude toward

performance DV. Results of the factor analysis were interpreted as follows:

Each item in the analysis was considered independently. A judgment was made about which factor, if any, each item "loaded" onto. This judgment was based on the relative magnitude of the factor loadings for the item on each of the factors. The standard established as a criterion was a loading of .60 or above for the factor on which the item received its highest loading, and a loading of .40 or below for the remaining factors. Consider, for example, the following hypothetical factors, items, and factor loadings:

Item	Factor			
	1	2	3	4
1	.2	.8	.1	.1
2	.6	.1	.6	.2

The first item above, according to the criterion used for the factor analysis, would be judged as loading on the second factor, since its loading under factor two is above .60 and its loadings on all the other factors are below .40. The second item, however, is split between the first and the third factors, and cannot be considered part of either factor.

Once an independent judgment had been made for each item on each of the DVs, the scores in each factor were summed and prepared for the major statistical analysis.

Major statistical analysis

Before conducting a statistical analysis of the data, the researcher had to decide whether to employ parametric or nonparametric statistical tests. Siegel (1956) describes parametric tests as those statistics which have stronger or more extensive assumptions. Nonparametric statistics, he points out, restrict the researcher to making more general conclusions about his data. Before parametric statistics can be used, the following assumptions must be met:

1. The observations must be independent.
2. The observations must be drawn from normally distributed populations.
3. The populations must have the same variance.
4. The variables involved must have been measured in at least an interval scale.
5. The means of the populations must be linear combinations of effects due to columns and/or rows (Siegel, 1956, p. 19).

Siegel adds that with the exception of the third assumption (homogeneity of variance), the conditions outlined above are not normally tested in an experiment. Rather, they are "presumptions which are accepted (pp. 19-20)." However, from experimental results cited by Boneau (1960), it has been shown that even the homogeneity of variance assumption can be safely violated in most cases. However, this is true only when the experimental groups are relatively equal in size and the number in each group is 15 or more.

Since the smallest number of Ss in any condition of this experiment was less than 15, it was decided to test for homogeneity of variance, and base the decision of whether to use parametric or nonparametric statistics on the outcome of that test. Bartlett's test for homogeneity of variance (Winer, 1962) was employed.

Another assumption of concern to E was whether the scales used in the measuring instruments constituted equal intervals. Kerlinger (1964) states that "it is probable that most psychological . . . scales approximate interval equality fairly well." He recommends that "the best procedure would seem to be to treat ordinal measurements as though they were interval measurements, but to be constantly alert to the possibility of gross inequality of intervals (p. 427)." It was decided that the semantic differential scales used in measuring the DVs of this study probably contained no gross inequality of intervals, and that the assumption of equality of intervals had not been seriously violated.

As stated at the outset of this chapter, one of the primary functions of a research design is to aid the researcher in deciding which statistical tests to use. In this particular study, which utilized a 2x2 factorial design, the 2-way analysis of variance was appropriate. In the cases where all the assumptions for parametric statistics apparently were met, the F test for analysis of

variance (Winer, 1962) was appropriate. If parametric assumptions clearly were not met, the Wilson (1956) nonparametric analysis of variance was appropriate.

Analysis of variance tests were used to indicate significant differences between combinations of experimental conditions, as well as significant interactions. However, for estimating differences between individual groups, additional tests were needed. In the cases where parametric tests were possible, the t ratio (Winer, 1962) was appropriate to estimate the significance of between-group differences. If parametric assumptions had not been met, the Mann-Whitney U (Siegel, 1956) was appropriate. The probability level set for significance for all statistical tests was .05.

All statistical tests were calculated by means of library computer programs on a Control Data Corporation 3600 computer, in operation at Michigan State University.[5]

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[5]The library programs employed were:

Williams, A. Factor analysis. Technical Report No. 34. Computer Institute for Social Science Research. Michigan State University, 1967.

Morris, J. Nonparametric chi-square tests and analyses of variance. Technical Report No. 42. Computer Institute for Social Science Research. Michigan State University, 1966.

Morris, J. Mann-Whitney and Wilcoxon tests, randomization and sign tests, parametric t-tests and F-tests. Technical Report No. 45. Computer Institute for Social Science Research. Michigan State University, 1967.

Ruble, W. L. Analysis of covariance and analysis of variance with unequal frequencies permitted in the cells--(LS routine). STAT Series Description No. 18. Michigan State University Agricultural Experiment Station, 1968.

CHAPTER V

RESULTS

This chapter will include seven major divisions. The first section will cite the results of the preliminary manipulation checks. Section two will present the results of the factor analyses. The third section will report the results of Bartlett's test for homogeneity of variance. The fourth and fifth sections will present the major results of the study. Section six will describe a supplementary analysis, and the final section will summarize the results.

Manipulation Checks

EAR

As stated in Chapter IV, two manipulation checks on the independent variables were needed. First, a check on EAR was necessary to determine whether the Ss had built an expectation of the audience's response. After the experiment each S was asked on a questionnaire, "What type of attitude did your audience have toward your topic before you spoke to them?" After examining each of the questionnaires, it was discovered that each S who had been assigned to positive EAR still recalled the audience's prior attitude

as positive. Similarly, each S assigned to negative EAR recalled the audience's prior attitude as negative. A better manipulation check on EAR might have been to question the Ss before the experimental induction. However, it was feared that a pretest would sensitize the Ss. The experimenter therefore decided to combine the EAR check with the post measurement of the DVs. Results of the check suggest that the EAR manipulation lasted through the experimental treatment.

OAR

The second experimental induction, OAR, was checked by measuring perceived audience response (PAR). Ss were asked, "What type of response did you receive from your audience?" A seven-point scale, ranging from "highly positive" to "highly negative" was used to measure PAR. The results were analyzed by two methods. First, the data were submitted to a chi square test to determine whether there was a significant difference between the Ss' perceptions of positive and negative OAR. A chi square value of 27.69 ($p < .05$) was obtained.

In the second method of analysis each of the questionnaires was examined to determine if each S receiving positive OAR reported positive PAR and each S receiving negative OAR reported negative PAR. It was found that all Ss in the positive OAR condition perceived the response

as positive. However, in the negative OAR condition, seven Ss perceived the response as "slightly positive" and one S reported receiving a "moderately positive" response. These findings could not be dismissed as mistakes, since these Ss also reported that the audience was slightly or moderately positive toward their topic after the performances. Since PAR did not equal OAR, it was concluded that the OAR induction was not entirely successful.

Because selective perception was likely in operation, and since the focus of this study was on source behavior, it was decided to abandon the OAR IV and substitute PAR. Another reason for making this substitution was that the balance theory paradigm introduced in Chapter II defined the B→X relationship as A's perception of B's attitude toward X. Therefore, the change from OAR to PAR was consistent with the rationale and the a priori hypotheses of the study. While the major analysis of this study was the EAR X PAR results, the EAR X OAR data is also reported in Appendix F, Tables 14-17.

Factor Analysis

The two major DVs of the study, audience credibility and attitude toward performance, were submitted to a factor analysis. Results of the factor analyzed audience credibility data suggest that three dimensions of credibility (character, authoritativeness, and dynamism) existed.

Table 1, Appendix F, lists the scales which had factor loadings above .60 on one factor and below .40 on all other factors. Six scales: Qualified--Unqualified, Reliable--Unreliable, Expert--Inexpert, Informed--Uninformed, Trained--Untrained, and Experienced--Inexperienced loaded on the authoritativeness factor. Two scales: Timid--Bold, and Aggressive--Meek loaded on the dynamism factor. Five scales: Kind--Cruel, Unpleasant--Pleasant, Selfish--Unselfish, Awful--Nice, and Friendly--Unfriendly loaded on the character factor.

Turning to the second DV, speaker attitude toward his performance, five scales produced high common-factor variance. These sclaes were: Good--Bad, Well Delivered--Poorly Delivered, Beneficial--Harmful, Forceful--Forceless, and Perfect--Imperfect. Table 2, Appendix F, lists these scales and their factor loadings.

In summary, the factor analysis reduced the data to four variables. Three variables, authoritativeness, character, and dynamism measured the Ss' attitudes toward the audience. The fourth variable, performance, measured the Ss' attitudes toward their performances.

Test for Homogeneity of Variance

As explained in Chapter IV, Bartlett's test for homogeneity of variance (Winer, 1962) was used to test the homogeneity assumption. As shown in Table 3, Appendix F,

all DVs in the EAR X PAR analysis produced nonsignificant chi square values on the homogeneity test, indicating that the assumption of homogeneity of variance was tenable for the EAR X PAR data. The OAR analysis, however, contained two measures (character and performance) which did not meet the homogeneity of variance assumption. This raises the interesting possibility that the apparent selective perception found earlier in the analysis may account for the serious imbalance of variance in the EAR X OAR analysis. The homogeneity check on OAR also indicated that the decision to use PAR for the major analysis was a wise one.

Since homogeneity of variance was found in the PAR results, a parametric analysis of variance and *t* tests were used to analyze the EAR X PAR data. For the analysis of the EAR X OAR data, parametric statistical tests were used to analyze authoritativeness and dynamism, and alternative nonparametric tests were used to analyze character and performance.

Results of the Performance DV

Analysis of Variance Results

A two-way analysis of variance of the EAR X PAR data revealed a significant effect for PAR ($F = 40.19$, $p < .05$), a significant EAR X PAR interaction ($F = 3.71$, $p < .05$), and no significant EAR effect ($F = 1.22$, $p < .30$).

Table 9, Appendix F, presents a summary of the analysis of variance results for the Performance DV. The next section will relate the performance results to the hypotheses of this study.

Performance Hypotheses

I. There will be an interaction between EAR and PAR on performance ratings by the speaker, to the effect that: Speakers in the negative EAR condition who receive negative PAR will rate their own performances higher than speakers in the positive EAR condition who receive negative PAR.

As shown by the analysis of variance, the data supplied full support for Hypothesis I. First, there was a significant interaction between EAR and PAR on speaker performance ratings. While there was overall support for the interaction, it was also necessary to examine the second part of Hypothesis I for an explanation of the interaction. It must be stressed that unless the explanatory portion of the hypothesis is supported, overall support for the interaction cannot be claimed.

Results for the second portion of Hypothesis I showed that Ss in the negative EAR, negative PAR condition produced a mean performance rating of 18.18, compared to 14.00 for Ss in the positive EAR, negative PAR condition. As shown in Table 4, Appendix F, a t test of the difference between the two means produced a t of 1.84 ($p < .05$), indicating full support for the explanatory portion of Hypothesis I. Thus, the first hypothesis, which predicted and

explained an interaction between EAR and PAR, was strongly supported by the data.

II. Speakers who receive positive PAR will rate their own performances higher than speakers who receive negative PAR.

Hypothesis II was tested by observing the main effect for PAR in the analysis of variance of speaker performance ratings. As reported in the analysis of variance results, there was a significant PAR effect for the performance DV. It must be noted that since there was a significant interaction between EAR and PAR, a careful analysis of the PAR main effect was necessary. A close examination of the means in the four experimental conditions indicated that the interaction did not appear to confound the main effect for PAR. Therefore, Hypothesis II was strongly supported.

Results of the Audience Credibility DV

Analysis of Variance Results

An analysis of variance was computed for the results of each of the three credibility DVs (character, authoritativeness, and dynamism). The character analysis of variance (summarized in Table 6, Appendix F) revealed a significant PAR effect ($F = 67.53$, $p < .05$), no significant EAR effect ($F = 1.22$, $p < .30$), and no significant EAR X PAR interaction ($F = 0.01$, $p > .90$).

The authoritativeness analysis of variance (summarized in Table 7, Appendix F) also showed a significant PAR effect ($F = 12.47$, $p < .05$), no significant effect for EAR ($F = 1.28$, $p < .30$), and a lack of significance for the EAR X PAR interaction ($F = 0.37$, $p < .60$).

The dynamism analysis of variance (found in Table 8, Appendix F), revealed no significant effect for PAR ($F = 0.21$, $p < .70$), no significant effect for EAR ($F = 1.28$, $p < .30$) and no significant interaction between EAR and PAR ($F = 1.28$, $p < .30$).

Credibility Hypotheses

III. There will be an interaction between EAR and PAR on audience character and authoritativeness ratings by the source, to the effect that:
Speakers in the positive EAR condition who receive negative PAR will rate the audience higher in character and authoritativeness than speakers in the negative EAR condition who receive negative PAR.

Support for Hypothesis III was tested by a two-step analysis. First, an analysis of variance tested for an overall interaction. Second, a *t* test for significance of differences between the positive EAR, negative PAR condition and the negative EAR, negative PAR condition was computed to test the explanatory portion of the interaction hypothesis.

The audience character ratings did not support Hypothesis III. The analysis of variance for interaction revealed no significant interaction between EAR and PAR on character ratings. In the explanatory analysis of the

interaction, Ss in the positive EAR, negative PAR condition and in the negative EAR, negative PAR condition produced mean character ratings of 16.42 and 14.90, respectively. While the difference between the two means was in the direction predicted, a t test revealed no significant difference between the group means ($t = 0.61$, $p < .30$).

The authoritativeness ratings also did not support Hypothesis III. The analysis of variance showed no significant interaction between EAR and PAR. Ss in the positive EAR, negative PAR condition produced a mean authoritativeness rating of 23.57, while Ss in the negative EAR, negative PAR condition produced a mean authoritativeness rating of 20.72. As in character ratings, the differences in authoritativeness were in the direction predicted, but were not significant ($t = 1.06$, $p < .20$).

Therefore, no support was found for Hypothesis III, either in character ratings, or in authoritativeness ratings.

IV. Speakers who receive positive PAR will rate the audience higher in character and authoritativeness than speakers who receive negative PAR.

Hypothesis IV was tested by observing the main effect for PAR in the analysis of variance of character and authoritativeness ratings. Results on both character and authoritativeness ratings supported this hypothesis. No significant PAR effect was predicted for the dynamism dimension of credibility, and no PAR effect was observed for dynamism. Therefore, Hypothesis IV was strongly supported by the results of this study.

Supplementary Analysis: SEX X PAR

Although the Ss had been assigned to groups with sex equalized in the experimental conditions, it was decided to re-analyze the data in terms of SEX X PAR. This was done because some Ss were reassigned as a result of the PAR measurement and because some Ss were lost due to attrition.

A two-way analysis of variance for SEX X PAR revealed a significant PAR effect ($p < .05$) for character, authoritativeness, and performance ratings. There was no significant PAR effect for dynamism ($p < .80$). No significant SEX effects were found for any of the DVs, and no significant interaction effects were discovered in any of the analyses. The fact that no significant sex or interaction effects were found suggests that sex was probably not a confounding variable in the results.

Summary of the Results

1. Strong support was found in the results for Hypothesis I. First, there was a significant interaction between EAR and PAR on performance ratings by the speaker.

Second, speakers in the negative EAR condition who received negative PAR rated their own performances significantly higher than speakers in the positive EAR condition who received negative PAR.

2. Hypothesis II was also strongly supported in this study. Speakers who received positive PAR rated their own performances significantly higher than speakers who received negative PAR.

3. The data did not support Hypothesis III. No significant interaction was found between EAR and PAR on audience character or authoritativeness ratings by the source.

Also, speakers in the positive EAR condition who received negative PAR did not rate the audience significantly higher in character and authoritativeness than speakers in the negative EAR condition who received negative PAR.

4. Hypothesis IV was solidly supported by the data. Speakers who received positive PAR rated the audience significantly higher in character and authoritativeness than speakers who received negative PAR.

5. A supplementary analysis for SEX X PAR showed a highly significant PAR effect, no significant interaction between SEX and PAR, and no significant difference between males and females who received negative and positive response from the audience.

CHAPTER VI

DISCUSSION

This final chapter will discuss the results of this study in light of balance theory, practical applications of feedback, and future research on feedback.

Balance Theory

The experiment described in this thesis tested the predictive ability of balance theory in a communication feedback setting. Public speakers were placed in four experimental conditions. Two of these conditions were designed to create cognitive imbalance, while two others were designed to maintain cognitive balance. The speakers' attitudes were measured in order to test the predictions made from balance theory. The results of each of the four experimental communication settings will be discussed below, along with their support or lack of support for balance theory.

The first experimental condition involved speakers who expected positive audience response and received positive response as they spoke. It was assumed that this situation would produce no cognitive imbalance for the

speakers, and consequently their performance ratings and audience ratings would be strongly positive. This prediction was supported. First, the speakers' performance ratings and their attitudes toward the audience were higher than those from speakers in the other three groups. Second, all measures were consistently on the positive side of the midpoint. Third, the speakers who expected and received positive audience response showed significantly higher performance ratings, audience character ratings, and audience authoritativeness ratings than speakers who expected positive response and received negative response (Hypotheses I and IV). Therefore, the outcome of the first experimental condition was successfully predicted by balance theory.

The second experimental condition involved speakers who expected negative audience response but perceived the response as positive. According to balance theory, this was a cognitively inconsistent situation. Speakers could restore balance either by improving their attitudes toward the audience or by derogating their own performances. It was predicted that the speakers would resolve the imbalance by rating the audience positively. It was reasoned that since the source perceived his effort as successful, he would not likely derogate his performance, but would increase his esteem of the audience. The results supported this prediction. The audience character and

authoritativeness ratings were well above the midpoint on the credibility scales. The audience ratings were significantly higher when speakers expected negative response and received positive response than when the speakers expected negative response and received negative response (Hypothesis IV). Also, the audience credibility ratings from speakers who expected negative audience response and received positive response were not significantly different from audience ratings from speakers who expected positive response and received positive response. Therefore, in the second experimental situation, solid support was found for balance theory's ability to predict the cognitive outcomes.

Speakers in the third experimental condition expected positive audience response but received a negative reaction from the audience. It was predicted that this situation would be inconsistent. The speakers in this condition could resolve the situation either by derogating the audience or by devaluing their performances. As discussed in Chapter III, both audience derogation and performance derogation were expected in this condition. This seeming contradiction was attributed to differences in self-esteem. It was reasoned that speakers with high self-esteem would restore balance by devaluing the audience, while speakers with low self-esteem would resolve the situation by derogating their performances. It was predicted,

however, that the overall outcome would be a slightly stronger derogation of performance.

The results indicated that the speakers did downgrade both their performances and the audience. Speakers who perceived negative responses rated their performances significantly lower than speakers who perceived positive responses (Hypothesis II). Also, speakers who expected positive responses and received negative responses rated their performances significantly lower than speakers who expected negative responses and received negative responses (Hypothesis I).

While the speaker performance ratings were low in this experimental setting, the speakers also derogated the audience. Speakers rated their performances six points below the midpoint on performance scales, while they rated the audience only 3.58 points below the midpoint on character ratings and 0.43 points below the midpoint on authoritativeness ratings. Thus, speakers derogated their performances more than they devalued the audience, supporting the balance theory prediction.

The fourth experimental setting involved speakers who expected a negative audience response and perceived a negative response as they spoke. It was predicted that this setting would be balanced, and that speakers would give comparitively high performance ratings and low audience ratings. The results supported this prediction.

The speakers who expected negative response and received negative response rated their performances significantly higher than speakers who expected positive response and received negative response (Hypothesis I). The speaker performance ratings in this fourth condition were 1.82 points below the midpoint. They were weakly negative, rather than weakly positive, as predicted.

The audience ratings in the fourth experimental condition were low as predicted. Audience character and authoritativeness ratings from speakers who received negative response were significantly lower than character and authoritativeness ratings from speakers who received positive response (Hypothesis IV). Audience ratings from speakers who expected negative response and received negative response were also lower than those from speakers who expected positive response and received negative response. However, there was not a significant difference between the two groups (Hypothesis III).

Therefore, the outcome of the fourth experimental situation was predicted reasonably well by balance theory. While the differences predicted were not significant in all cases, they were consistent in direction and pattern.

In summary, the results allow two generalizations about the experimental situations that were designed to create cognitive imbalance. First, the speakers who expected positive response but received negative response

restored balance primarily by devaluing their performances. Second, the speakers who expected negative response but received positive response restored balance by raising their evaluations of the audience.

This discussion has attempted to relate the findings of this study back to the theoretical rationale used to make the predictions. Balance theory was generally successful in predicting attitudinal outcomes in the four communication feedback situations.

Applications of Feedback

The Communication Source

It is generally accepted among communication theorists that in order to successfully persuade, the communication source must maintain a relatively high degree of rapport or credibility with his audience. If the speaker perceives, through negative audience response, that his message is not successful, he will develop (according to the results of this study) a negative attitude toward his performance, toward the audience, or toward both. Assuming the speaker develops a negative attitude toward his performance and the audience, it will be difficult for him to build up his credibility and accomplish his purpose.

The results of this study suggest that a speaker must either determine how to avoid negative audience response or overcome the tendency to derogate when negative

response is given. The rhetorically skilled speaker who receives negative responses will modify his persuasive strategy, or if necessary, his persuasive purpose. He will adapt his message to the receiver. He will plan alternative means for accomplishing his persuasive goals (Williams, 1964), and will use these means when faced with negative response. Thus, a negative message from the receiver will initiate an adjustment in the source's communication strategy, and he will produce a new input designed to better accomplish his purpose.

The Communication Receiver

The communication receiver also must realize the important role he plays in the feedback cycle. Negative and positive response, initiated by the receiver, can have strikingly differential effects on the attitudes of the communication source (e.g., when the receiver acts as evaluator). If the results of this study can be applied to speech evaluation in the classroom, it is possible that negative criticism for the novice speaker may produce negative attitudes toward his speaking and toward the evaluator. Conversely, positive criticism may generate positive attitudes toward speaking and toward the individual evaluating the speech. Other studies (e.g., Bostrom, 1964) dealing with this problem have reached similar conclusions.

In summary, the feedback phenomenon can be applied from two perspectives. First, the speaker must realize the possible impact of audience response on his communication attitudes and be prepared to cope with this eventuality. Second, the receiver who acts as evaluator should understand the potential negative or positive effects he can have on the communication source.

Limitations and Future Research

This final section will simultaneously deal with the study's limitations and suggest ideas and procedures for future research on feedback.

The first improvement suggested for future research is a more rigorous induction of EAR. A few Ss in this study reported having doubts about the validity of the "Audience Profile." When questioned as a group, however, over 75% of the Ss believed that the profile was the actual result of an audience survey. There are a number of possible methods for strengthening the induction of EAR. One possibility is measuring the audience's attitude in the presence of S. This can be done either orally, with brief written scales, or by a nonverbal vote. The audience can be instructed on how to respond before S arrives. This induction would likely be more believable than the one employed in the present study.

Future research on feedback should also eliminate potentially confounding variables that may contaminate OAR. When audience response is administered by a live audience, as in the present study, a number of potentially confounding variables are present. Some of these are: 1) Different movements and expressions by the Cs between treatments. 2) Different movements and expressions by the Cs within treatments. 3) Possible failure of the Cs to execute OAR as instructed. 4) Fatigue on the part of the Cs as the experimental session progresses. 5) Failure of both Ss and Cs to distinguish between person-oriented and content-oriented responses. 6) Different clothing worn by Cs during different experimental sessions. 7) The tendency for the Cs to give subconscious approval cues during disapproval conditions. While the research method employed was designed to control the above variables, absolute control of such elements probably is impossible.

Three possible alternatives for controlling OAR are suggested. First, the Cs can be trained to act with robot-like precision in each positive and negative condition, yet appear as natural as possible. Second, the response channel can be limited to verbal-oral-interposed, by placing a barrier between the speaker and the audience so that the audience can respond only verbally. Third, E can limit the response channel to nonverbal-interposed,

by manipulating the response through nonverbal means such as lights (e.g., Huenergardt, 1967).

While the above alternatives are not ideal, they are a step toward controlling a number of the confounding variables that possibly influence the results of feedback studies. In each case, however, the increased control is accompanied by increased movement from a "real life" communication situation, and greater difficulty in generalizing the results.

A third area where improvement is needed is predictability. While balance theory was quite successful for predicting the outcome of this study, the predictions could have been more precise, had a more thorough knowledge of the personality characteristics of the Ss been available. Future research should study possible interactions between feedback and such personality variables as self-esteem, need-affiliation, need-influence, need-achievement, introversion, dogmatism, and authoritarianism.

Fourth, a variety of independent variables should be tested with feedback to study the possible interaction effects. Some of these variables are: ego involvement with the topic, familiarity with the audience, prior credibility of the audience, delayed vs. concurrent response, personal- vs. message- vs. topic-oriented responses, sex, and amount of effort involved in preparing for the performance.

Finally, and most important, future research should examine the total feedback cycle as it relates to communication behavior. The sophisticated feedback study should observe, control, or manipulate: a) the original input by the source, b) the consequent adjustment by the receiver, c) the output by the receiver, d) the consequent adjustment in the source's message, purpose, strategy, performance, attitudes, and finally e) the source's new input, which marks the completion of a single feedback cycle. This type of research necessarily is microscopic, and requires careful control. However, it must be done before feedback can take its place as a part of what will some day become formalized communication theory.

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APPENDICES

APPENDIX A

A METHODOLOGICAL SUMMARY OF RESEARCH STUDIES ON FEEDBACK

STUDY	THEORY	METHOD	OTHER IVS	DVS
Leavitt, Mueller (1951)	----	Ss described geometric patterns to an audience under 4 FB conditions: zero response, nonverbal only, yes-no only, free response.	----	Accuracy & time of message transmission
Gibb, et al. (1955)	----	Trained group observers administered positive and negative evaluations to Ss in a group task situation.	Type of FB: feeling- vs. task-oriented	Defensive feelings; task efficiency
Greenspoon (1955)	Reinforcement	In an interview setting, E gave S positive (mm-hum") or negative ("huh-uh") reinforcement for using plural nouns.	----	Frequency of plural nouns
Lott, et al. (1955)	----	Ss in groups were given information in graph form, indicating their task progress.	Feeling- vs. task-oriented feedback	Defensive feelings; task efficiency

STUDY	THEORY	METHOD	OTHER IVS	DVS
Verplanck (1955)	Reinforcement	In a conversation setting, Es reinforced Ss' opinion statements in 3 stages: 10 min. operant level, 10-min. pos. reinf. (agree or paraphrase), 10 min. neg. reinf. (disagree or silence).	-----	Frequency of opinion statements during 3 10 min. periods
Hildum, Brown (1956)	Reinforcement	In telephone interviews, E reinforced Ss responses (1/2 pro, 1/2 con) with "good", "mm-hum."	-----	Attitude toward topic
Stotland (1956)	-----	Ss were given an impossible task by expert E or inexpert E. S's failure was either kept private or made public.	Publicness of failure, expertise of E	Self-evaluations
Harvey, et al. (1957)	Consistency	Ss in group were rated either higher or lower than their self-evaluations by a familiar or unfamiliar peer.	Ss' familiarity with peer giving rating	Self-rating; rating of peer giving rating
Scott (1957)	Reinforcement	Ss engaged in counter-attitudinal debates. An audience voted on the winners, and results of vote were manipulated by E.	-----	Attitude toward topic
Marshall (1958)	-----	After a group interaction, Ss received fav. or unfav. personality evaluations from peers, manipulated by E.	Self-esteem	Attitude toward self & peers

STUDY	THEORY	METHOD	OTHER IVS	DVS
Scott (1959a)	Consistency	After delivering counter-attitudinal arguments, Ss were reinforced with praise from E.	-----	Attitude twd. topic
Scott (1959b)	Reinforcement	Ss in a debate received positive (won), or negative (lost) reinforcement from 3 judges.	Position: same as belief, opposite, neut.	Attitude toward topic
Smith, Kight (1959)	Reinforcement	In a field setting, Ss gave each other personalized FB on their group behavior.	-----	Group productivity; self-insight
Cohen (1960)	-----	Ss in a task situation were given fictitious success or failure information on their task performance.	High or low task expectancy	Self-evaluations
Bostrom, et al. (1961)	Reinforcement	Ss who wrote counter-attitudinal essays were given positive ("A" grades), negative ("D" grades), or no reinforcement.	-----	Attitude toward topic
Miller, et al. (1961)	Reinforcement	Ss first observed a C speaking and receiving response from E, then Ss spoke & received reward ("good") or nonreward (silence) from E.	Differential reward of C and S	Fluency; rate; estimates of speaking time; judge ratings

STUDY	THEORY	METHOD	OTHER IVS	DVS
Cieutat (1962)	Reinforcement	Ss in free-responding conversations were given nonverbal positive (listened to by E) or negative (ignored by E) reinforcement by male or female Es.	Sex of E	Quantity of social conversation
Jones, et al. (1962)	Reinforcement	Ss in an interview situation were instructed to give either accurate or hypocritical self-descriptions. Ss were later informed that E was either favorably or unfavorably impressed with their descriptions.	Machiavellian: hi, lo. Hypocracy vs. accuracy descriptions	Self-evaluations; Ss' evaluations of interviewer
McNeil (1962)	----	Students evaluated teachers' performances with answer-light buttons installed in their desks.	-----	Performance of teachers
Bostrom (1963)	Reinforcement	Ss gave speeches to a panel of evaluators, and received either positive or negative criticism orally by one evaluator.	Type of speech: informative or persuasive	Self-ratings; and attitudes toward speaking
Cameron (1963)	----	Two methods of teaching were compared: integrative (encouraging and evaluating student feedback) and lecture (without feedback).	-----	Final exam score; MSAI; MTAI
Lucas (1963)	----	Ss in a task situation were given either relevant (task-oriented) or irrelevant (feeling-oriented) feedback.	Personality types	Task performance; group measures

STUDY	THEORY	METHOD	OTHER IVS	DVS
Mikawa (1963)	Reinforcement	Each S was given a personality test by a small group, then given approval or rejection feedback from the group.	Need-affiliation	Self-hostility; hostility toward group
Molof (1963)	-----	Small task groups discussed and wrote solutions to case studies, and were given success or failure information by E.	Continual vs. terminal feedback	Group ratings; self-ratings
Ring, Kelley (1963)	Reinforcement	Ss' opinion responses were reinforced by E through augmentation (reward) or reduction (punishment).	Plausibility of criterion given by E	Ss' concealment of opinion; agreement with E.
Stolz, Tannenbaum (1963)	-----	Ss taking an oral exam answered questions over an intercom, Ss were given responses (pos., neg., none) from judges via a Gen. Elec. Opinion meter.	-----	Time; hesitations; loudness; stage fright
Engbretson (1964)	Balance	In task-oriented dyads, Ss described a geometric puzzle to a C, who administered positive or negative verbal response.	Self-credibility, source credibility	Attitudes toward self, source, task
Goldstein, McGinnies (1964)	Reinforcement	Ss delivered a counter-attitudinal message to a small group, then discussed the issue with the group	Audience attitude tow. topic: pro, con, neutral	Attitude toward topic
Karns (1964)	-----	Ss delivered a message to a) a trained audience which showed disagreement, lack of understanding the message, or b) a control audience.	-----	Changes in speech content; rate; fluency

STUDY	THEORY	METHOD	OTHER IVS	DVS
Krasner, et al. (1964)	Reinforcement	In an interview, Ss were positively reinforced for giving favorable responses toward a topic.	-----	Attitude toward topic; Dynamometer measures
Miller (1964)	Reinforcement	Ss first observed a C speaking and receiving response from E, then Ss spoke and received verbal approval ("good"), no comment, or verbal disapproval ("no") from E.	Differential reward of C & S: same, reward, punishment	Utterance rate; incidence of nonfluency
Sarbin, Allen (1964)	Reinforcement	An audience of trained peers reinforced Ss positively (attention, approval) or negatively (boredom, disapproval) as Ss delivered belief-discrepant message.	Need for social approval: hi, lo	Attitude toward topic
Sereno (1964)	Reinforcement	Ss delivered two speeches to a trained audience, and were given positive (smile & nod) or negative (shake head) responses.	Order of reinforcement: superior, inferior	Nonfluency; verbal output
Vlandis (1964)	Reinforcement	E administered positive ("good") or negative ("no") reinforcement to an S delivering a speech.	-----	Total utterance; moments of nonfluency
French (1965)	-----	Ss in a task group were given task-relevant or feeling-relevant information by E about their performances.	Task- vs. feeling-oriented Ss.	Task performance

STUDY	THEORY	METHOD	OTHER IVS	DVS
Gergen (1965)	Reinforcement	During an interview, Ss were given either positive reinforcement ("Yes, I agree, good," etc.) or negative reinforcement ("I sort of disagree," etc.) by E.	Personal vs. impersonal fb; accuracy or hypocracy self-descriptions by S	Self-descriptions by Ss
Hill (1965)	Reinforcement	Ss in a task situation were given either social reinforcement ("good") or nonreinforcement (no comments).	Success; test anxiety	Task performance
Insko (1965)	Reinforcement	Ss interviewed by telephone were positively reinforced ("good") by E for favorable responses toward the topic.	-----	Attitude toward topic
Krasner, et al. (1965)	Reinforcement	In an interview, Ss were positively reinforced for favorable responses toward the topic.	-----	Attitude toward topic; dynamometer measure
Buckhout, Rosenberg (1966)	Consistency	In an interview with Ss, E either gave: a) positive response to counter-attitudinal replies, b) positive responses to counterattitudinal replies plus negative response to belief-congruent replies, c) no response.	-----	Attitude toward topic
Cahn (1966)	Reinforcement	Ss delivered speeches to a fictitious audience over an intercom, & received reward or punishment via a panel of signal lights.	Type of audience: speech professor, 1 student, class	Attitude toward topic

STUDY	THEORY	METHOD	OTHER IVS	DVS
Frye (1966)	-----	In a task situation, Ss were given success or failure feedback concerning: a) effectiveness of the group, or b) effectiveness of the individual group member.	Public vs. private feedback	Group attraction; self-esteem
Krauss, Weinheimer (1966)	-----	In task situation, Ss were administered concurrent or confirmation feedback on their task performance.	-----	Reference phrases
Rosnow (1966)	Reinforcement	Ss arguing both pro and con on an issue were either rewarded or punished by E.	Order of presentation	Opinion toward issue
Videbeck, Bates (1966)	Reinforcement	Ss in a sentence construction task were positively reinforced ("very good") by a computer for beginning sentences with 1st person pronouns.	-----	Frequency of sentences beginning with 1st pers. pronouns
Wallace (1966)	Dissonance	Ss who defended a view opposite their beliefs in a debate were given either content reward, performance reward, or both. Response was administered by an audience, and manipulated by E.	-----	Attitude change toward topic
Amato, Ostermeier (1967)	-----	A trained audience signaled responses with colored cards (white=favorable, red=unfavorable, green=neutral) to Ss delivering speeches.	-----	Audience ratings of: eye contact, nervousness, movement, fluency

STUDY	THEORY	METHOD	OTHER IVS	DVS
Faules (1967)	-----	Ss as interviewers were instructed to get attitude information from interviewees under four conditions: full feedback, visual feedback only, auditory feedback only, written feedback only.	-----	Predictions by Ss of interviewee attitude; ratings of interviews by judges
Huenergardt (1967)	Reinforcement	Ss delivered speeches over an intercom to a ficticious audience, and received response as % audience approval (10%, 30%, 50%, 70%, 90%) signaled by a panel of lights.	Audience expertise	Attitude toward audience, self, topic
Mattox (1967)	Dissonance	Ss delivered speeches to a single trained listener, who administered positive ("uh-huh") or negative ("huh-uh") responses.	Attitude toward topic: pro and con	Attitude toward topic
Welke (1967)	-----	Ss delivered speeches to audiences of varying intensionality (closeness).	Intensionality of audience	Anxiety: self-report, rate, nonfluency
Berger (1968)	Dissonance	Ss wrote belief-discrepant arguments for a fictitious audience, were administered bogus written comments on the success or failure of their arguments.	Need-influence; justification	Attitude toward topic
Blubaugh (1968)	-----	Five trained audience members administered positive (attention, smiles, nods, etc.) or negative (inattention, no eye contact, etc.) responses to Ss delivering speeches.	Sex; 1-minute periods	Nonfluency; rate; verbal output

STUDY	THEORY	METHOD	OTHER IVS	DVS
Combs, Miller (1968)	-----	A trained audience signaled responses with colored cards (white= favorable, red=unfavorable, green=neutral) to a speaker.	-----	Audience ratings of: delivery, content, language, overall
Gardiner (1968)	Dissonance	Ss delivered arguments to an audience who voted on the persuasiveness of the arguments. The results (succeed vs. fail) were manipulated by E.	Effort	Attitude toward topic, and audience
Hylton (1968)	Consistency	While listening to a speaker, a trained audience administered positive, negative, or "free" responses for the benefit of naive audience members (Ss).	-----	Ss' attitude toward topic and speaker
Lewin (1968)	-----	Ss in a task situation were given experimentally-induced success or failure.	Task responsibility	Adjustment of task goals
Mehrley, Anderson (1968)	Reinforcement	Trained audiences administered positive (nodding, smiles, "Mmm-Hmm," applause, etc.) or negative (shaking heads, scowls, "no," leaving the room, etc.) visual & auditory responses to speakers. The videotaped speeches were played for a separate live audience, who were the Ss.	-----	Ss' attitudes toward the speaker; ratings of speeches by speech judges; speaker nonfluencies.
Reddy (1968)	-----	Ss were shown simulated psychotherapy films, asked to respond as a therapist. Ss were given either immediate, delayed, or no feedback responses.	-----	Empathy measures

STUDY	THEORY	METHOD	OTHER IVS	DVS
Tuckman, Oliver (1968)	-----	Classroom teachers were given feedback as: a) ratings from students, b) ratings from supervisors, c) ratings from both students and supervisors, d) no feedback.	Years of teaching experience	Student ratings of teachers
Barwind (1969)	Dissonance	Skilled and unskilled speakers delivered messages to a trained live audience, and received positive or negative responses as they spoke.	Speaking skill of the Ss.	Attitudes toward topic, self, audience, performance; disfluency

APPENDIX B

RESPONSE-ADMINISTERING ASSIGNMENTS FOR THE TRAINED AUDIENCE

POSITIVE REACTIONS

General instructions for the entire audience:

1. Allow a warmup period, in which you give little or no reaction. Work your feedback in gradually, as if you are beginning to get the gist of the speech.
2. Be as natural as possible, as in a meaningful communication situation.
3. Try to get the feel of what the speaker is trying to do, then work to help him out.
4. Be like a machine...do the same thing for each speaker in the positive feedback condition.
5. Keep your eyes on the speaker at least 90% of the time.
6. Control all movements, figeting, etc.
7. Sit erect, but comfortable.
8. By the end, appear to be enthused with the speech.
9. Clap at the end. When the speaker is through, comment to each other, and to the speaker, "good job", "great speech", "that was cool", etc.

Specific assignments for audience members:

1. Appear to be concentrating on the content of the message. Act as though you understand the points the speaker makes.
2. Agree with nearly every assertion the speaker makes by nodding your head.
3. Smile at the speaker. If he happens to falter, smile as if you understand.
4. Sit with your hands on your lap.
5. Fold your hands in front of you on the table.
6. Take notes on the speech. Appear to be concentrating on the message.
7. Keep time by using time cards. When the time is up, wave the "0" card briefly until the speaker sees it.

NEGATIVE REACTIONS

General instructions for the entire audience:

1. As with positive feedback, allow a warmup period before you begin administering feedback.
2. Try to get the feel of the speaker's purpose, then disagree with it.
3. Be like a machine---do the same thing for each speaker in the negative feedback condition.
4. Do not give the speaker more than 50% eye contact.
5. If the speaker pauses, falters, or makes a mistake, appear disgusted, like he's really out of it.
6. When the speaker is through, appear relieved. Start talking with one another with muffled negative comments.
7. Do not clap at the end.

Specific Assignments for Audience Members:

1. Listen for the main assertions, react to each with a frown. Be skeptical, obviously disagree with the speech.
2. Put your elbows on the table, chin in hands, and appear bored.
3. Slouch and squirm throughout the speech, yawn, appear sleepy.
4. Play with your pen, pencil, or object from your purse.
5. Tap your fingers on the table.
6. Look at speaker, but appear bewildered, as though you don't know what he's talking about.
7. Shake your head, as though you are disagreeing.
8. Begin to take notes at the start, but give up about two minutes into the speech, closing your notebook, shaking your head.
9. Keep time by using time cards. When the time is up, wave the time card until he sees it and then say "time".

APPENDIX C

COMMUNICATION 305

PERSUASIVE ASSIGNMENT #1

"Speaking to a Live Audience"

OBJECTIVES:

1. To give the student experience in preparing and delivering a persuasive message.
2. To provide an opportunity to speak before a "live" audience.
3. To help the student realize the prime importance of audience analysis.

DETAILS:

1. Topic: You are to choose a topic which you feel very strongly about. Narrow and limit this topic until you have a specific purpose in mind. Prepare a statement of topic and purpose to hand in.
2. Preparation: After you have finalized on your topic and purpose, begin preparing a five-minute persuasive message. When your preparation is in progress, you will be given a profile of the audience you will speak to, including specific attitudes toward the topic you are speaking on. This profile should be of great benefit in helping you adapt your message to the receiver.
3. Delivery: You will deliver your message to a live audience, arranged by the instructor. You will only have to come, deliver your speech, check with the instructor, and leave.
4. Place: 56 Baker Hall.

TIMETABLE:

*January 14 (Tuesday): Hand in a statement of your topic and purpose at class time. We have to have this information now in order to test the audience's attitude on the topic you are speaking about. From this point on you may not change your topic.

*January 21, 23: You will receive a profile of the audience you will be speaking to (if all goes well). Also, you will sign up for a time to speak.

*January 27, 28, 29, 30: From 7-10 p.m. on each of these days, the persuasive speeches will be delivered. You will only have to arrive at the time you signed up for, speak to the audience, check with the instructor, and be on your merry way.

If you have any questions or problems, check with the instructor in charge: James Gardiner, 56 Baker Hall, 353-6773.

APPENDIX D

AUDIENCE PROFILE

COMMUNICATION 305

ASSIGNMENT 1

SIZE: 13 SEX: 10 female, 3 male.

AGE DISTRIBUTION: Youngest - 17 Oldest - 24
Mean age - 18.5

MARITAL STATUS: 11 single, 2 married.

RESIDENCE: 4 apartment dwellers, 9 dormitory residents.

CLASS STANDING: 8 freshmen, 2 sophomores, 1 junior, 2 seniors.

COLLEGE MAJORS: French, Pre-med, Business, English Literature, German, Elementary Education, Secondary Education, Undecided.

OCCUPATIONAL ASPIRATIONS: Teaching, Medicine, Foreign service, Business Management, Undecided.

HOME TOWNS: Detroit, Lansing, Pontiac, Flint, Kalamazoo, Jackson, Milwaukee, Buffalo, Decatur, Ga., Boulder, Colorado.

POLITICAL LEANINGS: 8 Democratic, 3 Republican, 2 Independent.

RELIGIOUS AFFILIATIONS: 7 Catholic, 4 Protestant, 1 Jewish, 1 No affiliation.

HOBBIES: Skiing, Sewing, Dancing, Fencing, Music, Reading, Swimming, Horses, Decorating, Painting, Travel, Cycling.

EXPECTATIONS OF YOUR PERFORMANCE: The audience does not know who you are, except that you are from a public speaking class. They will have an agenda with your name and your topic. You will be introduced to the group by Jim Gardiner.

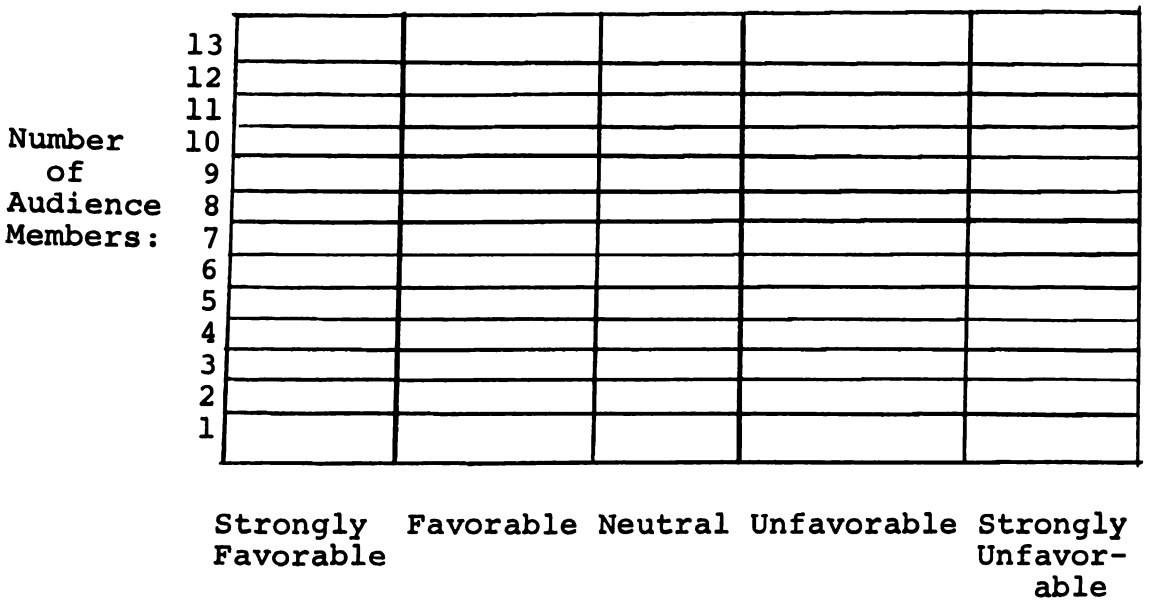
AUDIENCE ATTITUDE:

Explanation: Your general topic was presented to the prospective audience, and each member responded to the topic on a scale similar to the one below;

Strongly Favorable	:	Favorable	:	Neutral	:	Unfavorable	:	Strongly Unfavorable

The following is a graph-type summary of the attitude-responses toward your topic, which was:

_____



APPENDIX E

DEPENDENT MEASURES

COMMUNICATION 305

SPEAKER REACTION INVENTORY

Name _____ Student #_____

The following is a questionnaire seeking your reactions to the type of speaking situation you just experienced. Please record your first impressions, placing a check mark on each of the scales below.

1. How did you feel about the size of the audience you spoke to?
   - ☐ Too large
   - ☐ About right
   - ☐ Too small

2. What type of attitude did your audience have toward your topic before you spoke to them?
   - ☐ Favorable
   - ☐ Neutral
   - ☐ Unfavorable

3. How did they appear to feel toward your topic after you spoke to them?
   - ☐ Highly favorable
   - ☐ Moderately favorable
   - ☐ Slightly favorable
   - ☐ Neutral
   - ☐ Slightly unfavorable
   - ☐ Moderately unfavorable
   - ☐ Highly unfavorable

4. How would you rate the audience on responsiveness?
   - ☐ Highly unresponsive
   - ☐ Unresponsive
   - ☐ Neutral
   - ☐ Responsive
   - ☐ Highly responsive

5. Please rate THE AUDIENCE YOU JUST SPOKE TO by placing a check mark on each of the following scales:

Cruel __:__:__:__:__:__ Kind

Active __:__:__:__:__:__ Passive

Valuable __:__:__:__:__:__ Worthless

Unskilled __:__:__:__:__:__ Skilled

Just __:__:__:__:__:__ Unjust

Unpleasant __:__:__:__:__:__ Pleasant

Qualified __:__:__:__:__:__ Unqualified

Selfish __:__:__:__:__:__ Unselfish

Awful __:__:__:__:__:__ Nice

Honest __:__:__:__:__:__ Dishonest

Energetic __:__:__:__:__:__ Tired

Reliable __:__:__:__:__:__ Unreliable

Virtuous __:__:__:__:__:__ Sinful

Timid __:__:__:__:__:__ Bold

Expert __:__:__:__:__:__ Inexpert

Uninformed __:__:__:__:__:__ Informed

Emphatic __:__:__:__:__:__ Hesitant

Safe __:__:__:__:__:__ Unsafe

Unfriendly __:__:__:__:__:__ Friendly

Aggressive __:__:__:__:__:__ Meek

Trained __:__:__:__:__:__ Untrained

Unintelligent __:__:__:__:__:__ Intelligent

Experienced __:__:__:__:__:__ Inexperienced

6. I would rate my persuasive performance before this audience as:

Good	__:__:__:__:__:__:__	Bad
Fearful	__:__:__:__:__:__:__	Fearless
Well-Delivered	__:__:__:__:__:__:__	Poorly-Delivered
Beneficial	__:__:__:__:__:__:__	Harmful
Speaker-Centered	__:__:__:__:__:__:__	Audience-Centered
Forceless	__:__:__:__:__:__:__	Forceful
Perfect	__:__:__:__:__:__:__	Imperfect
Self-Conscious	__:__:__:__:__:__:__	Confident
Direct	__:__:__:__:__:__:__	Indirect
Unfriendly	__:__:__:__:__:__:__	Friendly
Strong	__:__:__:__:__:__:__	Weak
Poor-in-Content	__:__:__:__:__:__:__	Good-in-Content
Timid	__:__:__:__:__:__:__	Bold
Adaptive	__:__:__:__:__:__:__	Non-Adaptive
Message-Centered	__:__:__:__:__:__:__	Audience-Centered

7. What type of Response did you receive from the audience as you spoke?

- ☐ Highly positive
- ☐ Moderately positive
- ☐ Slightly positive
- ☐ Neutral
- ☐ Slightly negative
- ☐ Moderately negative
- ☐ Highly negative

8. I found this persuasive experience to be:

- ☐ Highly pleasant
- ☐ Moderately pleasant
- ☐ Slightly pleasant
- ☐ Neutral
- ☐ Slightly unpleasant
- ☐ Moderately unpleasant
- ☐ Highly unpleasant

9. If I were grading this speech, I would receive:

___ : ___ : ___ : ___ : ___ : ___ : ___ : ___ : ___ : ___
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5

10. If my audience were grading this speech, I would guess that I would receive:

___ : ___ : ___ : ___ : ___ : ___ : ___ : ___ : ___ : ___
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5

APPENDIX F

STATISTICAL TABLES

TABLE 1

Factor Analysis of Audience Ratings

Scales	Dimensions and Factor Loadings: Authoritativeness	Dynamism	Character
Kind--Cruel			-.80
Unpleasant--Pleasant			-.79
Qualified--Unqualified	.76		
Selfish--Unselfish			-.61
Awful--Nice			-.85
Reliable--Unreliable	.72		
Timid--Bold		.64	
Expert-Inexpert	.88		
Uninformed--Informed	.66		
Unfriendly--Friendly			-.74
Aggressive--Meek		.84	
Trained--Untrained	.76		
Experienced--Inexperienced	.79		

TABLE 2

Factor Analysis of Performance Ratings

Scales	Factor Leadings
Good-Bad	.81
Well-Delivered--Poorly-Delivered	.71
Beneficial--Harmful	.76
Forceless--Forceful	.78
Perfect--Imperfect	.64

TABLE 3

Results of Bartlett's Test for Homogeneity of Variance

DV	Analysis	df	chi square	Approximate Probability
Character	EAR X PAR	3	4.38	<.30*
	EAR X OAR	3	10.97	<.05
Authoritativeness	EAR X PAR	3	2.05	<.70*
	EAR X OAR	3	5.84	<.20*
Dynamism	EAR X PAR	3	1.50	<.70*
	EAR X OAR	3	1.09	<.80*
Performance	EAR X PAR	3	3.03	<.50*
	EAR X OAR	3	9.57	<.05

*Indicates that the Homogeneity assumption was held as tenable.

TABLE 4

Tests for Significance of Difference (PAR)

Comparison	DV	t	Approximate Probability
Positive EAR, Negative PAR	Character	0.61	<.30
Vs.	Authorit.	1.06	<.20
Negative EAR, Negative PAR	Performance	1.84	<.05
Positive EAR, Positive PAR			
Vs.	Performance	5.43	<.05
Positive EAR, Negative PAR			

TABLE 5

Perceived Audience Response
Group Means, Standard Deviations, Size

PAR:	Positive EAR	Negative EAR	DV:
Positive:	$\bar{X}$ = 25.41 s.d. = 3.88 n = 17	$\bar{X}$ = 24.27 s.d. = 4.29 n = 18	Performance
Negative	$\bar{X}$ = 14.00 s.d. = 5.35 n = 7	$\bar{X}$ = 18.18 s.d. = 5.87 n = 11	
Positive:	$\bar{X}$ = 29.05 s.d. = 5.80 n = 17	$\bar{X}$ = 27.22 s.d. = 4.05 n = 18	Character
Negative:	$\bar{X}$ = 16.42 s.d. = 6.52 n = 7	$\bar{X}$ = 14.90 s.d. = 4.72 n = 11	
Positive:	$\bar{X}$ = 28.35 s.d. = 5.30 n = 17	$\bar{X}$ = 27.50 s.d. = 4.25 n = 18	Authorita-tiveness
Negative:	$\bar{X}$ = 23.57 s.d. = 7.04 n = 7	$\bar{X}$ = 20.72 s.d. = 6.70 n = 11	
Positive:	$\bar{X}$ = 10.00 s.d. = 1.93 n = 17	$\bar{X}$ = 10.00 s.d. = 1.60 n = 18	Dynamism
Negative:	$\bar{X}$ = 10.85 s.d. = 2.26 n = 7	$\bar{X}$ = 9.63 s.d. = 1.68 n = 11	

TABLE 6

Analysis of Variance Summary for Character Ratings (PAR)

Source of Variance	df	M.S.	F	Approximate Probability
EAR	1	32.35	1.22	.27
PAR	1	1787.11	67.53	< .05
EAR X PAR	1	0.29	0.01	.92
Error	49	26.46		

TABLE 7

Analysis of Variance Summary for Authoritativeness Ratings (PAR)

Source of Variance	df	M.S.	F	Approximate Probability
EAR	1	39.26	1.28	.26
PAR	1	383.46	12.47	<.05
EAR X PAR	1	11.39	0.37	.55
Error	49	30.74		

TABLE 8

Analysis of Variance Summary for Dynamism Ratings (PAR)

Source of Variance	df	M.S.	F	Approximate Probability
EAR	1	4.28	1.28	.26
PAR	1	0.70	0.21	.65
EAR X PAR	1	4.28	1.28	.26
Error	49	3.33		

TABLE 9

Analysis of Variance Summary for Performance Ratings (PAR)

Source of Variance	df	M.S.	F	Approximate Probability
EAR	1	26.68	1.22	.28
PAR	1	880.44	40.19	< .05
EAR X PAR	1	81.17	3.71	< .05
Error	49	21.91		

TABLE 10

Analysis of Variance Summary for Character Ratings (SEX)

Source of Variance	df	M.S.	F	Approximate Probability
SEX	1	16.72	0.62	.43
PAR	1	1883.83	70.22	< .05
SEX X PAR	1	11.65	0.43	.50
Error	49	26.83		

TABLE 11

Analysis of Variance Summary for Authoritativeness Ratings (SEX)

Source of Variance	df	M.S.	F	Approximate Probability
SEX	1	73.31	2.45	.12
PAR	1	479.28	16.02	< .05
SEX X PAR	1	30.49	1.02	.32
Error	49	29.92		

TABLE 12

Analysis of Variance Summary for Dynamism Ratings (SEX)

Source of Variance	df	M.S.	F	Approximate Probability
SEX	1	0.77	0.22	.64
PAR	1	0.33	0.09	.76
SEX X PAR	1	0.77	0.22	.64
Error	49	3.44		

TABLE 13

Analysis of Variance Summary for Performance Ratings (SEX)

Source of Variance	df	M.S.	F	Approximate Probability
SEX	1	1.81	0.08	.78
PAR	1	719.81	31.36	<.05
SEX X PAR	1	34.23	1.49	.23
Error	49	22.95		

TABLE 14

Analysis of Variance Summary for Character Ratings (OAR)

Source of Variance	chi square	Approximate Probability
Total	34.12	<.05
EAR	2.42	.12
OAR	31.79	<.05
EAR X OAR	0.00	1.00

TABLE 15

Analysis of Variance Summary for Authoritativeness Ratings (OAR)

Source of Variance	df	M.S.	F	Approximate Probability
EAR	1	23.82	0.71	.40
OAR	1	295.40	8.84	<.05
EAR X OAR	1	4.99	0.15	.70
Error	49	33.41		

TABLE 16

Analysis of Variance Summary for Dynamism Ratings (OAR)

Source of Variance	df	M.S.	F	Approximate Probability
EAR	1	2.82	0.85	.36
OAR	1	3.04	0.91	.34
EAR X OAR	1	2.69	0.81	.37
Error	49	3.32		

TABLE 17

Analysis of Variance Summary for Performance Ratings (OAR)

Source of Variance	Chi square	Approximate Probability
Total	18.70	<.05
EAR	0.79	.37
OAR	18.51	<.05
EAR X OAR	0.00	1.00