

PERCEIVED COMPETENCY AS INFLUENCED BY CREDIBILITY OF MEMBERS'  
STATEMENTS WITHIN SMALL GROUP SETTINGS: AN EXPERIMENTAL STUDY

by

Stephen Earl Catt

---

A Thesis Submitted to the Faculty of the

DEPARTMENT OF SPEECH COMMUNICATION

In Partial Fulfillment of the Requirements  
For the Degree of

MASTER OF ARTS

In the Graduate College

THE UNIVERSITY OF ARIZONA

1 9 7 6

STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED:

Stephen E. Carr

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

James W. Davis

JAMES W. DAVIS

Associate Professor of Speech Communication

2/12/76

Date

## ACKNOWLEDGMENTS

The author would like to express his appreciation to Cathy White and Dave Timmerman for voluntarily playing the role of confederates within the context of the experimental design utilized in this study. The professional manner in which they performed their assigned roles contributed significantly to the successful implementation of the experimental conditions being studied.

## TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	vi
LIST OF ILLUSTRATIONS . . . . .	vii
ABSTRACT . . . . .	viii
1. INTRODUCTION . . . . .	1
Purpose . . . . .	2
Need . . . . .	2
Related Theory and Research . . . . .	3
2. REVIEW OF LITERATURE . . . . .	5
First Impressions . . . . .	5
Proposition I . . . . .	6
Proposition Ia . . . . .	6
Proposition II . . . . .	6
Credibility . . . . .	11
Competency . . . . .	16
3. PROCEDURE . . . . .	21
Design Variables . . . . .	21
Measuring Instruments . . . . .	24
Attitude Change . . . . .	26
4. STATISTICAL PROCEDURES AND RESULTS . . . . .	35
5. DISCUSSION AND SUMMARY . . . . .	43
APPENDIX A: INFORMATION SHEETS AND STATEMENTS . . . . .	50
Tax Inequities . . . . .	50
Credible Statements . . . . .	51
Non-Credible Statements . . . . .	52
Energy Crisis . . . . .	52
Credible Statements . . . . .	53
Non-Credible Statements . . . . .	54

TABLE OF CONTENTS--Continued

	Page
APPENDIX B: MEASURING INSTRUMENTS . . . . .	55
Semantic Differential Scale . . . . .	55
Likert Scale . . . . .	55
LIST OF REFERENCES . . . . .	56

## LIST OF TABLES

Table	Page
1. Summary of Analysis of Variance for "How Competent" Scale . . .	37
2. Summary of Analysis of Variance for "Relevant" Scale . . . .	38
3. Summary of Analysis of Variance for "Competent" Scale . . . .	39
4. Summary of Analysis of Variance for "Logical" Scale . . . . .	40
5. Summary of Analysis of Variance for "Fair" Scale . . . . .	41
6. Summary of Analysis of Variance for "Knowledgeable" Scale . .	42

## LIST OF ILLUSTRATIONS

Figure	Page
1. Impression Formation as a Result of the Patterning of the Personality . . . . .	6
2. Design Illustrating the Implementation of Discussion Topics, Credibility Roles and Seating of Subjects . . . . .	22
3. Cell Structure Representing Design Variables . . . . .	35

## ABSTRACT

Our perceptions of others are influenced by a number of factors. One factor of particular interest in this study was that of credibility and its influence on perceptions relating to competency.

In investigating the relationship between credibility and competency perceptions, the topic areas of first impressions, credibility, competency and attitude change were reviewed and analyzed in terms of important research relevant to this investigation. Such a review revealed that impressions can best be thought of as resulting from a patterning of personality traits and that the credibility of one's statements can represent traits relating to need achievement abilities of that person and therefore his competence. Through a comparison of certain traits, attitudes toward a person were shown to develop and also change.

The results of an experimental design developed to measure changes in competency impressions as a result of credibility manipulation, indicate such impressions to be unusually immune to such manipulations. Possible explanations for such results and their implications are in turn considered.

## CHAPTER 1

### INTRODUCTION

Small group discussions occur frequently and within numerous settings ranging from the classroom to business conferences. As a result, even within a short period of time the opportunity usually exists for a person to participate in more than one small group discussion. Upon completion of one small group discussion it is not surprising to find that when a person transfers to a different group, some members from the previous group also transfer to the new small group discussion setting.

In some instances a person's statements, during a small group discussion, are consistently "credible." However, occasionally in a subsequent small group discussion, his statement will be "non-credible" as a result of little acquired expertise concerning the topic of conversation, etc. In the context of the present study the weight a receiver gives to a communicator's assertions can be referred to as the credibility of the communicator. In instances as described above, one or more members of the present discussion might also have been members of the previous group in which the person's statements appeared credible. Such circumstances raise concern in relation to the following questions: How do members who were with him in the first discussion subsequently perceive him when his statements are no longer credible? Do their perceptions of him differ from those members who

are listening to him for the first time? If changes in perceptions occur from one discussion to the next, do they change more going from credible to non-credible than from non-credible to credible, or does it make any difference?

### Purpose

The purpose of this study was to test whether initial evaluations, made by group members of another group member, would differ from subsequent evaluations made of this member in a second small group discussion. In the first group discussion, members would observe a certain group member making "credible" statements. In a second small group discussion, the same members would subsequently observe this member making "non-credible" statements. Since the opposite situation could also occur, this order of occurrence would also be reversed for comparison.

### Need

The need for such a study was evidenced by the lack of sufficient previous research to answer the question of how observed changes in the credibility of a person, within a small group setting, influences others' impressions of him. Although a number of studies have investigated the area of credibility impressions, with respect to small group communication it was felt that additional research would help shed light on when and in what manner impressions are formed, modified and resulting attitudes developed from such changes. In relation to information available on impression formation little research has been conducted concerning what it is that modifies

impressions or more specifically competency impressions. Likewise, little information appears to be available on what effects result from modification of competency impressions.

The present study sought to control a group member's level of credibility in order to permit meaningful measures to be made of resulting attitude changes concerning the competency of such a group member, over a short period of time.

### Related Theory and Research

It is a frequent observation that when two people meet for the first time, even if the communication process between the two people is brief, both will usually leave with some impression as to the competency of the person with whom they have communicated. For example, most people have had experiences where, upon meeting another person, they felt they did not make a favorable impression. One possible explanation is that they felt unable to carry on an educated conversation concerning the topic under discussion, thereby causing the other person to conclude they were not competent. In many cases, such a conclusion could be damaging to future interaction. Of course, such initial impressions of general competence made as a result of the first communicative interaction are not always accurate. However, regardless of their accuracy, the formation of such impressions is a common occurrence. As such, the impression of competency becomes a factor to be considered in any comprehensive analysis of interpersonal communication.

In an attempt to investigate how changes in the "credibility" of a person influence subsequent evaluations of this person after initial impressions have been formed, the present study considered four factors to be of prime importance. These were: first impressions, credibility, competency, and attitude change. Attention is therefore now directed to a review of research relevant to such factors.

## CHAPTER 2

### REVIEW OF LITERATURE

#### First Impressions

Each person comes to us with a large number of different characteristics. A certain man is brave, intelligent, with a ready sense of wit, energetic, but he is also serious, patient, and on time--not to mention his courteous nature. Our perceptions of others are determined in large part by observing such characteristics and many others. It is interesting to realize that the several characteristics function together to produce an impression of one person. However, what principles seem to regulate this process? Though our minds sometimes fail when we face the task of mastering a series of disconnected numbers or words, the more complicated task of forming an impression about a person is done easily and quickly by us. Even without repeated drill we can commit to memory the various characteristics observed in a person. In addition, though it is difficult to forget our view of a person once it is formed, we seldom confuse the half of one person with the half of another. Although there seems to be little disagreement that we do in fact form impressions, there are a number of theoretical possibilities proposed by S. E. Asch (1946, p. 258) for describing the process of forming an impression:

### Proposition I

One possibility for describing the process is that an impression =  $a + b + c + d + e$ , where the total impression of the person is the sum of the several independent impressions. In the above process each trait has its own quality and the next trait also, etc. Therefore, each trait produces its own impression. Some psychologists assume, in addition to the factors of the above theory, the operation of a "general impression."

### Proposition Ia

The general impression is conceived as an effective force "G", possessing a plus or minus direction which shifts the evaluation of the many traits in its direction. Under this interpretation, the process is represented as  $a + b + c + d + e \pm G$  where, to the sum of the traits there is now added another factor, the general impression.

### Proposition II

Another view contends that we form an impression of the entire person as being more complex than just consisting of a number of independent traits. It tries to get at the patterning of the personality, dealing with the traits in relation to each other. It can be expressed as shown in Figure 1.

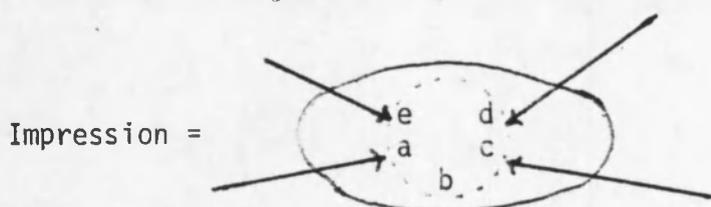


Fig. 1. Impression Formation as a Result of the Patterning of the Personality

Generally psychologists hold to Proposition II in one way or another. The experimental design used in the present study subscribed to this view, since an impression was expected to result through the interaction and consideration of all statements made by a person. In light of this expectation other impression formation theories will now be considered.

Gestalt theory, secured in logic and epistemology, and with its experimental foundations in the psychology of perception, learning and thinking, was regarded by its founder, the late Max Wertheimer, as equally applicable to perceptions of personality and of the social field (Luchins 1948, p. 318). The interactions of personality and competency perceptions is such that an understanding of one is an important preface to a better understanding of the other. An associate of Wertheimer, S. E. Asch (Asch 1946), conducted an experimental investigation dealing with the formation of impressions of personality. Asch demonstrated that certain crucial labels can transform the entire impression of the person, leading to attributions which are related to the label on a broad cultural basis. In different ways, Asch's experiments demonstrated that forming an impression is an organized process whereby relationships are perceived among characteristics leading to a distinction between central and peripheral qualities. A grasp of a particular structure becomes necessary to know a person. For the subjects in Asch's experiments, the gaining of an impression was not a process of fixing each trait in isolation and noting its meaning. Asch explains that if they proceeded in this way the traits would remain

abstract, lacking just the content and function which causes them to be living traits.

Asch read to his subjects a list of adjectives which described a particular person. He then asked them to characterize that person. He found that inclusion in the list of what he called central qualities such as "warm" as opposed to "cold", produced a widespread change in the entire impression. A widely recognized form of bias which often affects the rating of evaluators is termed the "halo effect." Thorndike (1920), the originator of the term, found (1920, p. 25) "ratings were apparently affected by a marked tendency to think of the person in general as rather good or rather inferior and to color the judgment of his qualities by this general feeling." However, the halo effect did not really explain the widespread change produced in Asch's study since it did not extend indiscriminately in a positive or negative direction to all characteristics. By changing their relative importance in the total impression, it differentially transformed the other qualities. The central qualities produced a stronger effect than those produced by the peripheral qualities such as "polite" versus "blunt." Mensch and Wishner (1947) repeated a number of Asch's experiments because of dissatisfaction with his sex and geographic distribution. Their data substantiates Asch's very closely. An investigation of the findings of Asch's experiments leads one to believe that Proposition I made by Asch is incomplete since an interaction among traits also occurs which means that the total impression is the summation of these effects, which is the theme of Proposition II.

In contrast to the Asch research on person impressions, Harold Kelley (1950), who was more interested in a general theory of first impressions, investigated the stability of early judgments, their determinants, and the relation of such judgments to the behavior of the person making them. Though Asch read to his subjects a list of adjectives which purportedly described a certain hypothetical person, Kelley tested the effects of the same central qualities, e.g., "warm" vs. "cold" as used by Asch, upon the early impressions of subjects toward real persons. They operated as expectations rather than as part of the stimulus pattern during the exposure period since they were introduced as pre-information about the stimulus person before his actual appearance. The results of Kelley's experiment indicate that those given the "warm" pre-information consistently rated the stimulus person more favorably than do those given the "cold" pre-information. These findings are very similar to Asch's for the characteristics common to both studies. Therefore, this data strongly supports his finding that such a central quality as "warmth" can greatly influence the total impression of a personality.

In regard to the power such general dimensions as "warmth" and "coldness" have, a number of studies of personality impression formation have shown that negative traits have more influence on an impression response than do positive traits (e.g., Levin and Schmidt 1969, 1970; Wyer 1970). The averaging model of stimulus integration theory (Anderson 1971) is one model which incorporated differential influence of information. According to this model, the total effect of a given stimulus is the product of its value and its weight. For

example, high ratings of likeableness were obtained for such words as honest, understanding and loyal, whereas spiteful, insulting and insincere received low ratings. The model can account for the greater influence of negative or low-valued personality trait adjectives by assuming that they have greater weight than positive or high-valued adjectives. This is done in light of the fact that value and weight are usually assumed to be independent. However, the model leaves to speculation the cause or causes of the greater weight for low-valued adjectives.

One explanation for the differential weighting is that unfavorable adjectives tend to be used less frequently than favorable adjectives in describing persons (Boucher and Osgood 1969). Normally subjects do not expect to see negative traits describing a person. Therefore, such traits may have a greater impact on their impression responses. Though Wyer provides indirect support for such an interpretation, up to that time there was no direct experimental test. However, Levin and Schmidt (1970) recently tested this assertion and found that for person descriptions containing both high and low valued adjectives, low adjectives were found to be weighted twice as much as high adjectives for a group which previously rated a series of high adjectives. However, both low and high adjectives were found to be weighted about equally for a group which previously rated a series of low-valued adjectives. In summary, such studies indicate that the description of a person by way of an equal number of positive and negative traits does not necessarily result in a cancellation effect

since the negative traits tend to carry more weight on personality impression formation.

The conclusion of research dealing with first impressions is that such impressions can and are made quickly and with a high degree of accuracy even though they must deal with complex characteristics. Such research emphasizes the existence of an organized process being involved in which the resulting first impression is influenced by important factors such as central qualities, values and weighing procedures. The existence of first impressions and the indication of their rapid appearance is significant to this experiment since such impressions provide the prior setting from which latter impressions in this experiment must be measured. However, as will be shown next, "credibility" can be an influencing factor in the development of any first impression since it can often bias or influence the observations from which the first impression is made.

### Credibility

One rather consistent finding in communication research has been that message sources perceived to be credible are more influential in changing message recipients' attitudes than are sources perceived to be lower in credibility. Beyond this, however, there is not a great deal known about the impact of low credible sources on audiences' acceptance of persuasive messages. A review by Anderson and Clevenger (1963) of communication research indicates that the general feeling is that a message attributed to a low credible source

immediately before its presentation produces maximum resistance to the message. Therefore, favorable attitude change among the audience will be minimal when exposed to the message.

The bases for this assumption are found in the work of Lumsdaine and Janis (1953) dealing with inoculation, and in the research of McGuire and Papageorgis (1961) on belief immunization. McGuire and Papageorgis found that when a communicator mentions arguments that are contrary to a respondent's belief and then explicitly refutes these arguments, that respondent's beliefs are most resistant to change when later attacked.

It is possible that low source credibility is one antecedent condition that serves to immunize an individual's beliefs making him more resistant to persuasion.

A study by Husek (1965) has provided some support for the hypothesis that when the source has low credibility, attribution of the message to the source after presentation of the message will result in more favorable audience attitudes toward the proposal than when the message is attributed to the source prior to presentation of the message. However, it is doubtful that manipulation of the identification of low credible sources will be very effective in affecting persuasion if the message itself is minimally effective.

In addition, a study by Greenberg and Miller (1966) found that the effects of low credibility can be largely obviated by delaying source identification until after a message has been presented. In each of their experiments, delayed identification of the low credible source enhanced the persuasiveness of the message.

Despite the many experimental studies relevant to the effects of credibility on communication, the scope of this concept is such that the findings are not sufficiently numerous and sophisticated to permit definitive conclusions about its operation.

It is possible to state that generally the credibility of the source is related in some way to the impact of the message. However, evidence related to retention does not suggest that the amount of information gained from exposure to a message is related to the ethos of the source. As for persuasion, according to many studies the effect of credibility is temporal in dimension, such that when the stimulus is not renewed, material presented by a high credible source loses in persuasiveness and that given by a low-credible source gains. Some of the initial effect is re-established upon recall of the source, though any improvement produced by revival is subject to more rapid decay than that experienced by the original increment. The general distinction then, between retention and persuasion as it relates to the credibility associated with the presentation is that retention remains unaffected whereas persuasion is more directly influenced by the credibility of the message source.

A person's perceived level of credibility can be influenced by the level of prestige attributed to him. The question as to whether differences in speakers' prestige significantly influence the persuasive outcome of a speech however is an unsettled issue. Anderson and Clevenger (1963) reported a study in which one group of subjects listened to a tape recorded speech attributed to Thomas Parran, Surgeon General of the United States; a second group listened to a tape

recorded speech attributed to a "Northwestern University Sophomore." Not only was Parran rated significantly more competent than the other two, but also, as measured by the Woodward Shift-of-Opinion Ballot, his speech was significantly more effective in changing attitude than was either of the other two. The "Dennis" and the "Sophomore" speeches did not differ significantly (Anderson and Clevenger 1963, p. 63).

The supposed differences in prestige level of these experiments were assumed to be large, and the techniques of establishing the prestige levels were straightforward and obvious. However, Hovland and Mandell (1952) suspecting the possibility of subtler sources having an effect on the speaker's image, manipulated credibility through the suggestion of differing degrees of selfish interest and self-motivation. The nonsignificant difference in attitude change produced by the speakers was small, but the audiences, seemingly because of their presumed prejudices, rated the "unbiased sources" as the significantly fairer and more honest of the two.

An interesting result of the studies cited by Greenberg and Miller is the somewhat equivocal success of the low credibility manipulation. Even with audience members receiving information that should have prompted them to question strongly the competency of their sources, a number of respondents failed to rate the source's credibility low in any absolute sense. Though the reluctance to respond negatively may have been partially due to the quality of the message, the investigators seem to feel that some additional variable is involved. The existence of a normative standard might operate in such a manner as to cause audience members to give a source the benefit of a doubt. In

essence the lack of personal experience with the source could cause audiences to respond to sources in a basically positive manner.

Another possible explanation beyond that offered by the "normative standard" is that the positive characteristics of the message had a greater impact on source perception than did subsequent information concerning the source's dubious motives and questionable experience. This interpretation would seem to be consistent with previous research demonstrating the importance of primacy in impression formation (Luchins 1957).

Research conducted by Hovland, Lumsdaine and Sheffield (1949) showed that some opinion changes in the direction of the communicator's position are larger after a lapse of time than immediately after the communication. Hovland refers to this as the "sleeper effect." For a long time the results of investigations in the area of attitude-opinion change supported the assumption that the maximum modification of opinions was expected to occur shortly after exposure to experimental treatment. However, experiments other than Hovland's revealed findings of increased effects of a communication after a period of time. Investigators account for this phenomenon by advocating a distinction between the learning and acceptance of a communication. This argument states that, although the content of a communication is learned well, the communication may be discounted as coming from a source having a propagandistic purpose. Over a period of time, the discounting factor may be forgotten more rapidly than the content of the communication on which the opinions are based. The result is a delayed increment of the effect of the communication. One hypothesis

advanced by Hovland and his associates for their results is that individuals may be suspicious of the motives of the communicator and initially discount his position, and thus may evidence little or no immediate change in opinion. However, after a lapse of time they may remember and accept what was communicated but not remember who it was that communicated it. Therefore, they may then be more inclined to agree with the position presented by the communicator.

As the previous studies have shown, though it is possible to state that generally the credibility of the source is related in some way to the impact of the message, definitive conclusions about its operation are still unavailable. In this experiment a person's perceived level of credibility was expected to be related to or correlated with the level of credibility contained in his statements. In light of cited research, and the lack of pre-biasing since neither a favorable or unfavorable prior identification of subjects was made, the possibility of such an expected effect seemed to be within reason. However, the interaction of competency impressions with that of credibility impressions is also felt to be an area worthy of consideration in any impression formation process. With this in mind, attention will now be directed toward the influence of competency factors and their bearing on impression formation.

#### Competency

Interpersonal competence is being considered as a central concept in understanding human behavior more and more by behavioral scientists. In a series of studies, R. W. White (1963) indicates the

possibility of interpersonal competence being a basic need of man. He defines competence as meaning "capacity, fitness, or ability." The competence of the individual means his fitness or ability to carry on those transactions with the environment which results in his maintenance and success. The extent to which individuals produce this success is the measure of competence.

Chris Argyris (1965) outlined a theoretical framework with importance to understanding the topic of interpersonal competence. However, as Argyris points out, the extent to which a person produces an intended effect is not always an adequate measure of competence. For instance, a person may accomplish specific intended effects in such a way that does not solve the problem permanently or if it does solve it the probabilities of the individual's solving it again are decreased.

With this in mind, Argyris suggested three measures of interpersonal competence:

Human competence tends to increase

1. as one's awareness of relevant factors increase (relevant factors are those that have effect),
2. as the problems are solved in such a way that they remain solved,
3. with a minimal deterioration of the problem-solving process.

With this conception of competence, Argyris attempted to develop categories he felt to be relevant in observing and understanding this phenomenon. "Owning up to", "openness", and "risk taking" were the primary plus categories on the individual and interpersonal levels. A norms level was also included which had as its plus categories "individuality", "concern", and "trust." The primary

minus categories were "not owning up to", "not being open", and "rejecting risk taking" on the individual and interpersonal levels with the norms level containing "conformity", "antagonism", and "mistrust."

Argyris theorized that behavior is categorized at two levels: Level I, referring to individual and interpersonal aspects; and Level II referring to the cultural aspects of behavior which may be designated as norms. In the first level concern is with whether an individual is able to identify his behavior, communicate it, accept ownership of it, etc. Level II, in dealing with norms, suggests that the cultural aspects of behavior must be understood if a more complete picture of human behavior is to be developed. Argyris believed that through an understanding of behavior the nature of competence could be better understood. His second level, or norms level as he refers to it, is designated to categorize aspects of the cultural factors that affect this behavior.

In Level II Argyris explains that norms may be thought of as developing from those interactions among the participants that have proved useful (to the participants) in maintaining the system. He defines norms as "coercive mechanisms" created by the individuals to sanction behavior which will be functional for the system, acting to enhance or inhibit competence (1965, p. 62). For example, as one of his norm categories Argyris includes "trust or mistrust." Though a complex variable, trust is illustrated as occurring when 'A' senses that 'B' is concerned enough about their relationship to permit 'A' to take a risk with his self-esteem. However, such behavior has both positive and negative aspects. For example, Argyris explained that individual

'A' might say to 'B', "I believe in people having their say, but in this case 'X' is true. You're wrong and you'd better change your mind if you wish to succeed here." 'A' owning up to his beliefs could be scored positive whereas inducing 'B' to conform to them would be a negative aspect. 'A' believes in individuality, yet he creates conditions demanding conformity for 'B'. These become contradictory messages. "Imbalance theories" label this behavior as imbalance (creating) behavior. Roger Brown (1962, p. 57) concluded that..."human nature abhors imbalance...a situation of imbalance is one calling for mutually incompatible actions....Imbalance in the mind threatens to paralyze actions." This is Argyris's assumption about the impact of imbalance behavior upon competence striving.

Different types of behavior are thought to contribute differently to interpersonal competence. With this in mind Argyris created a potency score for each category within Level I and Level II. This became his index of competence. His model suggests that the higher the plus scores, the greater the individual interpersonal competence.

In recent research done by Korman, Singer, Fekete and Antonelli (1973), certain kinds of interpersonal descriptions were found to be generally predictive of "competent" behavior. Their findings indicated that individuals being rated high on ability to lead, problem-solving, and need achievement were more likely to have exhibited "competent" behaviors in at least three independent situations than those who were assessed as being low on these variables. However, a note of caution is suggested that the specific kinds of behavioral and psychological

characteristics which are likely to lead a person to be perceived as high need achieving, high problem-solving, etc., by others are not always easy to determine.

In conclusion, the present study sought to create experimental conditions under which a person would be viewed making statements contradictory in level of competency when compared to statements he had made in a prior discussion. The assumption is that such an imbalance would create a negative competency impression associated with the person making such statements. Argyris's work, though not conclusive, would lend support to such an assumption. The present experiment's attempt to influence competency impression through a switch of competency roles can be justified in light of previously cited research indicating that competency impressions are such that they would be sensitive enough to detect such changes. Therefore, being a part of behavior, the potential effect of competency on the impression formation process is worthy of consideration, especially in light of the fact that in this experiment changes in expressed levels of competency occurred before competency impressions were re-measured. However, with the re-measuring of any impression comes the difficulty involved in assessing actual changes in attitude. Such difficulties and the nature of attitude change in general can best be discussed after the attitude measuring instruments used in this study have been considered. Therefore, attention will not be given to the experimental design developed for this study.

## CHAPTER 3

### PROCEDURE

#### Design Variables

Variables manipulated by an experimenter typically have been called independent variables. Variables of interest that were manipulated in this study were:

- A) Rating: Manipulation occurred through the use of first and second ratings.
- B) Credibility: Manipulation occurred by providing the two confederates with either high or low "credibility" statements.
- C) Confederate: Both a male and female confederate were used throughout the experiment.

A dependent variable is often identified rather loosely as that which is going to be measured in an experiment. Measurement of "competency" as the dependent variable was accomplished through the use of both the Semantic Differential and Likert scales.

As shown in Figure 2, a "control group" was maintained within the experimental design through the use of partial replications. This was accomplished in that at the same time any two subjects were witnessing a second discussion, there were always two subjects to compare against who were witnessing the discussion for the first time.

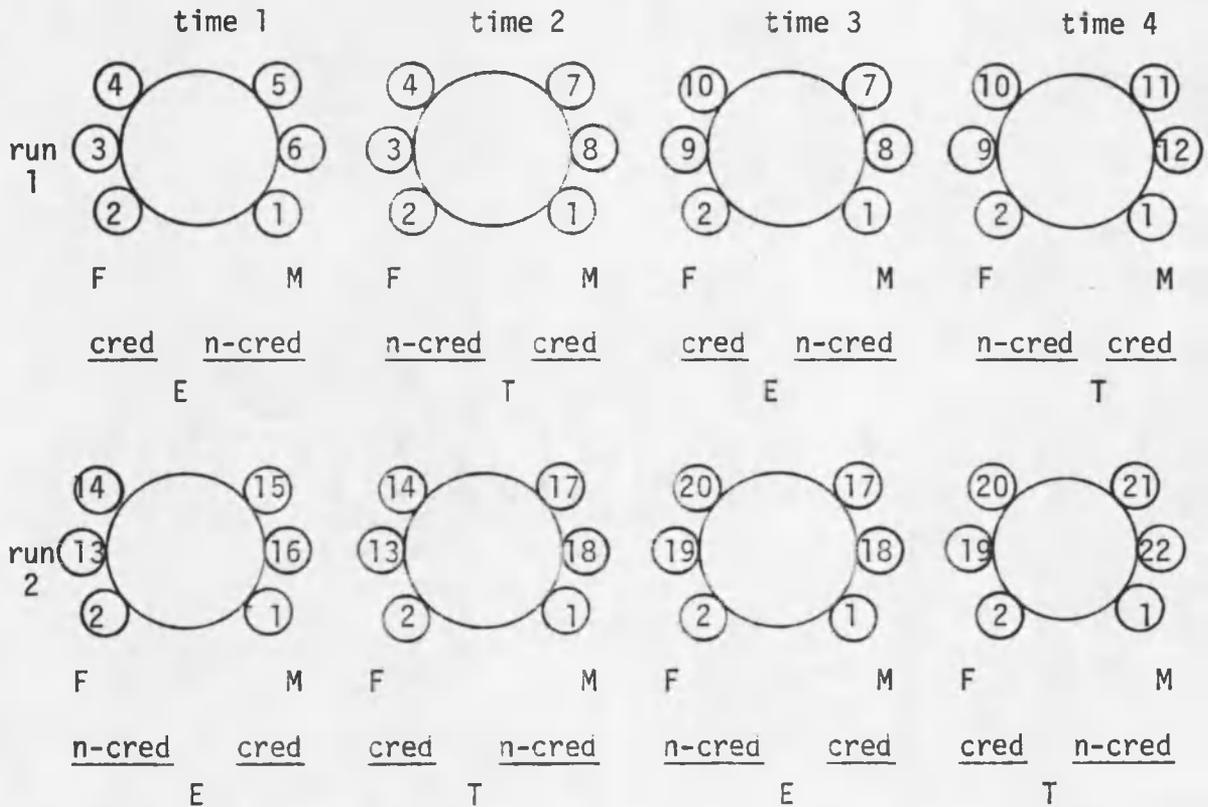


Fig. 2. Design Illustrating the Implementation of Discussion Topics, Credibility Roles and Seating of Subjects

F = Female confederate; number 2.  
 M = Male confederate; number 1.  
 cred = credible statements used.  
 n-cred = non-credible statements used.  
 E = energy crisis discussion topic.  
 T = tax inequities discussion topic.

Under this design, six people participated in each group discussion on one of two possible topics, either the Energy Crisis or Tax Inequities. Of the six people, two were graduate students who acted as confederates in the discussion. Each confederate memorized an identical set of five "credible" and five "non-credible" statements for both discussion topics. The rest of the subjects used in the experiment

were students randomly selected from Speech 103 or Speech 2 classes at The University of Arizona.

In "time one", the six people entered a room and sat around a round discussion table. At that time, each subject was given an information sheet on the Energy Crisis which they were asked to read. When all six subjects had finished reading the information sheet, the experimenter asked them to begin discussing the topic as a group after he left the room and to stop the discussion when he re-entered the room later. During this discussion, confederate two had been instructed to make her five credible statements and confederate one to make his five non-credible statements at realistic intervals within the discussion. The confederates were also instructed to make no other statements than the ones memorized.

During the discussion, the experimenter listened to and observed the discussion from behind a one way mirror in an adjacent room. After both confederates had made their five statements, the experimenter re-entered the discussion room and asked each subject to fill out four questionnaires, two of which pertained to confederate one and two identical questionnaires on confederate two. After the questionnaires had been completed and collected, subjects five and six were asked to leave. Time one in the design was then over and new subjects, labeled seven and eight, were brought in to participate in the second group discussion. As before, each subject read an information sheet concerning the new discussion topic of Tax Inequities. In time two the credibility roles were reversed and confederate two made non-credible statements and confederate one made credible statements.

Questionnaires were administered at the end of the group discussion in the same manner as in time one. The two subjects who remained for the second discussion did not know which subjects they would be asked to rate until after the discussion under time two was over. As before, all subjects received two questionnaires for rating confederate one and the same two questionnaires for rating confederate two. The only difference being that subjects seven and eight had not rated the confederates before under different credibility roles as had subjects three and four.

In time three, credibility roles and discussion topic reverted back to those used in time one. Subjects nine and ten were new and the same procedure was used as before. Subjects eleven and twelve were new in time four where credibility roles and discussion topic reverted to those used in time two. However, at the end of time four all subjects were asked to leave and run one was completed.

In run two, the credibility roles for each discussion topic were reversed from run one. Although the same confederates were used, a new group of subjects were used in run two. The text of the discussion topics used, along with statements memorized by the confederates can be found in Appendix A. The text of the two discussion topics and corresponding statements were written by the author for use in this study.

### Measuring Instruments

Both the Semantic Differential and Likert measuring instruments were used in this experiment. Each measuring instrument employed can be

found in the Appendix B. The Semantic Differential has been used in hundreds of studies for a variety of purposes ranging from predicting a political election to identifying changes in personality structure and was thought to be a valuable measuring instrument for use in this study.

Bipolar adjectives on seven-interval scales represent the critical attitudes of a semantic differential. The scales used may be specially constructed for a particular task as was the case in the present study. The appropriate method for analyzing the semantic differential data depends on the question the experimenter wants to answer. In general, differences in the patterns of check marks on the scales are assumed to represent differences in meanings of the concepts judged (Emmert and Brooks 1970, p. 182).

Extensive work done with samples of adjectives suggests that in over twenty cultures, three major independent dimensions underlie the judgments made by subjects (Triandis 1971, p. 47). These are as follows:

Evaluation: The object is good, clean, fair, honest, beautiful.

Potency: The object is strong, big, large, powerful, heavy.

Activity: The object is active, hot, fast, alive.

Osgood employs the evaluation dimension to measure attitudes.

Due to the reliability of Likert scales and because of the possibility that this method may be less time consuming, Likert scales have been widely used in attitude studies. In the present study both the semantic differential and Likert scale were utilized for the purpose of measuring attitude change and are found in Appendix B.

However, the difficulty in assessing actual changes in attitude rests not only with the measuring instruments used but also with the nature in which an attitude is defined and conceptualized. Consideration will now be given to the latter.

### Attitude Change

By the very nature of the experimental design used in this study, attitude change becomes an instrumental concept for consideration. As measured by the rating instruments used in the present study, a change in the subject's second ratings as compared with his first ratings was taken as an indication that a change had occurred in one or more of his perceptions concerning one or both of the confederates. However, to appreciate and better understand what takes place between the initial ratings and a subsequent change in ratings, the complex nature of attitudes and attitude change deserves consideration.

Having an attitude means that the individual is no longer neutral toward the referents of the attitude. He is for or against, positively inclined or negatively disposed in some degree toward them--not just momentarily, but in a lasting way, as long as the attitude in question is operative.

The referent of an attitude constitutes a set ranging, theoretically, from one to a large number of objects. Most of the time the formation of a positive or negative stand toward one object or person usually implies differential attachment to others in the same

domain. The subject-object relationship develops through the formation of categories both differentiating between the objects and between the person's positive or negative relationship to objects in the various categories. As an example, an attraction to one person usually involves a comparison with others who are similar and different. It becomes evident that the attitude toward the person includes the views toward others with whom he is compared. This process might often be an unconscious one. In addition to social objects, the referents of an attitude may also be objects in the person's environment that are nonsocial.

Smith, Bruner, and White (1956) mention seven dimensions along which attitudes may vary: differentiation, saliency, time perspective, informational support, object value, orientation, and policy stand. Therefore, the individual may differentiate among many parts of the attitude object; he may experience the attitude object with differing degrees of salience, may employ a temporal frame of reference in thinking about it, may or may not be well informed about it, may experience differing degrees of effect, and may be oriented to approach, avoid or be hostile toward it.

Person O has many characteristics. P's attitude toward O is determined in part by O's characteristics; however, a number of other variables are also important. The characteristics of P and the way they relate to O's characteristics, the culture and social context of the interaction are all important determinates of P's attitudes toward O (Sherif 1966).

Since O has a great variety of characteristics, the observation that P has an attitude toward him gives limited information. It is helpful to have observations of P's behaviors toward people who have or do not have the various characteristics. With such observations, P's attitude toward O can be better understood.

Because an attitude is not something that can be observed directly, we can only infer the nature of one's attitudes from what he says or indicates his attitudes to be. Just as we can never directly observe pain, psychological tension, or an unspoken idea, an attitude cannot be seen. Nevertheless, as pointed out by Sherif and Sherif (1967, p. 112), the concept of attitude is different from other concepts referring to internal states of the individual; for example: Attitudes are not innate; it is assumed that the appearance of an attitude is dependent on learning.

Attitudes are not temporary states but are more or less enduring once they are formed. Of course, attitudes do change; but once formed they acquire a regulatory function such that, within limits, they are not subject to change with the ups and downs or homeostatic functioning of the organism or with every just noticeable variation in the stimulus condition.

Attitudes are not self-generated, psychologically. They are formed or learned in relation to identifiable referents, whether these be persons, groups, objects, or ideologies.

Operationally, an attitude can be defined as the individual's set of categories for evaluating a stimulus domain, which is established as he learns about that domain in interaction with other persons and

which relate him to various subsets within the domain with varying degrees of positive or negative effect (Sherif and Sherif, p. 115).

The following analysis explains that there are three components of attitudes. Attitudes are necessarily cognitive-motivational-behavioral (Sherif and Sherif, p. 113). Under the cognitive component, beliefs about the attitude object's characteristics, relation to other objects, and degree of integration into a hierarchical pattern of cognitions are considered. Since attitudes are not neutral affairs, there is a motivational component. Finally, there is a behavioral component since the only possible data from which an attitude can be inferred are behaviors, verbal or nonverbal.

For purposes of assessing the structure of an attitude, three concepts are specified (Sherif and Sherif, p. 115).

1. Latitude of acceptance: The latitude of acceptance is the most acceptable position plus other positions the individual also finds acceptable.

2. Latitude of rejection: The position most objectionable to the individual, the thing he most detests in a particular domain, plus other positions he finds objectionable define the latitude of rejection.

3. Latitude of noncommitment: While accepting some and rejecting others, the individual may remain noncommittal concerning certain positions.

According to social judgment theory Sherif, Sherif and Nebergall (1965) explain that a persuasive message falling within or slightly out of the latitude of acceptance is perceived by the receiver as closer to his prime attitude than it really is. On the other hand,

if a source argues in favor of a position that is in the receiver's latitude of rejection, it is seen as more discrepant than it actually is.

Although the present study was not designed to investigate any of the aspects of persuasion, it was concerned with the influence certain verbal statements would have on perceptions relating to the sender. It is not uncommon for people to listen in ways which avoid anxiety and to achieve satisfaction. Selective inattention and perceptual distortion are viewed as defensive mechanisms which people use to maintain their ability to function (Freund 1942). To the extent that any subjects excluded credible or non-credible statements they did not want to hear, such exclusions could affect their ratings of the confederates. Therefore, the latitude within which the confederate's statement might fall could influence how that statement was dealt with by the subject for the purpose of rating the confederate.

There are many classes of variables that determine interpersonal attitudes (Sherif and Sherif 1967, p. 235). For example, O's behavior, clothes, rate and loudness of speech, O's color, O's accent, etc., can all influence P to infer certain characteristics about O. Many of these variables could influence P's attitudes about O even before P had observed O making credible or non-credible statements. In developing an initial interpersonal attitude, the possibility always exists that in some cases O's statements would be discounted in light of the other characteristics observed by P.

In the present study, when credibility roles were reversed after the first ratings had been taken, perceptual distortion might

result in the case of some subjects. For example, through selective inattention, a subject might partially or wholly exclude any of the new statements he did not want to hear, when credibility roles were changed, in order to avoid anxiety regarding conflicting impressions. The opposite is also true since we easily and quickly hear those things we want or need to hear (Weaver 1972, p. 68).

Since attitudes have been indicated to be dependent on learning, it was the belief that in the present experiment an attitude would develop as a result of what was learned about a confederate from his statements.

When noticeable variations in the stimulus conditions were presented on the part of the confederate, it was also expected that a new attitude would be learned.

In relation to attitude change, a number of studies have reported results indicating that upon receiving a communication divergent from existing opinions, more opinion change can be expected when this discrepancy is large rather than small (Goldberg 1954, Hovland and Pritzker 1957, Harvey, Kelley and Shapiro 1957, and Zimbardo 1960).

However, just as there is evidence supporting the hypothesis that greater discrepancy results in greater change, there is also considerable evidence to support the hypothesis of greater change with smaller discrepancy. Hovland, Harvey, and Sherif (1957), and Sherif and Hovland (1961) have reported such findings.

Through his theory of cognitive dissonance, Festinger (1957) provides a theory to interpret the "greater" discrepancy results. A

theoretical interpretation of the opposite results is provided in the assimilation effect (Sherif and Hovland, 1961). However, in any situation dealing with attitude change, it is important to first consider what it is that is to be changed when a person is exposed to a communication or some other attempt at attitude change. What is involved that is resistant to change? Is it his guesses about the number of books on a shelf, or people in a room? Or is it his views regarding his family, his religion, his politics, his country, or his life style? After all, it is one thing to change a person's opinion regarding which candy bar is best; however, it is quite another thing to change the person's stand toward groups and institutions he accepts or rejects. In other words, there are always many issues that a subject is not ego-involved with. Consequently, such opinions are easily changed. In an experimental setting where future interpersonal interaction with group members is doubtful, it is doubtful that ego-involvement would be high.

A theory of attitude change that differs somewhat in general approach from some explicitly functional theories is that of Kelman's theory (Kelman 1958). Kelman focuses on the attitude change per se and builds his theory on the processes of attitude "change"; some theories prior to Kelman's were theories about attitudes (Smith, Bruner, and White 1956) but contained relatively little focus on change per se. Kelman theorizes that "compliance", "identification", and "internalization" are the three processes of attitude change.

According to Kelman, compliance can be said to occur when an individual accepts influence in hopes of achieving a favorable reaction

from another person or group. He adopts the induced behavior--not because he believes its contents--but because he believes he will gain specific rewards or approval and avoid specific punishments or disapproval by conforming. Therefore, the satisfaction derived from compliance is a result of the social effect of accepting influence. Kelman goes on to define "identification" as occurring when an individual accepts influence because he wants to establish or maintain a satisfying self-defining relationship to another person or a group. Though their specific content is more or less irrelevant, it seems that the individual actually believes in the responses which he adopts through identification. The induced behavior is adopted because of its association with the desired relationship. Kelman explains that compliance depends on the communicator's control of rewards and punishments and that identification depends on the communicator's power. However, Kelman's distinction is not really clear in light of the fact that psychologists have defined power as the ability to control the rewards and punishments others receive.

The last process, internalization, occurs when an individual accepts influence because the content of the induced behavior--the ideas and actions of which it is composed--is intrinsically rewarding. Behavior adopted in this fashion tends to be integrated with the individual's existing values. Thus Kelman explains that the satisfaction derived from internalization is due to the content of the behavior.

In the present experiment a reasonable case could be made for the existence of any of these three processes to some extent. Though

the subject's sex was not recorded in this study, attraction to either the male or female confederate could have been possible. Such attraction could cause the individual subject to accept the confederate's responses in order to adopt an identification with that confederate. However, other factors besides sex could also produce an identification.

Kelman recognizes the fact that the same attitude can be expressed for a variety of reasons. Kelman's work has received some criticism that it is not clear that his "three processes" all directly refer to attitude change. For example, others who have written about attitude change would not consider the compliant act itself a form of attitude change (Kiesler, Collins and Miller 1969, p. 338). Although such criticism is not without merit, Kelman's theory in general seems to be a fairly compelling analysis of attitudes as far as it goes.

Gordon Allport (1935) traces the study of "Attitudes" to 1888, when L. Lange discovered that a subject instructed to concentrate on being ready to press a key at the onset of a stimulus responded more rapidly than a subject whose instructions were to concentrate on the incoming stimulus itself. A great deal of research on issues concerning attitudes and attitude change has transpired since Lange's study, but many of these issues still remain theoretical and empirical issues. In the present study, the measurement of attitude and attitude change was limited to the scales developed and interpretation of rating changes found to occur among differing treatment conditions. Attention is now directed more specifically to the statistical analysis of results obtained from this study.

## CHAPTER 4

### STATISTICAL PROCEDURES AND RESULTS

In the present study, sampling with replacement was utilized for the purpose of yielding a random sample. Under this sampling plan, six subjects were selected for each of the eight cells contained in Figure 3 below:

Rating:	a <sub>1</sub>		a <sub>2</sub>	
Credibility:	b <sub>1</sub>	b <sub>2</sub>	b <sub>1</sub>	b <sub>2</sub>
Confederate:	c <sub>1</sub>	6	6	6
	c <sub>2</sub>	6	6	6

Fig. 3. Cell Structure Representing Design Variables

Six subjects in each of the eight cells yielded a total of forty-eight ratings for each scale contained within the measuring instruments used in the study.

As indicated by the structure of the experimental design used, four experimental variables existed: rating, credibility, confederate and discussion topic. For purposes of statistical analysis, the design was collapsed to the three main effects of rating, credibility and confederate. Collapsing to three variables reduced the number of cells

from sixteen to eight, resulting in a substantial increase in the number of subjects available per cell for statistical analysis. The small difference found between preliminary means computed for ratings under each discussion topic indicated that the collapsing of this variable could be justified.

A three-factor analysis of variance procedures was utilized in analyzing the Likert measuring instrument and each of the five scales within the semantic differential. The purpose of the analysis of variance was to determine which factors of the experiment have noteworthy effects on the scores, and to provide quantitative information about the relative importance of different factors and their levels. As stated earlier, the main effects being analyzed are:

- A) rating (first rating and second rating)
- B) credibility (credible and non-credible)
- C) confederate (male confederate and female confederate)

The outcome of the three-way analysis of variance is shown in Tables 1 through 6.

As Table 1 indicates, the "How Competent" scale was analyzed for the main effects of rating, credibility, confederate, and interaction effects. However, no source of variance achieved statistical significance. Therefore, the "How Competent" scale was not influenced significantly by the variables under consideration.

Table 1. Summary of Analysis of Variance for "How Competent" Scale

Source of Variance	SS	df	MS	Calcd. value of F	Crit. val. of F*
A	0	1	0	0.00	2.84
B	1.33	1	1.33	1.34	
C	.08	1	.08	.08	
AB	.08	1	.08	.08	
AC	0	1	0	0.00	
BC	0	1	0	0.00	
ABC	.74	1	.74	.75	
error	39.69	40	.99		
Total	41.92	47			

\* F .90 (1.40) = 2.84

The outcome of the three-way analysis of variance for the "Relevant" scale within the semantic differential measuring instrument is shown in Table 2.

The "Relevant" scale was analyzed for the main effects of rating, credibility, confederate, and interaction effects. However, no source of variance achieved statistical significance. Therefore, the "Relevant" scale was not influenced significantly by the variables under consideration.

Table 2. Summary of Analysis of Variance for "Relevant" Scale

Source of Variance	SS	df	MS	Calcd. value of F	Crit. val. of F*
A	.08	1	.08	.08	2.84
B	0	1	0	0.00	
C	1.33	1	1.33	1.24	
AB	.08	1	.08	.08	
AC	.09	1	.09	.08	
BC	1.33	1	1.33	1.24	
ABC	1.42	1	1.42	1.34	
error	42.67	40	1.06		
Total	47.00	47			

\*  $F_{.90}(1.40) = 2.84$

The outcome of the three-way analysis of variance for the "Competent" scale within the semantic differential measuring instrument is shown in Table 3.

The "Competent" scale was analyzed for the main effects of rating, credibility, confederate, and interaction effects. The only source of variance achieving statistical significance was the three-way interaction. Therefore, though they produced no effect separately, through an interaction of the three variables the "Competent" scale was influenced significantly.

Table 3. Summary of Analysis of Variance for "Competent" Scale

Source of Variance	SS	df	MS	Calcd. value of F	Crit. val. of F*
A	.18	1	.18	.27	2.84
B	.51	1	.51	.78	
C	.02	1	.02	.03	
AB	.53	1	.53	.82	
AC	.49	1	.49	.75	
BC	1.03	1	1.03	1.58	
ABC	2.54	1	2.54	3.90	
error	26.18	40	.65		
Total	31.48	47			

\* F .90 (1.40) = 2.84

The outcome of the three-way analysis of variance for the "Logical" scale within the semantic differential measuring instrument is shown in Table 4.

The "Logical" scale was analyzed for the main effects of rating, credibility, confederate, and interaction effects. Both the three-way interaction and interaction of credibility with confederate produced statistical significance. Therefore, through two forms of interaction, all three variables significantly influenced the "Logical" scale.

Table 4. Summary of Analysis of Variance for "Logical" Scale

Source of Variance	SS	df	MS	Calcd. value of F	Crit. val. of F*
A	1.33	1	1.33	1.27	2.84
B	.33	1	.33	.31	
C	.07	1	.07	.07	
AB	.08	1	.08	.08	
AC	.01	1	.01	.01	
BC	3.01	1	3.01	2.86	
ABC	4.06	1	4.06	3.86	
error	42.36	40	1.05		
Total	51.25	47			

\* F .90 (1.40) = 2.84

The outcome of the three-way analysis of variance for the "Fair" scale within the semantic differential measuring instrument is shown in Table 5.

The "Fair" scale was analyzed for the main effects of rating, credibility, confederate, and interaction effects. However, no source of variance achieved statistical significance. Therefore, the "Fair" scale was not influenced significantly by the variables under consideration.

Table 5. Summary of Analysis of Variance for "Fair" Scale

Source of Variance	SS	df	MS	Calcd. value of F	Crit. val. of F*
A	.51	1	.51	.53	2.84
B	.51	1	.51	.53	
C	.51	1	.51	.53	
AB	.04	1	.04	.04	
AC	.20	1	.20	.21	
BC	.20	1	.20	.21	
ABC	.15	1	.15	.15	
error	36.86	40	.97		
Total	38.98	47			

\*  $F_{.90}(1,40) = 2.84$

The outcome of the three-way analysis of variance for the "Knowledgeable" scale within the semantic differential measuring instrument is shown in Table 6.

The "Knowledgeable" scale was analyzed for the main effects of rating, credibility, confederate, and interaction effects. The only source of variance achieving statistical significance was the interaction of rating with confederate. Therefore, though they produced no effect separately, through an interaction of these two variables the "Knowledgeable" scale was influenced significantly.

Table 6. Summary of Analysis of Variance for "Knowledgeable" Scale

Source of Variance	SS	df	MS	Calcd. value of F	Crit. val. of F*
A	.32	1	.32	.15	2.84
B	4.08	1	4.08	1.91	
C	1.33	1	1.33	.62	
AB	.34	1	.34	.16	
AC	6.75	1	6.75	3.15	
BC	1.34	1	1.34	.63	
ABC	2.05	1	2.05	.96	
error	85.70	40	2.14		
Total	101.92	47			

\* F .90 (1.40) = 2.84

As indicated by these results, singularly, none of the main effects reached statistical significance; only through interaction effects were significant results obtained for three of the semantic differential scales.

## CHAPTER 5

### DISCUSSION AND SUMMARY

In studying the results of this study, a number of possible explanations emerge. Although such explanations are not supported by statistically significant results, acknowledgment of such ideas is considered by the author to be important.

A first and possibly more liberal explanation for the results obtained is that they are in fact correct. That is, that what people have to say is not related or relevant to the formulation of competency impressions. In actuality, maybe a person can say anything he pleases without fear of its interpretation as long as other conditions are favorable. Such other conditions could be a host of things such as eye contact, race, sex, age, hair color, posture, tone of voice, etc. This being possible, a person would seem to be "typed or classified" without regard to his statements. If so, his statements would automatically be applauded or attacked regardless of their make-up or content. Though this author finds such an explanation difficult to defend when projected to an intelligent and sophisticated listener, possibly the average person or speech communication student does react within the boundaries of such an explanation.

Another possibility is that "quantity" of statements made is an influencing factor in determining whether a person is given a high "quality" rating by the other members in a group.

In research conducted by Bales (1953) there was reported a clear tendency for the member who does the most talking to be credited by his fellow-members with having contributed most of the solution of the problem under discussion. Henry Rieken (1958) conducted similar research to that of Bales and obtained an even clearer relationship showing that the higher the individual ranks in amount of interaction initiated, the higher he is ranked in terms of his contribution to the solution of the problem.

The question seems to arise as to whether a person can exert influence on a group just by being an active "talker", even though others in the group relate information which is superior to his. Rieken's data indicates that the talkative person has the edge in this controversy since it was found that the person doing the greatest amount of talking is more often able to get the best solution accepted by his fellow members than is the less talkative person in a group even though the less talkative person is equally well equipped with information and suggestions. It seems reasonable to assume, therefore, that it is probably not the superiority of the talkative person's information, suggestions, or opinions which lead him to be seen as having contributed most to the solution. Rieken explains that he found group members to be fairly accurate in identifying the individuals who did the greatest and the least amount of talking during a discussion. He also reveals the existence of a distinct tendency to identify quality of contribution with amount of talking. With this in mind, and understanding that the confederates were the highest participators in the

experimental discussions, it is possible that the similar, high ratings consistently received by them can be accounted for in part by this phenomenon.

The question as to how much time is required for a person to develop an impression concerning another person seems to be an important one in connection with this study. With this question in mind, some might argue that there was not enough time provided in the experiment for "testable" impressions to be formed.

In response to such arguments, Asch's experiments which demonstrated that certain crucial labels can transform the entire impression of the person, seems to leave little doubt that enough time was provided in this experiment for an impression of the confederate's character and capability to be formed by each subject in the discussion. Though there is no guarantee that subsequent observation will enrich or upset this first view, nevertheless there seems no way of preventing the initial rapid growth of such first impressions.

It might also be argued that although there may have been enough time to observe traits, the possibility of them forming into one impression would be small until more traits were observed. However, research in this area by Asch and others seems to indicate that as soon as two or more traits are observed to belong to one person, they cease to exist as isolated traits, and come into immediate dynamic relation. Although the possibility exists that some traits may be seen as accidental, having no relation to the rest of the person, it seems more likely that even insignificant traits will be seen as being part of the person.

The possibility of sex attraction in this experiment certainly exists due to the fact that mixed sex groups were used. Since both confederates used were attractive individuals it is possible that the male subjects let such an attraction toward the female confederate affect their rating of her. The same could easily apply for the female subjects toward the male confederate. However, this should not be a factor for the male subjects rating the male confederate or the female subjects rating the female confederate. Though no records were kept as to the sex of the subjects participating, it seems that this argument fails since all ratings were similar from one discussion to the next which means that "common" sex ratings were no different than opposite sex ratings. If single sex groups were used in any future testing, the problem of sex attraction could be eliminated.

Since the subjects tested always came from the same class it could be argued that they then became a subgroup which might respond in a different manner than they would have if they had not known any other members in the group. Such an argument is limited, but its possibility does exist and could be reduced in future testing by recruiting each subject from a different class.

Another possible reason for the closeness of results is contained in the following argument: Once having responded to the questionnaire, the subject may conceivably feel himself "committed" to a certain conception in the second questionnaire, thus making for primacy effects.

A "Law of Primacy in Persuasion" was promulgated by Lund (1925), stating that the side of an issue presented first is more effective in persuasion than the side subsequently presented. Results shown by

Luchins (1958) indicated that the information presented first was more effective in impression-formation than the information subsequently presented. With these results in mind it can be argued that this experiment, by its very nature, was plagued with primacy effects from the beginning. However, this author contends that studies in communication research have reached no consensus as to the effect of order presentation. Although it is true that some progress has been made in the study of the relevant variables (Anderson 1959, Hovland 1957), the situation is far from clear.

One limitation of much of the work done in this area is the small number, typically two, of communications involved. Controversies which have arisen with reference to primacy effects should examine the different studies to see how they compare with the method of presentation of the communications and at what points in the course of the communication subjects had an opportunity to formulate a clear impression.

In reviewing Luchins' study, it was found that the experience they had when breaks between the questionnaires were introduced indicated that these breaks operated against primacy. It appears that if subjects considered that they were finished when they answered the first questionnaire, they answered the second questionnaire at a later time as if they were dealing with a new task. Since both confederates were rated after the discussion was concluded by the experimenter, this type of "completion" may have helped to keep the

two questionnaires separated in the subjects' view. If this in fact occurred the arguments based on primacy would be unfounded in relation to this experiment.

If the impressions created by credible or non-credible statements are overshadowed by some other variable causing stronger impressions, the effect of the weaker variable might be lost or difficult to observe through the testing scales.

The results obtained in this study would have little bearing on the effects of credible statements on impression formation if such an argument could produce the stronger variable. However, such an obviously stronger variable has not been identified by the author.

The argument in favor of pre-testing the credible and non-credible statements is a very strong one. The need to have more conclusive evidence than presently exists as to the interpreted credibility of the statements used is realized by the author. To provide the necessary evidence a pre-test could still be conducted on the statements used even though the experiment has already been completed.

In conclusion, though the possibility of alternative explanations exist for the results obtained, there is, nevertheless, an indication that a fallacy exists in what people expect the consequences of non-credible statements to be on the perceptions others have of the person making the non-credible statements. That is, no loss of perceived competency resulted from the non-credible statements

employed in this study. Further testing is planned as a means of continued investigation of this topic and further resolution of the question raised by this study.

## APPENDIX A

### INFORMATION SHEETS AND STATEMENTS

The two information sheets and corresponding statements were written by the author for use in this study.

#### Tax Inequities

A few years ago Treasury Secretary Joseph Bar disclosed that more than 150 wealthy citizens in the \$200,000 plus income bracket were quite legally not paying a cent in income tax. In the recent presidential election "a taxpayer revolt" was threatened if something wasn't done about the widespread tax inequities that such extreme examples represent. However, Treasury officials of the Nixon administration explain that though tax reform is desirable, it is a highly complicated subject needing further study.

At a time when taxpayers are heavily burdened, it is particularly important that they not be unfairly burdened. The fact that they are unfairly burdened need not be elaborated further in studies by the administration since it has been exhaustively documented by tens of thousands of pages of congressional committee testimony.

All the special gimmicks and escape hatches that Congress has been writing into the tax laws are the equivalent of direct welfare payments to the lucky recipients of the tax favors. Our tax rate was designed to be progressive--to take more from the rich man's dollar

than from the poor man's. However, tax loopholes defeat this purpose. Though some reform has been made, the biggest loopholes are still available: tax-exempt interest on state and local bonds, depletion allowances and other privileges for investors in oil, gas and other minerals, and the still heavily favored treatment of capital gains in securities and other investments.

It has been estimated that, by eliminating the numerous remaining escape hatches in the federal tax law which favor our wealthier citizens, the government could increase its tax intake by \$15 billion to \$20 billion a year. The majority of taxpayers should realize that when someone else pays less the rest of the taxpayers have to pay more.

#### Credible Statements

1. One of the main inequities is that in virtually all instances those who live primarily on wages and salaries pay the nominal rates, literally and fully. The withholding and reporting systems of the Internal Revenue Service make any other result all but impossible.
2. Although our taxes are supposed to be progressive, there is no progression worthy of mention, up to incomes of \$15,000, because all families below that level pay about 30 per cent of their personal incomes in taxes.
3. I feel sure that higher taxes will be sought by the administration to meet the demand for greater spending on health, environmental controls, housing and other social needs.
4. Our taxes are bad, but there are a number of countries, for example West Germany and Great Britain, whose taxes are higher than ours as a percentage of their Gross National Product.
5. Actually, most money collected by the federal government comes from regressive taxes such as payroll levies and excises where the poor pay more. In fact, Washington now collects more revenue from payrolls than from corporate taxes.

### Non-Credible Statements

1. It seems to me that a good way to handle taxes would be to use a lottery system. Since a lottery was used for the draft, we could use a lottery to choose those who will have to pay taxes and those who won't rather than letting tax loopholes do this.
2. Since tax loopholes make it possible for some people to get out of paying taxes, we should just collect taxes every other year. This way everyone would get a chance to not pay any taxes on their income.
3. To make things equitable we could have a small standard tax that everyone would have to pay. If the government needed more money it could just have the treasury print up more money for it.
4. It seems to me that if the rich get out of paying so many taxes, that what we should do is just double whatever amount they say they owe. Then they would probably be paying what they really owe.
5. Maybe what we should do to make the tax system more equitable is to pass more tax loopholes so there will be enough for everyone to get a chance to use.

### Energy Crisis

Many Americans who had discounted the mounting cries of "energy crisis" were suddenly confronted with the predicted fuel shortages this winter as harsh weather set in across the nation.

America has created the most enormous energy machine in history. All in all, the U.S. wastes fully 50 per cent of all the energy it burns. Given the doomsday implications of the U.S. energy plight, it seems inconceivable that the nation could have raced so close to disaster so blindly. Ironically, the illusion was promoted by the government, which clung to the low cost, maximum-usage policy launched in the 1930's even as the days of plenty passed.

To try to remedy the problem, the country has several options--all logical enough, but all certain to set off political warfare. The government can push further development of the country's own fuel

resources. But environmentalists oppose a massive new drilling program. The clean air act could be eased requiring less emission controls on new cars and decreasing gas consumption. However, many feel the act should be made tougher. U.S. ports could be opened wide to oil imports. But the resulting balance-of-payments deficit could undermine the dollar. A kind of super-daylight-saving time--moving the clocks ahead one hour in the winter and two hours in the summer--has also been suggested.

Perhaps the wasteful trend could be reversed by allowing prices to soar to levels that will force Americans to use less energy. However, during the next critical twelve years, the worst thing that anyone can do is to do nothing.

#### Credible Statements

1. You know, it's hard to believe, but even though the United States has only 6 per cent of the world's population, we use 33 per cent of the world's energy.
2. We should be more aware of the energy that we waste so we can correct these problems. For instance, just the pilot light on a gas range consumes one third of all the fuel the appliance burns.
3. Many of the energy problems we face today are due to the governments poor research of the situation. Even after the massive East coast blackout in 1965--a private, high level White House study concluded that "the nation's total energy resources were adequate to meet expected requirements through the remainder of the century at costs near present levels."
4. I think the government should spend more money investigating the use of nuclear fusion reactors since we have enough of the lithium fuel they use to last for millions of years even at energy levels far above what we are experiencing now.
5. If we and other nations became a bigger user of foreign oil this could be good for the world because the consuming nations would band closer together to deal collectively with the cartelized oil-producing states and thus get better terms. This would be a force for good rather than a cause for war.

Non-Credible Statements

1. We import a lot of things from Japan, so maybe we could also import whatever electricity we need from Japan.
2. Right now there seems to be more than enough fuel for cars and heating. I don't see any need to worry about the energy crisis until the energy runs out.
3. We seem to have a lot of batteries around, so maybe we could just use batteries to solve our energy needs.
4. If it's true that the United States wastes 50 per cent of the energy it burns, it seems like what we should do is cut energy production by 50 per cent to eliminate the waste.
5. I don't think we should be concerned about trying to conserve energy. I'm sure we will come up with a substitute or something before the energy supplies run out.

APPENDIX B

MEASURING INSTRUMENTS

Semantic Differential Scale

Please rate member # \_\_\_\_\_ on the descriptive scales presented below. Rate this member on his or her treatment of the subject matter of the discussion. For instance, if you feel that the member was well organized in their treatment of the subject matter, you would mark the scale presented below as follows:

organized \_\_\_\_\_ unorganized

Please mark all the scales in a similar manner, placing your 'X' in the position that best describes the group member's performance.

relevant \_\_\_\_\_ irrelevant

competent \_\_\_\_\_ incompetent

logical \_\_\_\_\_ illogical

fair \_\_\_\_\_ unfair

knowledgeable \_\_\_\_\_ unknowledgeable

Likert Scale

Please rate member # \_\_\_\_\_ on the scale presented below on the basis of how competent he or she appeared in their treatment of the subject. Please circle the number that corresponds to your judgment.

7            6            5            4            3            2            1  
superior    excellent    good        average    fair        poor        inferior

## LIST OF REFERENCES

- Allport, G. W. "Attitudes," in Handbook of Social Psychology, by C. Murchison (Worcester: Clark University Press, 1935).
- Anderson, K. and T. Clevenger, Jr. "A Summary of Experimental Research in Ethos," Speech Monographs, 30 (1963), pp. 59-78.
- Anderson, N. H. "Test of a Model for Opinion Change," Journal of Abnormal and Social Psychology, 59 (1959), pp. 371-381.
- Anderson, N. H. "Integration Theory and Attitude Change," Psychological Review, 78 (1971), pp. 171-206.
- Argyris, C. "Explorations in Interpersonal Competence," The Journal of Applied Behavioral Science, 1 (1965), pp. 58-83.
- Asch, S. E. "Forming Impressions of Personality," Journal of Abnormal and Social Psychology, 41 (1946), pp. 258-290.
- Bales, R. F. "The Equilibrium Problem, in Small Groups," in Working Papers in the Theory of Action, by T. Parsons, R. F. Bales, and E. A. Shils (Glencoe: The Free Press, 1953).
- Boucher, J. and C. E. Osgood. "The Pollyanna Hypothesis," Journal of Verbal Learning and Verbal Behavior, 8 (1969), pp. 1-8.
- Brown, R. "Models of Attitude Change," in New Directions in Psychology, Ed. R. Brown (New York: Holt, Rinehart, and Winston, 1962).
- Emmert, P. and W. D. Brooks. Methods of Research in Communication (Boston: Houghton Mifflin, 1970).
- Festinger, L. The Theory of Cognitive Dissonance (Evanston, Illinois: Row, Peterson, 1957).
- Freud, A. The Ego and the Mechanisms of Defense, (London: Hogarth, 1942).
- Goldberg, S. C. "Three Situational Determinants of Conformity to Social Norms," Journal of Abnormal and Social Psychology, 49 (1954).
- Greenberg, B. X. and G. R. Miller. "The Effects of Low-Credible Sources on Message Acceptance," Speech Monographs, 33 (1966), pp. 127-136.

- Harvey, O. J., H. Kelley and M. Shapiro. "Reactions to Unfavorable Evaluations of the Self Made by Other Persons," Journal of Personality, 25 (1957), pp. 393-411.
- Hovland, C. I. The Order of Presentation in Persuasion (New Haven: Yale University Press, 1957).
- Hovland, C. I., O. J. Harvey and M. Sherif. "Assimilation and Contrast Effects in Reactions to Communication and Attitude Change," Journal of Abnormal and Social Psychology, 55 (1957), pp. 244-252.
- Hovland, C. I., A. A. Lumsdaine and F. D. Sheffield. Experiments on Mass Communication (Princeton: University Press, 1949).
- Hovland, C. I. and W. Mandell. "An Experimental Comparison of Conclusion Drawing by the Communicator and the Audience," Journal of Abnormal and Social Psychology, 47 (1952), pp. 581-588.
- Hovland, C. I. and H. A. Pritzker. "Extent of Opinion Change as a Function of Amount of Change Advocated," Journal of Abnormal and Social Psychology, 54 (1957), pp. 257-261.
- Husek, T. R. "Persuasive Impacts of Early, Late or No Mention of a Negative Source," Journal of Personality and Social Psychology, 2 (1965), pp. 125-128.
- Kelley, H. H. "The Warm-Cold Variable in First Impressions of Persons," Journal of Personality, 18 (1950), pp. 431-439.
- Kelman, H. C. "Compliance, Identification and Internalization: Three Processes of Attitude Change," Journal of Conflict Resolution, 2 (1958), pp. 51-60.
- Kiesler, C. A., B. E. Collins and N. Miller. Attitude Change: A Critical Analysis of Theoretical Approaches (New York: Wiley, 1969).
- Korman, A. K., R. D. Singer, A. F. Fekete and M. B. Antonelli. "Perceived Characteristics of Competent People," Journal of Vocational Behavior, 3 (1973), pp. 145-152.
- Levin, I. P. and C. F. Schmidt. "Sequential Effects in Impression Formation With Binary Intermittent Responding," Journal of Experimental Psychology, 79 (1969), pp. 283-287.
- Levin, I. P. and C. F. Schmidt. "Differential Influence of Information in an Impression Formation Task With Binary Intermittent Responding," Journal of Experimental Psychology, 84 (1970), pp. 374-376.

- Luchins, A. S. "Forming Impressions of Personality: A Critique," Journal of Abnormal and Social Psychology, 43 (1948), pp. 318-325.
- Luchins, A. S. "Primacy-Recency in Impression Formation," in The Order of Presentation in Persuasion, by C. I. Hovland (New Haven, 1957).
- Luchins, A. S. "Definitions of Impression and Primacy-Recency in Communication," The Journal of Social Psychology, 48 (1958), pp. 275-290.
- Lumsdaine, A. A. and I. L. Janis. "Retrenchment to 'Counterpropaganda' Produced by One-Sided and Two-Sided 'Propaganda' Presentations," Public Opinion Quarterly, 27 (1953), pp. 311-318.
- Lund, F. H. "The Psychology of Belief," Journal of Abnormal and Social Psychology, 20 (1925), pp. 174-196.
- McGuire, W. J. and D. Papageorgis. "The Relative Efficacy of Various Types of Prior Belief-Defense in Producing Immunity to Persuasion," Journal of Abnormal and Social Psychology, 62 (1961), pp. 327-337.
- Mensch, I. N. and J. Wishner. "Asch on 'Forming Impressions of Personality': Further Evidence," Journal of Personality, 16 (1947), pp. 188-191.
- Rieken, H. W. "The Effect of Talkativeness on Ability to Influence Group Solutions of Problems," Sociometry, 21 (1958), pp. 309-321.
- Sherif, C. W. and M. Sherif. Attitude, Ego-Involvement, and Change (New York: Wiley, 1967).
- Sherif, C. W., M. Sherif and R. E. Nebergall. Attitude and Attitude Change: The Social Judgment-Involvement Approach (Philadelphia: W. B. Saunders, 1965).
- Sherif, M. "Theoretical Analysis of the Individual-Group Relationship in a Social Situation," in Problems of Conceptual Definition in the Behavioral Sciences, by G. DiRenzo (New York: Random House, 1966).
- Sherif, M. and C. I. Hovland. Social Judgment (New Haven: Yale University Press, 1961).
- Smith, M. B., J. S. Bruner and R. W. White. Opinions and Personality (New York: Wiley, 1956).
- Thorndike, E. L. "A Constant Error in Psychological Ratings," Journal of Applied Psychology, 4 (1920), pp. 25-29.

- Triandis, H. C. Attitude and Attitude Change (New York: Wiley, 1971).
- Weaver, C. H. Human Listening: Processes and Behavior (Indianapolis: Bobbs-Merrill, 1972).
- White, R. W. "Sense of Interpersonal Competence," in The Study of Lives, ed. R. W. White (New York: Atherton Press, 1963).
- Wyer, R. S. "Information Redundancy, Inconsistency, and Novelty and Their Role in Impression Formation," Journal of Experimental Social Psychology, 6 (1970), pp. 111-127.
- Zimbardo, P. G. "Involvement and Communication Discrepancy as Determinants of Opinion Change," Journal of Abnormal and Social Psychology, 60 (1960), pp. 86-94.

105