AN INVESTIGATION OF
THE RELATIONSHIP BETWEEN
COMMUNICATOR STIMULI AND PRESTIGE SUGGESTION

DISSERTATION
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CHAPTER I

INTRODUCTION

The study of opinions, attitudes and opinion changes has a long history in terms of experimental investigation and naturalistic observation. In recent years, the techniques for such investigations have been refined and more research is being conducted in these areas. The bulk of this recent research has dealt with characteristics of the individual attempting to induce opinion change, characteristics of the audience and characteristics of the persuasive and emotional appeals.

The study of opinion change has both practical and theoretical implications. In the area of practical or applied implications, we have many examples of the importance of this phenomenon. At the present time we are engaged in an ideological war in which a major weapon is propaganda. Are such propaganda successful? What methods are most effective for bringing about a change in the opinions of people involved in this struggle? Can we do more than change the overt responses of the people, or more precisely, can we effect a change in the attitudes of the audience?

Industrial leaders also are concerned with the problem of communication with their employees. How can they get information to the employees? How can they learn what
are the employees' attitudes toward the practices and policies of the organization? How is it possible to modify these attitudes where such modification seems desirable? These questions and many others are being asked repeatedly by responsible people in many areas of everyday life. The answers are being sought by persons who are interested in "communications research." Such persons are interested not only in these applied problems, but are also concerned with developing an adequate theory of communications.

In the theoretical group, in addition to the above mentioned investigators there is another group who are very much concerned with the nature of attitudes and opinions. Since attitudes and opinions can be measured only indirectly and are acquired in a natural setting over long periods of time under widely varying conditions, it is difficult to develop any theory of attitudes and opinions which uses as its basic data observations of individuals as they go about their regular duties. Instead, these researchers prefer to investigate experimentally-induced opinion changes on the assumption that the process underlying opinion changes is the same as that underlying the acquisition of an opinion. Opinions and attitudes are interrelated, as will be explained subsequently, and these investigators are also interested in this interrelation. Briefly, one of the foremost reasons for studying opinion change is the gathering of data upon which an adequate theory of attitudes and
opinions may be built. As attitudes have drive value, a knowledge of this intervening variable and its relationship to antecedent and subsequent conditions will contribute considerably to our knowledge of human behavior. It is toward this end that both groups of investigators are working.

The present research is an attempt to determine more precisely the role which the communicator plays in inducing opinion changes. It is hoped that by studying the communication stimuli and the attitudes aroused by these stimuli, that a better understanding of the process underlying opinion change may be gained.

DEFINITION OF TERMS

Before proceeding with a discussion of previous research and the present investigation, it is necessary to define the terms which will be used.

Hovland, Janis and Kelley state that the terms "opinion" and "attitude" refer to "implicit responses" and are "therefore intervening variables" (25, p. 7). The distinction between the two, however, is that those implicit responses which are designated as attitudinal are those which are oriented toward approaching or avoiding a given object, person, symbol or group. Thus these authors agree with Doob (12), and Sherif and Cantril (17) in that, in the former's terms, attitudes have drive value. They tend to
initiate activity toward or away from a given object. Opinions, on the other hand, do not possess this motivational characteristic.

The relationship between attitudes and opinions however, is an intimate one and of such a nature that a change in one may bring about a change in the other. Thus, a change in one's attitude of admiration toward a teacher may bring about a change in opinion concerning the teacher's competence. Conversely, a change in opinion with respect to the teacher's competence may alter the individual's attitude of admiration toward him. This last example emphasizes the assumption that we may alter attitudes by changing an individual's opinion of a given object, person or symbol.

Opinions, as mentioned above, are implicit responses. They are verbalizable in that the individual may express his opinion in answer to some question. But his overt response may not coincide with the implicit response. Thus if a worker is asked whether or not his foreman is a capable leader, he may answer in the affirmative while still holding to the opinion that he is an extremely poor leader. This falsification may depend on certain sanctions which the interrogator may be capable of imposing on him, for instance firing him. Those interested in changing opinions and thereby attitudes are not satisfied to accept such falsifications as opinion changes because the maintenance of such changes would depend upon continuous reinstatement of the
reward or punishment which brought them about. At the same time, it is probable that no change in attitudes would be induced and the individual's behavior which depends in part on that attitude would go unchanged. Thus, in our previous example, the worker might continue to follow instructions of the foreman in a haphazard and resistant fashion because the attitude is unchanged.

Because of this discrepancy, when we refer to "opinion change" we refer to a change in the implicit responses. This, of course, raises the important methodological problem of measuring such implicit responses. We must assume that under certain conditions the implicit and overt responses are approximately the same. The conditions under which this might occur would vary. Where opinions deal with problems which arouse shame or guilt (e.g. sex practices), special interview techniques, similar to a clinical interview, are necessary. Where the opinions are more freely expressed, we may use questionnaires which are administered under carefully controlled conditions to minimize the tendency to falsify or distort. Thus we may clearly designate the administrator of the opinion measures as research worker and assure the audience that their responses will affect their careers in no way, that the responses will be coded and that only group data will be used.

Research which attempts to measure opinion change as defined here, then, must include the methodological precau-
tions discussed above. In this way, we may minimize falsification. Then operationally, "opinions are viewed as verbal 'answers' that an individual gives in response to stimulus situations in which some general question is raised." (25, p. 7) A change in opinion would involve, then, a change in that answer given in response to that same question. "Are unions trying to take over management functions?" A change from "yes" to "no" under the conditions specified above would involve an opinion change as defined for purposes of this research.

HISTORICAL BACKGROUND

Before going into details of the present investigation, an attempt will be made to point out some of the research previously conducted in this area and to emphasize that research which bears directly upon the present problem. Rather than presenting a lengthy chronology of the various investigations which have been conducted, an attempt will be made to organize the discussion into areas of interest and their relationship to the problem under study. A difficulty involved here is that our study cuts across several areas of interest so that at first the organization may seem somewhat arbitrary. It is hoped, however, that this organization will help clarify the issues involved.
Opinions and Demographic Correlates

Before discussing attitude and opinion change it seems appropriate to discuss some factors associated with the development of a given attitude or opinion.

An individual is born in certain geographic region which is also inhabited by other individuals and is raised in the environment partially created by those individuals. Among these individuals are members of his family who play an important part in the socialization of the child. The particular fashion in which the child is permitted to satisfy his various drives is determined by his family and others in close proximity. Thus, they may reinforce one behavior and punish or fail to reinforce others. If the child makes an appropriate response to an environmental stimulus, this will be reinforced by the adults. One such appropriate response is the espousal of a given belief. The particular beliefs which are fostered by the adults will vary with different geographical regions, classes and groups. Examples of this are abundant in the literature. Carlson, for example, found that the religious background of college students was related to the liberality of their beliefs concerning God, birth control and war (9). Harris, Remmers and Ellison (19) obtained similar results. Correlations have been found for attitudes toward Fascism (49), between opinions of parents and their children (50), and between friend and friend (55).
Kornhauser (34) points to the differences in economic and political attitudes found between different income, educational, and occupational groups, and also indicates within each group the relationship of these attitudes to the individual's feelings of satisfaction and discontent with his station in life. More recently, Wechsler (51) and Helper (22) have developed attitude scales which differentiate significantly between the members of labor and management groups. Murphy, Murphy and Newcomb (44) summarize much of the research in this area. There seems to be sufficient evidence at hand to indicate that cultural determinants of attitude and opinion are effective.

We would not expect, however, to find that these relationships are high. Indeed this is the case. In some studies, (cf. Wechsler, 51) they barely reach significance. We do not expect these relationships to be high because we know that cultural influences take many forms, that different people interpret the culture differently, the perceptions of people differ depending upon previous experience, the present stimulus situation and needs which are operating. Moreover, the experiences of the given child differ from those of other children. Significant differences between groups would be reduced because of overlapping of cultural standards from one group to another.

The relevance of these data to our problem is that
while we may expect them to be determinants of opinions concerning and attitudes toward prestige symbols, we would not expect them to show a high relationship with opinion change. The rationale for this expectation can be sketched briefly. As indicated above, one of the determinants of a person's attitude toward status would be his own socioeconomic status. We would expect a positive correlation between these two measures. In addition to this, however, we must consider the fact that the overlapping of cultural standards would lower this relationship. Add to this the differences in interpretation of the cultural standards by the subject's associates and his own unique experiences with prestige figures and it is again lowered. As indicated above, we are now barely approaching significance. Now we introduce a prestige figure who possesses only a few status symbols, such as being an author, having a Ph. D., etc. The experience of college freshmen with such an individual would be relatively uniform (with the possible exception of those who are children of professionals, especially professors) so that we would expect the relationship of the determinants of the attitudes toward status and opinion change induced under these conditions to drop to near zero or zero. In the present study, a number of demographic measures are included, such as socioeconomic level, parental occupation, etc., principally to divert attention of the subjects from the variables such as
attitudes toward status which are important to the study. A check will be made, however, to determine whether the foregoing analysis is correct in this situation.

**OPINION CHANGE**

In any communication designed to change the audience's opinions concerning a topic area, there are a number of variables operating which will determine the effectiveness of the communication. One of these is the source of the communication itself, or the communicator. In addition, there is the nature of the communication, i.e., how it is presented (books, movies, personal address, radio, face-to-face conversation, etc.), the arguments and appeals employed, the topic being discussed, plus the use of humor or fear-arousing appeals. This second group includes the various stimuli which are transmitted by the communicator. Besides these, the audience is also important. Are they friendly, hostile, well-informed, ready to be entertained or educated? Are they favorably disposed toward the topic to be presented or opposed to it? As the present research cuts across all three of these areas, we will briefly discuss previous research conducted in each. Other investigations also span more than one of these categories, so that the classification may appear to be somewhat arbitrary.
**Communication Variables**

The research in the area of the effectiveness of communication variables has shown the greatest diversity. One large group of investigators has studied the effects of varying the medium of presentation. Here we find studies which show that motion pictures (50), radio addresses (8), cartoons, (1), printed material (32) and lectures (15) are effective in inducing an opinion change.

Others have been concerned with the actual content of the communication. Thus we find studies of the effectiveness of oral arguments (31), fear-arousing appeals (8,25), humor (41), emotional and rational appeals (20), ambiguous stimuli (10), and a one- or two-sided presentation (23).

Within this area of research, the evidence which bears directly on the present investigation is that obtained using logical arguments and evidence. We may assume, on the basis of work of Knower (32), Hovland, Lumsdaine and Sheffield (23) Hovland, Janis and Kelley (25) and Hartmann (20), that one source of incentives which may be offered to induce acceptance of a new opinion is logical evidence and arguments. Those individuals who have found the use of such arguments reinforcing in the past may be swayed by the use of such appeals in a new communication.
Communicator Variables

An important variable which may determine the effectiveness of a communication is the person who is perceived as the originator of the communication. Specifically, the effectiveness will depend to some extent upon the cues supplied as to the source's trustworthiness, expertness and motives. Where the source is well-known, such as President Eisenhower or Adlai Stevenson, the audience already possesses certain attitudes toward the source which will serve as motivation to accept or reject the recommendations made. Thus a Republican would be more acceptant of Eisenhower's recommendations concerning budgetary matters than those of Stevenson, even though they were the same.

One group of studies in this area has dealt with the effectiveness of majority opinion upon the opinions of the audience. The typical technique is to administer a scale to the audience to determine their opinions within a given subject matter area, such as religion. After a time the questionnaire is readministered with the majority opinions indicated on the blank. The degree of change on the total scale or the number of items on which the individual changes is then taken as a measure of the effectiveness of the suggestion. Barry (5), and Wheeler and Jordan (54), for example, found that majority opinion is quite effective in inhibiting the expression of dissenting opinions and in fostering a change in the desired direction.
Quite often, the effects of this type of suggestion are investigated in conjunction with a study of the effects of expert or prestige suggestion. H. T. Moore (43), in one of the earliest investigations of this type, found that attitudes toward speech, morals and music were more affected by majority opinion than by expert opinion. Marple (42), found experts to be more effective in inducing opinion changes about economics than was majority opinion. Burtt and Falkenberg (7), in comparing the effectiveness of these two sources' changes of religious opinions, found no significant differences. Coffin summarizes much of the research in this area and concludes that these studies need not be regarded as contradictory. The effectiveness of majority or expert opinion will vary depending upon the topic being judged. Expert opinion is most effective where the topic is fairly technical. Topics more closely related to social norms are more influenced by majority opinion. If the problem relates to very personal matters, neither is very effective. The communication used in the present research deals with labor-management relations, which in the opinion of the present author, is a fairly technical subject. We would thus expect expert opinion to have a marked effect.

Few systematic investigations have been made of the effectiveness of different kinds of "experts" on opinion change. Kulp found that for graduate students in education, the social and political opinions of educators and social
scientists are more influential than opinions of lay citizens (36). Bowden, Caldwell and West (16) found that opinions concerning various solutions to monetary problems are changed more frequently when the source is an educator or businessman than when he is a minister.

No investigations have been made, however, where expertness has been varied along a single continuum, i.e., where all sources possess expertness to varying degrees. At the same time, the above investigations have merely indicated what the opinions of the experts are, rather than attempting to support them with any logical arguments or rational appeals. The present study differs from the afore mentioned studies in that both of these modifications are introduced. Specifically, one source is a noted authority in the field of labor-management relations while the other is a novice in this same field. They both present the same address, Unions and Industrial Democracy, which incorporates evidence and arguments for adopting a more favorable attitude toward unions.

Another difficulty involved in these studies has to do with the definition of "expertness." In the last two studies mentioned above, the measure of expertness is the change of opinion induced. It is circular to explain that the change is due to prestige, when the measure of prestige is opinion change. An independent measure of the perceived expertness of the source is required. Such a measure is
included in the present investigation.

An interesting modification of the problem of prestige suggestion has been suggested by Doob's analysis of the use of news stories as compared to advertisements by publicity agents (12). Here we are concerned with the credibility of the communicator. Hovland and Weiss (24) have made a fairly extensive study of this problem by presenting articles advocating a stand on some issue and attributing them to high and low credibility sources. Thus we find that an article dealing with the practicality of atomic submarines is more effective when attributed to Robert J. Oppenheimer than when attributed to Pravda. Similar studies by Lewis (38), Sherif (47), and Haiman (17) can be viewed as supporting the contention that the trustworthiness of the communicator, in the eyes of the audience, will be an important determiner of the effectiveness of the communication.

In view of this, the present investigation includes two precautionary devices to minimize the effects of this variable. First, these communicators are fictitious so that no predispositional attitudes toward the speaker as a person would bias the results. Second, both communicators are introduced in such a fashion as to give no cues as to ulterior motives on the part of the communicator or cues of identification with a particular interest group. (See Appendix B for the actual introductions.)
**Audience Variables**

The inclusion of the foregoing material on expertness and trustworthiness under the topic "communicator variables" would be viewed by some authors (e.g. Coffin) as arbitrary. Admittedly it is, due to the fact that it is the audience's attitudes toward the communicator which in part determine the effectiveness of the communication. However, as this is a variable which can be manipulated by the experimenter we included it there. It should be emphasized, however, that the attitudes toward the communicator with respect to his trustworthiness, expertness and motives can properly be considered as audience variables.

One important predisposing factor which may determine whether or not a change in opinion will occur is the attitude of the communicatee toward the topic discussed. Coffin (10) found that individuals who possessed pro-British attitudes were more likely to accept pro-British propaganda than those who were pro-Nazi. The reverse of this was also found to be true.

Another determiner of effectiveness of a communication has been found to be group membership. Thus Kelley and Volkart (29) found that Boy Scouts with strong positive attitudes toward this organization tended to resist the suggestions that they could better spend their time in learning about city life and indulging in city activities rather
than learning wood-craft and similar skills. Newcomb (44) also finds that group-conformity motives have the effect of inducing opinion changes in the direction of liberality.

**Suggestibility**

Perhaps the greatest amount of research has been directed toward individual factors related to susceptibility to suggestion. In the present analysis, this would be included under the heading of audience variables. The research in this field is so extensive, however, as to demand separate treatment.

As Krech and Crutchfield (35) point out, research on the question of the trait of suggestibility has been of two major types. One type has involved attempts to relate the various characteristics of people to the performance under suggestion. The other involves correlational studies of amenability to suggestions in a number of situations. The idea underlying the second approach is that if suggestibility is a personality trait, we would expect to find high correlations among the suggestibility scores of individuals in a number of situations.

The first type of research includes a number of studies such as that by Lindberg (35) in which he related body types to suggestibility. He concluded that to some extent suggestibility is constitutionally determined and that pyknics are least suggestible. Other investigators have examined the relationship between sex and suggestibility
and find conflicting results. Most studies [e.g., Knowler (31), Wegrocki (52), and Sherif (47)] indicate that women are more suggestible than men. Others, such as Otis, M. (46) find that the opposite is true. Usually the results which are reported are not significant and the degree of overlap between the two sexes is very great. In some of the earlier studies (Wegrocki, and Sherif, Ibid.), no tests of significance were employed.

The relationship between suggestibility and intelligence is also an area in which contradictory results have been obtained. Knowler (33) found no relationship. Wegrocki (Ibid.) finds that the more intelligent are less susceptible, but his conditions are quite unusual and no test of significance was employed. Murphy, Murphy and Newcomb (44) in their summary, conclude that the relationship is zero or near zero. Studying the effects of Army documentary films on opinions, Hovland, Lumsdaine and Sheffield (23) came to a different conclusion. They found a significant positive relationship between suggestibility and intelligence, in which the level of intelligence was determined by the number of years of schooling. They conclude that over-all measures of intelligence are too complex. They theorize that this over-all index actually includes: learning ability which would be positively related; critical ability which would be negatively related; and the ability to draw inferences from the communication. Where logical arguments are used,
they would be less influenced. They add, however, that where the level of the communication and the opinion instrument are consistent with the minimum intelligence level of the audience, this factor will play a relatively minor role. As it was desired to minimize the effects of differential intelligence levels upon the results of the present investigation, the communication employed was pitched at the estimated minimal level of intelligence anticipated in the sample. An intelligence test was included as a check to see that the attempt was successful. Thus we predict and find that in the present study there is no relationship between intelligence and suggestibility scores.

With respect to other studies in this same sub-area, the same inconsistent results have been found. We find that schizophrenics are nonsuggestible and also negatively suggestible. Delinquent girls are highly suggestible and highly resistant to suggestion. Suggestibility increases with age and decreases with age (10).

The second sub-area of research deals with correlations between suggestibility scores in one situation with those in others. Simple correlational studies give conflicting results. Studies employing factor analysis, however, have been more consistent. Ferguson (14) points out that although prestige suggestion is dependent upon the opinion stimuli to some extent, it may still be possible to point to a general factor of suggestibility. Thus, if we find that
several opinion measures are independent of each other and still find a general factor of suggestibility, then it is worthwhile to talk in these terms. He developed three independent attitude scales of religionism, humanitarianism, and nationalism (13). In a later study (14), he administered these instruments to 200 elementary psychology students. After determining the majority opinions he then divided his group, giving 120 the correct majority percentages and the other 80 the incorrect (complementary) percentages. A centroid analysis of conformance scores yielded a unitary factor. The fact that no significant relations were found between initial attitudes and susceptibility scores mitigates against an identification of this factor as a common ideological factor which spans the three scales. He ignores an important variable, however. The conditions of administration and suggestion (majority opinion) were the same for all three scales. The motivational aspects of each stimulus situation must be considered. In this case the same motives may be operating in all three cases - a favorable attitude toward majority or group opinion - and this could account for the factor obtained.

More recently, Janis (25) has sought factors which underly susceptibility to suggestion. He points out that because we find a predisposition to suggestibility which is independent of the content of the communication or topic-free, this does not mean that it is necessarily independent
of other aspects of the communication. He then goes on to discuss a number of motivational factors which are clearly related to the communication system. He found for example, that individuals with low self-esteem ratings shifted their opinions significantly more than did other members of the audience. In his study the audience was exposed to three different communications dealing with three different topics. Neither prestige nor majority suggestion were used, however. His findings are similar to those of Ferguson in that the scores on initial opinions in each area were relatively independent of opinion change scores on all three measures. This suggests that a common ideological factor based on the content of each scale and communication cannot account for the relationship indicated above.

Other examples of motivational factors which may operate in inducing suggestion come from the work of Newcomb (44), who found that social withdrawal tendencies were associated with resistance to suggestion. Barry (5) states that those who resist suggestion are critical, derogatory, irritable and fail to use status titles. However, his N is extremely small and no tests of significance are employed. More recently, Janis and King (28) have found that an opinion change may be induced through role playing and that an important mediating factor is the satisfaction which the individual receives from his performance in the role.

In summarizing the research in the area of suggestion
and suggestibility it appears to the present author that the most fruitful approach to research on audience predispositions would involve a careful analysis of the stimuli and motives which are operating in each communication situation. While some merit exists in the general search for a suggestibility trait, the use of such terminology can lead to confusion as to the factors which may be operating. To state this another way, it may be more meaningful psychologically to attempt to identify the attitudes which would be aroused by communication and communicator stimuli in a wide variety of situations. Thus, while we may find, as Ferguson did (14), that we may assign certain individuals scores on suggestibility under the influence of majority opinion, these same individuals might have very low scores on suggestibility when operating under a high prestige source.

The present research is directed, in part, at this particular problem. On the basis of a logical analysis of the stimulus characteristics of the communicator, we will attempt to predict which individuals will change their opinions under these conditions. We hypothesize that individuals with strong, positive attitudes toward status will be more affected when subjected to a communication coming from a high prestige source than will those who cannot be so characterized. We would also predict, although this is beyond the scope of the present investigation, that the same individuals might not change when exposed to majority opinion, a communi-
cation from an untrustworthy source or some other different source.

THEORETICAL ORIENTATION

The reader by this time may have an idea as to the general theoretical orientation of the present author. It is advisable, however, to make this orientation explicit. Much of the thinking stems from the work and theorizing of Hovland, Janis and Kelley (25). An attempt has been made however, to expand and make more explicit the conditions which underly opinion change.

An individual is confronted with the following statement and asked to indicate his degree of agreement with the viewpoint expressed therein: "Labor unions tend to reduce individual initiative." Let us assume that he agrees with the statement. Later he is exposed to a communication which is favorable toward labor and when again confronted with the same statement, he expressed disagreement. The question arises as to what took place to bring about this change in opinion.

We assume that opinions are habits which will remain unchanged unless some new learning takes place. Thus, in our example, we assume that the opinion expressed originally is a response which has been previously reinforced and thereby gained habit strength. When we expose the individual to a communication in an attempt to substitute a new response,
we must take into account those variables which are necessary for learning. Following Hull (26), we assume that such new learning will depend upon reinforcement. Specifically, the individual must be motivated and an incentive must be attained which is appropriate to that motive.

What incentives are available in our present example? One type would include logical arguments or reasons for changing the opinion. We must assume, however, that the individual in question must have had previous reinforcing experiences involving the use of logical arguments or reasons. Thus, by using such devices on an examination, our subject has received high grades.

Another type of incentives would involve approval from the communicator, the subject's peer group or fellow workers. Still another would be the avoidance of punishment. We will confine our discussion below to the incentives which have a direct bearing on the present study, i.e., the incentive characteristics of the communicator.

Before going further, we might examine an hypothesis which has been offered as to the function which the communicator plays in the process of opinion change. We might hypothesize that, because of his favorable attitudes toward the communicator, our subject will attend more closely and learn more of the arguments supporting the recommendations of the communicator. On the other hand, another individual who holds an unfavorable attitude may be inattentive. In
this case, the communicator merely serves as an attention-getting device for the other incentives offered (arguments, evidence, and reasons) rather than serving as an incentive source himself. Evidence from Hovland and Weiss (24), Kelman and Hovland (30), and Weiss (53) suggests that this hypothesis is not tenable. They find no significant differences between recall scores on a test of the content of the communication, regardless of its source.\(^1\) The present study, which varies only the expertness characteristics of the communicator rather than his trustworthiness, affords a similar check on this hypothesis. Again as we shall show later recall scores are unrelated to opinion change.

While this hypothesis does not hold, we will assume nevertheless that the communicator possesses some incentive characteristics and continue with our analysis of how these and other factors operate.

We pointed out previously that learning is partly a function of motivation. The incentives mentioned above will not be reinforcing unless the individual is motivated toward them. We have stated that attitudes have drive value. If

\(^1\) It should be noted that in our daily exposure to communications from various sources the communicator may also serve as an attention-getting device. We tend to listen to certain commentators and follow the newspaper columnists whose opinions we agree with, while we avoid exposure to those with whom we disagree. Where we are dealing with captive audiences (students in a classroom), however, it appears that the communicator no longer serves this function.
the subject has a favorable attitude toward certain prestige
symbols, such as a Ph.D., authorship, expertness, etc., the
use of such prestige symbols in our communication will serve
as reinforcement for any change which occurs.

Let us assume that our subject has a favorable atti­
tude toward the source of the communication and may desire
approval from this source. He sees that the expression of
the old opinion is inappropriate to achieve this approval.
He therefore attempts a new response in anticipation of ap­
proval. To state this in different terms, we may assume,
"that the individual is motivated to accept conclusions and
recommendations which he anticipates will be substantiated
by further experiences or will lead to reward, social ap­
proval and avoidance of punishment." (25, p. 38) Following
this line of reasoning, the motivational level of the sub­
ject may be increased by increasing the anticipation of such
approval.

How can we tell if an individual holds a positive
attitude toward the communicator? An obvious although cir­
cular answer is that we know he is if he changes his opinion
in response to the communicator's recommendations. It is
obvious that we need separate measures of such attitudes.
As has been indicated previously, we cannot measure attitudes
directly, but must infer them from behaviors. Examples of
such behaviors would be responses to questions concerning
his feelings toward the source. If the communicator is a
candidate for office, we might find out whether or not our subject voted for him and/or contributed to his campaign fund.

We run into difficulties with this type of measure in the present study because our communicators are fictitious. The reader will recall that we wanted to avoid any suspicion of bias on the part of the communicator and to deal only with the prestige characteristics of the communicator. We therefore selected behaviors which appeared to be measures of positive attitudes toward status; a Status Attitude Scale (see p. 36); positive attitudes toward prestige symbols (the Achievement Drive Scale of the Occupational Attitudes Rating Scales, p. 37), and status-seeking behaviors, such as participation in extracurricular activities and holding offices therein. We may also ask the subject his opinions of the communicator's qualifications and fairness following the communication.

A difficulty anticipated here is that we must assume that the individual's motives are operating during the communication and exposure to the opinion measure. It seems safe to assume that a given motive will not always be in operation or will not always be strong enough to take precedence over other competing motives. In animal experimentation, we do not encounter this difficulty as we can deprive the animal of food or water for 12 or 18 hours and thereby increase the drive strength. It does not seem to be
very meaningful to talk in terms of deprivation when we are discussing needs for approval or needs for status. Rather, the present author assumes that these needs are aroused by the offering of or anticipation of an incentive. The actual achievement of the incentive would then constitute reinforcement. If the intensity of the incentive stimulus is not strong enough to raise the level of motivation to a point where it exceeds that of other motives, we would expect no opinion change. If our subject is exposed to the communication and opinion questionnaire just before dinner, his hungrier drive may be strong enough to interfere with the arousal of the motives appropriate to the incentives offered.

One last problem remains and that is the fixation of the new response. This is a learning process and requires reinforcement. In most studies of opinion change, and that would include the present study, the incentives are never actually achieved under the experimental conditions. (This discussion is included because it is necessary to complete the theoretical model, even though it is only partially related to the issues involved in the present investigation.) Typically, we find that we have only touched upon the beginning of the process of inducing acceptance of a new opinion. Thus most studies of the enduring effects of suggestion find that the individual has returned to his previous response. In the present investigation, we would have to require the communicator to examine the responses made by
the subject and praise him for his shrewd analysis and mature thinking. Under these conditions, we would predict that the opinion change would be more permanent. Additional reinforced trials would serve to fixate this response even more.

In summary then, we are concerned with the relationship of the prestige characteristics of the communicator to opinion change. We assume that the process underlying this change is as follows: The prestige characteristics of the communicator (prestige stimuli) serve to arouse the status needs of the audience. The individual changes his response in anticipation of approval or avoidance of punishment. The fixation (learning) of this new response is dependent upon achievement of approval from the prestige figure.

STATEMENT OF THE PROBLEM

In summarizing the literature in the field of opinion change and suggestion it appears that a fruitful approach to the problem would involve an analysis of the various stimuli present in the communication situation and their relationship to characteristics of the individual exposed to the communication. In the present investigation, we hope to induce an opinion change with respect to certain labor-management issues by exposing the individual to prestige sources. Two levels of prestige are used to vary the intensity of the prestige stimuli. We expect fewer persons to
change under low prestige conditions as the stimulus intensity is less than under the high prestige conditions. Therefore, there is less chance of arousing the need to a point where it can successfully compete with other needs which may be operating (e.g., hunger, sleep, affection, etc.).

Within each level of prestige suggestion, we divided the groups, telling one of each that the communicator would come in after the administrator has obtained their formal responses in order to get their personal reactions and to talk to them. In this step, we expect to increase the anticipation of reinforcement and thereby increase the subjects' motivation. Thus we would predict that these two subgroups would exceed their corresponding pairs in opinion change.

Finally, we hope to relate logically derived measures of prestige and status needs to opinion change. We would expect those who score high on attitude scales dealing with prestige and prestige symbols to be more likely to change their opinions than those who score low on these measures. Also, those scoring high on measures of behavior characterized as status-seeking would also change under these conditions.

Specific hypotheses to be tested will be given in the next chapter.
CHAPTER II

METHODOLOGY

It is the purpose of this research to investigate the relationship between status needs and prestige suggestion. Specifically, we want to find if people who have high status needs, as determined by a number of measures, will change their opinion more under prestige suggestion than will people with low status needs. The opinions studied were in the context of labor problems.

Accordingly, a number of instruments which measured opinions toward various labor issues, attitudes toward status, and attitudes toward various aspects of employment, as well as a questionnaire dealing with biographical information were administered to a large group of elementary psychology students. Three weeks later, they were exposed to a transcribed pro-labor address. The transcription was heard under four different conditions: (1) The speaker was a noted authority in the field who would later address them in person; (2) The speaker was an authority in the field and the subjects were told nothing of a personal appearance; (3) The speaker was a novice in the field and would later address them personally; (4) The speaker was a novice and nothing was said about a personal appearance.

Immediately following the address, the attitudes
toward labor were again measured to determine the effect of the communication under the various conditions. A control group was also given the second test after three weeks with no intervening communication. In addition to noting the change of attitudes resulting from the address given under the different conditions we were interested in the relationship of the other attitudinal measures and the biographical information to the opinion change induced.

This chapter will describe, 1) the subjects, 2) the measures employed and 3) the experimental procedures. This information will lead to a statement of hypotheses in specific operational terms.

**Description of Subjects**

The subjects for this experiment were students enrolled in the elementary psychology course (401) at The Ohio State University. In the initial administration of tests, 356 subjects took part. One hundred sixty-four of these were subjected to the experimental and control conditions mentioned before: 122 being exposed to the pro-labor communication, and 42 serving as controls. These subjects were recruited in the manner which prevails at Ohio State. All Psychology 401 students were required to serve as subjects in a number of experiments and are given the opportunity to sign up for them at various times during the quarter. An analysis of variance of the pretest scores on the
Labor Attitude Scale shows no significant differences among the groups who signed up for the different conditions. (See Table III, page 64). It would appear then, that no systematic factors were operating in the assignment of subjects to the various conditions.

Description of Measures

A. The Hepler Labor Attitude Scale: As a measure of attitudes before and after exposure to the pro-labor communication, the Hepler Labor Attitude Scale was used. (22) It consists of 36 items covering a wide variety of issues, for example:

"White collar workers should not be allowed to unionize."

"The union should be given equal representation with management on the Board of Directors."

"The Democratic Party is being taken over by the unions and will soon be the Labor Party."

It is a typical Likert scale, the subject indicating whether he agrees or disagrees with each statement by checking a five-point scale. All items are scored so that Five indicates a pro-labor opinion.

The instrument was developed by first collecting 118 items through interviews with union officials, management officials, a labor economist, an industrial management economist and a labor arbitrator. The items were scored on the
basis of the judgments of these experts as to whether or not agreement with the statement was pro-labor or pro-management. The 118-item form was then administered to 112 male college students and an item analysis was performed to select those items which best discriminated between high and low scores on the total test. Thirty-six items were selected to constitute the scale in its present form. As a test of the instrument's validity, Hepler administered it to 26 members of a business association and 19 union leaders and stewards. The difference between the means of these two groups yielded a $t$-of 6.41 which is significant beyond the 0.01 level of confidence. The test-retest reliability, over a ten-week period, is 0.86. A copy of the 36-item scale used in the present study may be found in Appendix A.

B. Labor Information Test: Previous research (cf. Cantril, 8) has shown that stated opinions toward various issues are positively related to the amount of information the individual possesses about the topic. Thus, if one knows a lot about labor and unions, it is probable that his attitude toward labor and unions will be favorable. The question arises, however, as to whether knowledge concerning a topic will be related to opinion change as a result of a communication about that topic - in this case labor and unions. Therefore, the Labor Information Test was developed by the author from various sources on labor and unions (Lester, 37; Golden and Ruttenberg, 16; and Yoder, 56).
Typical questions asked are:

"The first Secretary of Labor under the Eisenhower administration was: (1) Martin Durkin; (2) Francis Perkins; (3) Samuel Gompers; (4) Eugene V. Debs."

"The law which first made "yellow-dog" contracts illegal was the: (1) Taft-Hartley; (2) Wagner; (3) Norris-LaGuardia; (4) Clayton."

It is a short test consisting of twenty items, the difficulty values (P-values) of which range from 0.08 to 0.89, with 14 of them between 0.30 and 0.70. No reliability data are available. A copy of this test and the P-values for each item will be found in Appendix A.

C. The Content Test: In order to check on the possible effects of differential learning of the content of the communication and its effects on opinion change, it was necessary to administer a recall test shortly after the communication. This test consists of 20 multiple-choice items covering various statements made by the speaker. Examples of the items are:

"Which of the following was NOT a reason given by the speaker for an increase in job satisfaction? (1) job specialization; (2) loss of individuality; (3) loss of control over one's work; (4) increased difference between wages and what they can buy."

"The speaker sees the union as an instrument for giving the worker: (1) higher wages; (2) shorter hours; (3) same control over his working life; (4) more interesting work."

Four of the 20 items deal with the name of the speaker, where he is from, the name of the simulated radio program, and the title of the address.
As stated above, this test was administered to all groups who were exposed to the communication. As a check on the validity of the instrument, it was also given to the control group who were not exposed to the address. A *t* test of the significance of the smallest difference between the control and experimental means yields a value of 7.93, which is significant beyond the 0.001 level of confidence. A complete copy of the test will be found in Appendix A.

D. The Seeman Status Attitude Scale: As a measure of the individual's attitudes toward status, the Seeman Status Attitude Scale was administered to all subjects during the initial session. This instrument consists of 18 Likert-type items, such as:

"Differences in prestige among the various occupations should be reduced."

"It would avoid awkwardness and embarrassment if people who are qualified to use certain titles (e.g., an M.D. or Ph.D.) would do so regularly."

"High social or economic position in America are a pretty good sign of an individual's superior ability or efforts?"

The subject indicates his degree of agreement or disagreement in the usual fashion on a five-point scale.

This instrument was developed as a part of a study conducted under a grant from the Rockefeller Foundation to the Personnel Research Board of The Ohio State University. Originally, the test consisted of 33 items which were administered to 165 teachers in four communities in Ohio in
such a fashion as to guarantee anonymity. An item analysis based on this sample yielded the 18 items of the present form. Tetrachoric coefficients of these items with the total test score range from 0.31 to 0.72. The complete scale is given in Appendix A.

E. The Occupational Attitudes Rating Scales: A measure of the individual's attitudes toward various activities indicative of status is necessary in order to give us a clue as to the value which the individual places upon the prestige characteristics attributed to the speaker. As indicated in Chapter I, we have assumed that these characteristics serve as stimuli in arousing these attitudes which then mediate opinion change.

Accordingly, we used the Occupational Attitudes Rating Scales (hereafter referred to as OARS) developed by Hammond (18) as a part of her work with the Occupational Opportunities Service of The Ohio State University. This is a self-rating, forced-choice scale designed to measure the degree of liking or disliking of various aspects and activities found in occupations. Four relatively independent factors have been identified: Economic (Get-rich quick); Achievement Drive (dominance); Technical (methodical-systematic); and Humanitarianism (social service). The test consists of 10 tetrads. A given tetrad consists of 4 items, each of which has a high loading on only one of the factors. The subject is asked to rank the four items in order from
"most liked" to "least liked." The example below shows two typical tetrads. The name in the parenthesis indicates the factor to which the item belongs.

"make big money (Economic)
using mathematics (Technical)
having responsibilities (Achievement Drive)
initiating group action" (Humanitarianism)

"working with theory (Technical)
change people for the better (Humanitarianism)
regular salary (Economic)
looked up to in the community" (Achievement Drive)

Tests of internal consistency for each factor give reliabilities around 0.70. Test-retest correlations from the present study over a three-week period are for each scale respectively as originally listed: 0.78, 0.74, 0.64 and 0.97. An N of 39 was involved in this last analysis. A complete copy of this scale will be found in Appendix A.

F. The Ohio State Psychological Examination:
Although we would expect no relationship between intelligence test scores and attitude change scores because the communication is pitched at a level comprehensible to all our subjects, it is necessary to include a measure of intelligence. All subjects had taken this test as a part of the entrance requirements at various times prior to the experiment. Their total and reading scores were obtained. The reading score is based upon responses to questions dealing with fairly technical paragraphs which are included in the test. The total score includes this as well as other standard verbal intelligence test items (e.g., verbal analogies, vocabulary). The instrument is very heavily loaded with a
verbal factor and has a reliability of 0.97. Its validity, using academic grades as a criterion, is 0.64. As this test is circulated on a restricted basis, no copy can be supplied.

G. **Biographical Inventory**: A biographical inventory developed by the present author was also included. This covers such items as age, class rank, previous work experience, participation in fraternity and nonfraternity extracurricular activities, occupation of the subject's father and mother, membership in unions of mother, father and subjects, as well as parents' education. Specific information was requested in every instance in order to insure the accuracy of the data obtained. For example, the questions dealing with occupation of father reads:

"Father's occupation: (If father deceased, give former occupation)

- Name of company
- Type of business
- Position held
- Is (or was) he a labor union member? Yes__No__"

Specific scoring instructions for this blank are too complex for discussion here. They will be found with the complete instrument in Appendix A.

While factors such as parents' education, occupation and membership in unions might be expected to be related to our subjects' attitudes toward unions, we are more interested in such variables as participation in extracurricular activities. As the latter may be characterized in part as status-seeking activities, we would expect them to be relat-
ed to an individual's valuation of status symbols and thus to our measures of opinion change.

H. Communicator Measures: As an empirical check on the relative prestige of the two communicators, a brief four-item questionnaire was administered. Questions deal with the fairness of the presentation, the speaker's qualifications, the relevance of the issues involved, and the effectiveness of the address. For example:

"Did you feel that the speaker was qualified to talk about this topic? (1) very poorly qualified; (2) fairly poorly qualified; (3) about average or undecided; (4) fairly well qualified; (5) very well qualified."

Copies of this instrument will also be found in Appendix A.

Experimental Procedures

On April 30, 1954, the Biographical Inventory (p. 39 and Appendix A), OARS (pp. 37-38 and Appendix A), Labor Attitude Scale (p. 33 and Appendix A), and the Status Attitude Scale (p. 36 and Appendix A) were administered in class to 356 subjects. Actually students met in 8 sections at 8 different times. The directions for the administration were as follows:

I. Introductory remarks: "There are a number of instruments which are being developed as a part of some research projects being conducted on campus. In order to adequately test the goodness of these instruments, as they must be tested before they can be used with any confidence, it is necessary to try them out on people such as yourselves. Rather than hand these out to you one at a time and ask you to fill them out at home, we felt it only fair to collect them and give them to you in a class as a group."
I have been asked to ask you to cooperate by filling out these forms and answering questions frankly and honestly. You will note that we are asking you to put your names on them, and feel we should explain why. This is done so that we may relate your answers to other data for the purpose of setting up special norms for various subgroups. You need not be concerned about this, however, as no individual data will be used - only group data, with breakdowns according to sex, age, etc. For example, we might want to compare the answers given on one of the tests by women to those given by men. Other similar breakdowns will be made.

The responses you make will be held strictly confidential. They will have no effect on your college or post-college career. As soon as they are scored, the answers will be coded so that identification of any individual will be impossible.

Are there any questions?"

At this point, the Biographical Inventory was distributed, with the following comments accompanying its completion.

"Please write legibly. Print your full name, last name first in the space provided. Fill in all the blanks. If a question does not apply to you, please do not leave it blank, but draw a line through the space to indicate that you have considered it, but it does not apply to you."

The author then read each item in turn, making appropriate comments with respect to the completion of each question. The blanks were then collected. Administration consumed approximately ten minutes.

Next, the OARS was distributed along with the IBM answer sheets and scoring pencils.

"Print your full name on the answer sheet, last name first. State the college in which you are enrolled in the space provided. State two occupations you are considering entering in the spaces marked one and two just below your name. Put the preferred occupation first. If you don't know, say you don't know." (This information was requested by Hammond for the purpose of setting up norms for different colleges and occupational choices.)

The directions which are printed at the top of the test were then read to them and any questions were answered.
Everyone was permitted to work until finished. This took about 15 minutes.

Following the collection of the OARS and answer sheets, the Labor Attitude Scale was distributed along with clean answer sheets. Again, the usual instructions for filling out the spaces at the top of the answer sheet were given, and the directions printed on the cover page were read aloud. After answering questions, the subjects were again permitted to work until finished. Administration time is about 12 minutes.

Finally the Status Attitude Scale was distributed along with clean answer sheets. The directions and procedure was the same as for the Labor Attitude Scale. The completion of this scale took about 10 minutes.

Finally, all materials were collected and the subjects were thanked for their cooperation.

The reader will note that no mention was made of the research which was to be a part of the present study. The author felt it best to present the tests as a straightforward standardization problem. Although no evidence is available, it is our hunch that more valid data are gathered under these conditions than if the subjects were told that they would be serving in an experiment later involving these measures.
The Experimental Sessions

Approximately three weeks later, 164 of the original 336 subjects served in the various experimental sessions. Forty-two of them, constituting the control group, took the OARS, LAS (Labor Attitude Scale) and SAS (Status Attitude Scale), a second time, and also took the Content Test.

The remaining 122 experimental subjects were divided into four groups. Each group was first given the Labor Information test with the following instructions:

"As you know, we are conducting a study of audience reaction. We have a number of radio addresses which we want Psychology 401 students to evaluate. Your address will be on the topic, Unions and Industrial Democracy.

In order that we can properly evaluate your reactions, it will be necessary for us to find out first how much you know about labor and unions. The test I will hand out now is designed to measure this. It is fairly hard, but we do not expect you to get all of them right. Do the best you can. Answer all questions. Those you aren't sure of, take a guess at. Work as quickly as possible."

Subjects were permitted to work until they finished. Total administration time was about ten minutes. After collecting the answer sheets, the tape recording of the simulated radio broadcast was played. From this point on the procedure was varied for the four groups. Two had the recording by a high prestige person and two by a low prestige person.

The broadcast was introduced by a brief recorded introduction made by Robert E. Rankin, a graduate student in Psychology at The Ohio State University. The introduction for the high prestige figure was as follows:
"This is your University Forum. Another in a series of addresses by leaders from various universities on important political, social and economic issues.

Today, we are fortunate to have with us, Dr. Frank Roberts of the University of Pennsylvania. Dr. Roberts is well known to those in the field of labor-management relations as an outstanding author and lecturer on labor economics. Besides his academic training, Dr. Roberts has had considerable experience as a consultant not only for business, but also for the government, as an adviser to the National Labor Relations Board. In addition, he has participated in a number of major negotiations between labor and management as a representative of the American Arbitration Association, a group of experts in the field who are called in jointly by both labor and management to help bring about a fair and equitable solution to their problems."

Today, Dr. Roberts will speak to us on the subject of: Unions and Industrial Democracy. Dr. Roberts.......

The introduction of the low prestige figure, to whom the other two experimental groups were exposed, contained the same material as in the first paragraph above, but a different second paragraph as follows:

"Today, we are fortunate to have with us a senior from Ohio Wesleyan University, Paul Ross. Mr. Ross has been interested in the field of labor management relations. Although his training has been entirely academic, he plans a career in labor-management relations following graduation.

Today, Mr. Ross will speak to us on the subject of: Unions and Industrial Democracy. Mr. Ross...."

The address itself was actually the same for all experimental groups. A complete typescript can be found in Appendix B, but it seems appropriate here to discuss the general nature of the content. In general, it is a plea for the acceptance of the idea that only through unions can we have anything which approaches industrial democracy. It was pointed out, by citing appropriate studies, that the worker
has certain wants and desires, such as a desire for economic security, a chance to better himself, a desire for decent treatment, and a sense of community contribution. The speaker stated that these desires differ from those in the professional and managerial groups, not because they are of a different breed but because these desires are often unfulfilled, whereas they are fulfilled for the professional-managerial group. The union then is a means for the worker to express these desires and a means by which he can have some assurance that these wants will be satisfied.

Following the address, the announcer made concluding remarks which served to reinstate the prestige characteristics of each communicator. Essentially, he summarized what he had previously said about the speaker in the introduction. Copies of the two different introductions and concluding remarks will be found in Appendix B with the typescript of the address.

Actually, the high prestige figure was fictitious. Paul Ross, however, was played by a graduate student at The Ohio State University. (He was incorrectly identified, though, as a senior at Ohio Wesleyan University.) It is he who made the recording of the address. He was selected because, on the basis of the judgments of 5 graduate students and a member of the senior staff, he possessed what could be called an "ageless voice," i.e., it was extremely difficult to tell on the basis of the voice alone just how old
the speaker was. Estimates varied from 20 to 55 years of age. As the address itself had to sound authentic regardless of the prestige figure giving it, this characteristic was very important.

Thus far, we have seen that two of the groups were exposed to the high prestige communicator and two to the low. Within each of these pairs, however, another distinction existed. One group of each pair was told prior to the second administration of the LAS that the speaker was actually on campus and would come in to get their personal reactions to his talk, after we had collected their formal reactions. In the case of the low prestige figure, Paul Ross actually came in. In the case of the high prestige figure, however, this was impossible as Dr. Roberts is fictitious. Instead, a supposed telephone message was delivered to the experimenter at the end of the session, stating that Dr. Roberts was tied up in conferences which he was attending on campus and could not appear. The experimenter evidenced signs of disappointment and the subjects appeared to accept this explanation wholeheartedly.

Following the address (or the statement concerning the speaker's appearance), the LAS (Labor Attitude Scale) was distributed with the following instructions:

"You remember that we gave you a test of your attitudes toward certain issues in the field of labor-management relations about 3 weeks ago. As you've no doubt guessed by now, that was a part of this study. We are going to give that to you again now. Remember, we want your own
ideas on each question. Answer them honestly and frankly."

When everyone had finished this scale, the four-item questionnaire dealing with qualifications, fairness, etc., of the speaker was filled out. Following this, the Content Test was given. As noted above, the groups were either dismissed then, with a word of thanks for their cooperation, or the communicator in person, or the "telephone message" was presented. Table I summarizes the treatments given to all groups.

Statement of Hypotheses

Before presenting the results of the present study, the hypotheses to be tested will be discussed. Each will be stated formally and will be followed by a brief explanation of the rationale underlying it. The first three deal with differences in opinion change expected to be found among the experimental and control groups. The next four state that certain variables are related to opinion change. The remaining three, involve variables unrelated to opinion change.

Hypotheses Involving Differences in Opinion Change Among Experimental Conditions

I. A greater degree of opinion change, as measured by a comparison of LAS pretest and post-test scores, will be induced in the groups exposed to the high prestige communicator than in groups exposed to the low prestige communicator.
### TABLE I

**SUMMARY OF EXPERIMENTAL PROCEDURES**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Session I</th>
<th>Session II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Administrative</td>
<td>1. Information Test</td>
</tr>
<tr>
<td>High prestige</td>
<td>Biographical</td>
<td>2. Communication with Dr. Roberts introduction</td>
</tr>
<tr>
<td>Present</td>
<td>Inventory, OARS, LAS AND SAS</td>
<td>3. Promise of communicator's appearance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. LAS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. 4-item questionnaire concerning the speaker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Content Test</td>
</tr>
<tr>
<td>High prestige - Absent</td>
<td>Same as above</td>
<td>Same as above for steps 1, 2, 4-6.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Nothing said about speaker's appearance</td>
</tr>
<tr>
<td>Low prestige present</td>
<td>Same as above</td>
<td>Same as High prestige present</td>
</tr>
<tr>
<td></td>
<td></td>
<td>except that Paul Ross introduction is used in step 2.</td>
</tr>
<tr>
<td>Low prestige - Absent</td>
<td>Same as above</td>
<td>Same as High prestige absent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>except that Paul Ross introduction is used in step 2.</td>
</tr>
<tr>
<td>Control</td>
<td>Same as above</td>
<td>1. LAS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. SAS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. OARS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Content Test</td>
</tr>
</tbody>
</table>
This hypothesis is based upon the assumption that a change in opinion is dependent on the intensity of the prestige stimuli available, and the prestige attitudes of the audience members. The discussion above (p. 28) indicated that if the intensity of the incentive stimulus is not strong enough to arouse the level of motivation to a point where it takes precedence over competing needs then the incentive will have no effect upon the individual's behavior. By increasing the prestige characteristics of the high prestige communicator, we increase the intensity of this stimulus and thereby have a greater chance of arousing the relevant need. If, for example, several of the subjects are anticipating the pleasures involved in a date immediately after the experimental session, the stimulus intensity must be strong to compete with the subject's desire to leave the experimental session.

Ia. No significant differences will be found between the experimental groups in their performance on the Content Test. All experimental groups will differ significantly on the Content Test from the control group which was not exposed to the communication.

As indicated previously, one hypothesis which has been offered elsewhere for the differential effect of high and low prestige sources has been that people will be less favorably disposed toward a low prestige figure and will therefore pay less attention to what is said. Thus they learn
less of the supporting arguments offered by the communicator for inducing the opinion change. Research cited above makes this hypothesis suspect, even when the source is considered to be untrustworthy (24, 30, 53). We cannot assume, however, that this will operate under all conditions. In order to adequately test our Hypothesis Ia, which is in line with I, that differences in opinion change are due to differences in incentives offered, we must make this comparison.

The comparison of the experimental groups with the control on the Content Test is an empirical check on the validity of the Content Test.

II. The experimental groups who are told that the communicator will address them personally following the recording will evidence a greater opinion change than those who are not so informed.

Under these conditions we are increasing the anticipation of reinforcement and thereby increasing the subjects' motivation. Thus we would predict that those two subgroups who are told that the communicator will actually appear will be more likely to change their opinions than those who are not told anything concerning the communicator's appearance.²

² An interesting extension of this study would be to have the communicator actually express approval of the subject's responses, thereby administering reinforcement for the opinion change. A comparison of opinion change scores over a period of time should show a greater retention of the opinion change for persons so treated than for persons who merely undergo the communication.
III. The opinion changes induced in the experimental groups will be greater than those which occur in the control and will be in the direction advocated by the communicator, i.e., in the pro-labor direction.

It is, of course, necessary to compare the results with the control group to guard against any changes which may have come about through nonexperimental conditions to which many of the subjects may have been exposed. For example, during the delay period between pre- and post-test, a nationwide strike could occur. Perhaps it would involve telephone operators. The consequent inconvenience to the subjects who rely heavily on the telephone might have the effect of inducing a negative attitude toward labor and unions in general. Early research in this area did not include this precaution. This may account for some of the contradictory results which were reported in Chapter I.

**Hypotheses Involving Variables Related to Opinion Change**

IV. Individuals who describe themselves as being favorably disposed toward status and status symbols (as measured by the SAS) will change their opinions more than those who do not so describe themselves.

For the purposes of this research, we operationally define the individual with a high status need as one who scores high on the SAS. It should be reemphasized that no validity data are available for this scale, as is the case
for the vast majority of attitude scales now in use. The problem of the validity of attitude scales is one of the knottiest problems in this area. Some attempts have been made, such as correlating a scale of attitudes toward religion with a church attendance, and we typically find that the correlation is low. In terms of predicting church attendance, the instrument is poor. The question of whether or not it measures an individual's attitude toward religion, however, is still an incompletely answered question. Until this particular problem is solved, investigators have to rely on reliable instruments with high "face validity."

Working on the basis of reliability and face validity then, the present author has defined this scale as a measure of individual's need for status. Because of these reservations, we cannot expect too high a relationship between these scores and opinion change.

We would expect that persons who value status and status symbols would change their opinion more when these incentives are available, than would individuals to whom these incentives are of little value. One might be able to induce a heavy drinker to do something by offering him a shot of whiskey, but he would have little luck if this friend were an abstainer. We may state this idea in other terms: if an individual is not motivated in the direction of the communicator, the incentives offered will be inappropriate. We
would not expect a change in opinion change under these conditions.

V. The Achievement Drive scale of the OARS will be positively related to opinion change.

The rationale is the same as that under Hypothesis IV. An individual who indicates that he wishes to "make a name for himself" on the OARS, indicates that this is a goal which has a positive valence for him. The incentives offered have to do with prestige. If they do not have reinforcing characteristics, we would not expect a change.

VI. The following behavioral measures will be positively related to opinion change:

a. Participation in extracurricular activities. This is based on the assumption that such participation can be characterized in part as status-seeking. It follows that the participating individual is favorably disposed toward status (cf. Hypothesis IV).

b. Number of offices held in extracurricular activities. The same assumption holds as under VIa.

c. Membership in fraternities or sororities. Again, the explanation given under VIa applies.

d. Number of offices held in fraternities or sororities. The same status-seeking assumption is made here.

VII. Measures of the communicator's qualifications and his fairness, as well as judgments as to the degree of relatedness of the issues raised in the address to the prob-
lem of unions and industrial democracy, will be positively related to the criterion of opinion change.

This is based on the assumption that individuals who describe themselves as being favorably disposed toward the communicator will be more acceptant of his recommendations.

VIIa. Individuals describing themselves on the four-item questionnaire as having been affected by the communicator and/or communication will change more than those who do not so describe themselves.

This is another indication of favorable attitudes toward the communicator.

Hypotheses Involving Variables Unrelated to Opinion Change

VIII. Total scores and Reading scores on the OSPE will be unrelated to the criterion of opinion change.

This is based on the evidence and analysis presented in Chapter I, where it was pointed out that if a communication is presented at a level intelligible to all and on logical grounds, intelligence will be unrelated. While it appears that the difficulty level of the communication is within the grasp of all participants, it is necessary to check this assumption. This then is an empirical check on the difficulty of the communication. There is no reason to believe that the communicator incentives would be viewed differently by persons of the different levels of intelligence found in the college sample.
IX. Scores on the Information Test and number of jobs held will be unrelated to opinion change.

While the possession of greater knowledge concerning labor, as revealed by the test or as acquired on jobs, would predispose the individual to a more favorable opinion of labor (cf. Wechsler, 51), we would not predict an increased opinion change unless the arguments and data presented were unique enough to add to supporting data which the individual already possesses. As a matter of fact, this knowledge may have the effect of holding the individual at a given point on the scale. If the changes of other individuals without any knowledge of labor and unions is great enough, we may find a negative relationship due to the shift of the other people.

IXa. Economic (Get-rich-quick) scale of the OARS and attitudes toward the strictness of parental treatment will be unrelated to opinion change.

The first of these, which includes items such as "make big money," will be unrelated because the incentives which would be appropriate to individuals scoring high on this scale are not offered. As to the second, while parental treatment may be related to attitudes toward status, other variables, such as negatively or nonreinforcing experiences with authority figures other than the parents, also affect this attitude. The complexity of the situation reduces the prediction to zero.
X. Other demographic variables will be unrelated to the criterion, as follows:

a. Number of quarters in college and class rank.
b. Age.
c. Sex.
d. Level of parental education and level of parent's occupation.

The foregoing analysis offers no support for assuming that these variables will be related to the criterion. Actually, these variables were included in the data to help conceal the nature of the investigation. It was desirable to keep the subjects from becoming suspicious over a number of questions concerning work experience, activities, and union membership.

In summary, we may predict that there will be significant differences between the groups on the variables mentioned in Hypotheses I, II and III. Essentially these hypotheses deal with predictions which are a logical outgrowth of a learning theory approach to this area.

Hypotheses IV through VII in one sense involve a validation study in which the selection of instruments is determined by this same approach. More specifically, we have assumed that changes in opinion are brought about through the offering of incentives - communicator incentives. The reinforcing character of these incentives is dependent upon the past experience (reinforcing, nonreinforcing, or negatively
reinforcing) of the individual. The offering of incentives will at the same time arouse certain acquired needs, such as the need for approval or status, within the individual if that incentive is appropriate.

One objective of the study of individual's characteristics would be to help identify those characteristics of the communicator which are reinforcing. This would be of considerable help not only in terms of theory, but also in terms of simplifying future research in this area. At the same time, it would aid in predicting who will change his opinions under these conditions, so that research requiring the use of individuals who are highly suggestible could be conducted with greater facility.

Janis' approach to the general problem of suggestibility has been to relate scores on personality inventories and the judgments of clinical psychologists to measures of opinion change. He has met with some success in that persons with low-self-esteem seem to be more suggestible.

Our approach here to the same problem is to see whether or not it is possible to develop measures based on the incentives offered which will help increase the efficiency of the prediction as to who will change his opinion under prestige suggestion.

Because of the exploratory nature of this problem, we do not expect the variables considered under Hypotheses IV through VII to be highly related to opinion change although
we do expect significant relationships.

With the formal statement of hypotheses, we are now ready to proceed to the next chapter for an analysis and discussion of the results.
CHAPTER III

RESULTS

The general plans for analyzing the data were as follows. The first step would involve a comparison of the Communicator Measures (his qualifications, fairness, etc.) to determine whether or not we were successful in our attempt to present two communicators who are perceived differently. (See p. 40 for a discussion of this point). The second step would be to compare the groups of subjects on initial LAS opinions to make sure that they were matched on this variable. This would involve an analysis of variance. Following this, an analysis of covariance of the pretest and post-test scores on the LAS would determine whether or not significant changes had been induced among the various experimental conditions as a result of exposure to the communication and communicators. This analysis would include a comparison of the experimental groups with the control group and would serve as a test of Hypotheses I, II, and III.

Having found significant differences between the experimental and control conditions, the predictors mentioned in Hypotheses IV through X would be correlated with the opinion change measures for the purpose of testing these hypotheses.

A Comparison of Communicator Measures

Table II summarizes the responses made by each experi-
mental group to the questions concerning their impressions of the communicators and the address. An examination of the data under the first question dealing with the speaker's qualifications shows that the means of the respective groups rank themselves in the expected order: HP (high prestige - present), HA (high prestige - absent), LP (low prestige - present) and LA (low prestige - absent). Significant differences among the means are obtained only between the two prestige levels, however. The mean of either high prestige group is significantly higher than the mean of either low prestige group. This means that Dr. Roberts is viewed as being more highly qualified than is Mr. Ross. On the other hand the anticipated presence of the speaker added nothing to his qualifications.

The responses to the second question, dealing with the degree of relatedness of the issues raised in the communication to the topic Unions and Industrial Democracy, show no significant differences between the means of the four groups. With respect to relevance of the issues raised then, the change in the communicator conditions had no effect on the audience's evaluation of the address.

The next question deals with the communicator's fairness. This would also be an evaluation of the address to some extent. The HP and HA means differ significantly from each other, and so do the HP and LA means. At the same
TABLE II
A COMPARISON OF COMMUNICATOR MEASURES*

Qualifications

"Did you feel that the speaker was qualified to talk on
this topic? (1) very poorly qualified; (2) fairly poorly
qualified; (3) about average or undecided; (4) fairly
well qualified; (5) very well qualified."

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SDN</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>26</td>
<td>4.60</td>
<td>.49</td>
<td>.098</td>
<td></td>
</tr>
<tr>
<td>HA</td>
<td>26</td>
<td>4.35</td>
<td>.87</td>
<td>.174</td>
<td></td>
</tr>
<tr>
<td>LP</td>
<td>26</td>
<td>3.75</td>
<td>.72</td>
<td>.144</td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>26</td>
<td>3.52</td>
<td>.75</td>
<td>.150</td>
<td></td>
</tr>
</tbody>
</table>

HP vs. HA: 1.25
LP vs. LA: 1.11
HP vs. LP: 4.88**
HP vs. LA: 6.62**
HA vs. LP: 2.65**

Relatedness of Issues

"Do you think that the issues he raised were related to the
topic? (1) definitely unrelated; (2) more unrelated than
related; (3) about even or undecided; (4) more related
than unrelated; (5) definitely related."

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SDN</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>26</td>
<td>4.08</td>
<td>.69</td>
<td>.138</td>
<td></td>
</tr>
<tr>
<td>HA</td>
<td>26</td>
<td>3.69</td>
<td>.91</td>
<td>.182</td>
<td></td>
</tr>
<tr>
<td>LP</td>
<td>26</td>
<td>3.83</td>
<td>1.11</td>
<td>.222</td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>26</td>
<td>3.88</td>
<td>.91</td>
<td>.182</td>
<td></td>
</tr>
</tbody>
</table>

HP vs. HA: 1.71
LP vs. LA: 0.17
HP vs. LP: 0.96

Fairness

"Do you think that he was fair in his presentation? (1)
very fair; (2) more fair than unfair; (3) about even or
undecided; (4) more unfair than fair; (5) very unfair."

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SDN</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>26</td>
<td>3.96</td>
<td>.87</td>
<td>.174</td>
<td></td>
</tr>
<tr>
<td>HA</td>
<td>26</td>
<td>3.27</td>
<td>.94</td>
<td>.188</td>
<td></td>
</tr>
<tr>
<td>LP</td>
<td>26</td>
<td>3.54</td>
<td>.96</td>
<td>.192</td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>26</td>
<td>3.40</td>
<td>1.02</td>
<td>.204</td>
<td></td>
</tr>
</tbody>
</table>

HP vs. HA: 2.69**
HP vs. LA: 2.09**
HP vs. LP: 1.62
LP vs. LA: 0.50

* The questions are given above in the same form as on the
original instrument. All were scored, however, so that a
positive response was assigned a value of 5 and a negative
response a value of 1.

** t at the .05 level of significance is 2.01
   t at the .01 level of significance is 2.68
**TABLE II (continued)**

A COMPARISON OF COMMUNICATOR MEASURES

**Effect on Attitude**

"Do you think that this address had any effect on your attitude toward unions? (1) a definitely favorable effect; (2) a slightly favorable effect; (3) very little or no effect; (4) a slightly unfavorable effect; (5) a definitely unfavorable effect."

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>3.76</td>
<td>.71</td>
<td>.142</td>
<td>HP vs. HA: 2.01**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA</td>
<td>3.38</td>
<td>.62</td>
<td>.124</td>
<td>LP vs. LA: 0.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LP</td>
<td>3.54</td>
<td>.71</td>
<td>.142</td>
<td>HP vs. LA: 1.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>3.44</td>
<td>.57</td>
<td>.114</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** t at the 0.5 level of significance is 2.01

** t at the 0.1 level of significance is 2.68
time, the LP and LA means are not significantly different from each other. A partial explanation of these differences and similarities suggests that the threat (Promise) of the speaker's personal appearance has the effect of raising the evaluation of his fairness. This is most marked when the speaker is a high prestige figure, but has little effect when the speaker is the equivalent of a peer-group member, i.e., a college student.

The last question on this particular instrument deals with the perceived effect of the address on the audience's opinions concerning unions. Only one difference between the means is significant here - that between the means of the two high prestige groups. It appears that a similar process might be involved here as in the responses to the previous question. The group which expects the high prestige speaker to appear in person inflates their evaluation of his influence. It was only moderately favorable in every case,

Scores on the Labor Attitude Scale

An examination of Table III shows that there are no significant differences among the experimental and control groups as to initial opinions concerning labor-management issues. This table contains the sums of squares for the experimental and control groups for both the within and between groups sources of variation. The obtained F of 0.193 is not significant. Thus we see that the groups were
### Table III

**A Comparison of LAS Pretest Scores**

**All Groups**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of squares</th>
<th>Mean Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>313.96</td>
<td>78.49</td>
</tr>
<tr>
<td>Within-groups</td>
<td>130</td>
<td>52,959.48</td>
<td>407.38</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td>53,273.44</td>
<td></td>
</tr>
</tbody>
</table>

\[ F = 0.193 \text{ (Not significant)} \]

\[ F \text{ at } P = .05; \ 2.44 \]

\[ F \text{ at } P = .01; \ 3.47 \]
matched with respect to initial opinion.

Table IV presents a summary of pretest and post-test scores for all groups. To the left of the table we find the mean, standard deviation and standard error of the mean for each group's pretest scores. In the center, the same statistics are presented for the post-test scores. Test-retest reliability figures for each group follow this. Finally, the standard error of the difference, the obtained difference between the means and the $t$ for each group are given. The $N$ in each group is 27. The LP audience consisted of only 27 members. Accordingly, the excess in each of the other groups was discarded at random so that the tests of significance which follow could be made. An inspection of the column headed "Differences" shows that the differences between the pre- and post-test means order themselves in the predicted fashion: HP, HA, LP, LA and Control. Only the HP and HA groups, however, show a significant change in the predicted direction.

In order to determine whether or not these changes are significantly greater than the change for the control group, an analysis of covariance was performed. This analysis takes into account the initial position of each individual on the pretest as well as the reliability of the instrument itself. Table V presents the results of this analysis. Only 4 groups, HP, HA, LP and Control, are included here. As indicated in Table IV the reliability coefficient for the
### TABLE IV

**GROUP-BY-GROUP COMPARISON OF LAB PRETEST AND POST-TEST SCORES**

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Post-test</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>SDM</td>
<td>Mean</td>
<td>SD</td>
<td>SDM</td>
<td>DXY</td>
<td>SDdiff</td>
<td>Diff</td>
</tr>
<tr>
<td>HP</td>
<td>50.07</td>
<td>13.47</td>
<td>2.64</td>
<td>56.48</td>
<td>14.65</td>
<td>2.87</td>
<td>0.613</td>
<td>3.08</td>
<td>6.07</td>
</tr>
<tr>
<td>HA</td>
<td>50.70</td>
<td>17.04</td>
<td>3.34</td>
<td>56.04</td>
<td>16.55</td>
<td>3.24</td>
<td>0.879</td>
<td>2.22</td>
<td>5.33</td>
</tr>
<tr>
<td>LP</td>
<td>48.30</td>
<td>15.02</td>
<td>2.95</td>
<td>51.48</td>
<td>20.65</td>
<td>4.05</td>
<td>0.726</td>
<td>3.44</td>
<td>3.18</td>
</tr>
<tr>
<td>LA</td>
<td>53.04</td>
<td>15.74</td>
<td>3.09</td>
<td>55.96</td>
<td>14.96</td>
<td>2.93</td>
<td>0.279</td>
<td>4.09</td>
<td>2.93</td>
</tr>
<tr>
<td>Cont.</td>
<td>49.82</td>
<td>12.93</td>
<td>2.54</td>
<td>52.56</td>
<td>16.34</td>
<td>3.20</td>
<td>0.661</td>
<td>3.07</td>
<td>2.74</td>
</tr>
</tbody>
</table>

N in all groups = 27

* t at .05 level of confidence = 2.056
** t at .01 level of confidence = 2.48
**TABLE V**

ANALYSIS OF COVARIANCE: LAS PRETEST & POST-TEST SCORES

**HP, HA, LP and Control Groups**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>$\sum x^2$</th>
<th>$\sum xy$</th>
<th>$\sum y^2$</th>
<th>df</th>
<th>$\sum y'^2$</th>
<th>Mean Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>29</td>
<td>164</td>
<td>504</td>
<td>3</td>
<td>289</td>
<td>96.33</td>
</tr>
<tr>
<td>Within-Groups</td>
<td>104</td>
<td>23647</td>
<td>20074</td>
<td>31915</td>
<td>103</td>
<td>14874</td>
<td>144.41</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>23735</td>
<td>20238</td>
<td>32419</td>
<td>106</td>
<td>15163</td>
<td></td>
</tr>
</tbody>
</table>

$F = 0.667$ (not significant)

(F at $P = .05$; 2.70
F at $P = .01$; 3.98)
LA group was only 0.279 as opposed to the higher correlation coefficients for the other groups. In order to meet the assumption of homogeneity of variance required for analysis of covariance, this group was eliminated. To return to a discussion of the table, the following data are listed for each source of variation: sum of squares for the pretest data, sum of cross-products for pre-and post-test scores, sum of squares for post-test data, the degrees of freedom for the conditions, sum of squares for the adjusted post-test scores and the mean square. The F ratio of 0.667 is not significant. It would appear from this analysis that Hypotheses I and III concerning the predicted differences among experimental and control groups (see pp. 47-51) must be rejected because of this lack of significance. An examination of Tables III or V, however, shows that the within-groups variance is extremely large, indicating a very heterogeneous sample with respect to this variable.\footnote{Original plans called for matching all groups on initial opinion within a restricted range of neutrality. The heavy demand for subjects during the Spring Quarter made this impossible.} Accordingly another type of analysis was attempted based on the frequency of persons making a change in a given direction.

"Opinion change scores" were computed for each individual as a preliminary step to converting the data to frequencies. This eliminates the large within-group vari-
ance which has the effect of reducing the obtained differences to nonsignificance. The change scores for each person were computed by subtracting his pretest from his post-test score. These were then tabulated as illustrated in Table VI. At the top of this table we see the means, standard deviations and frequencies of change in the expected direction for each group. The numbers who changed in the other direction or not at all are also included. The next section of the table indicates that the number of individuals who change in the predicted direction under the two high prestige conditions is significantly greater than the number who change similarly in the control group. The Chi-squared value of 3.81 approaches significance at the .05 level of confidence.\(^2\) This means that Hypothesis III is in part confirmed in that a greater degree of opinion change is induced in the high prestige audiences than in the control group. At the same time, it must be rejected in part as there is no significant difference between the number changing in the low prestige groups and the control. This last point was so obvious that no computation was necessary.

A test of Hypothesis I is made in the analysis presented just below the center of the Table. The number

\(^2\) All significance levels mentioned here are for a two-tailed test. Though the direction of change is predicted, this more rigorous test is preferred.
# Table VI

## Opinion Change Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>Frequencies</th>
<th>Change of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=27</td>
<td></td>
<td>Positive</td>
<td>No or Negative</td>
</tr>
<tr>
<td>HP</td>
<td>6.37</td>
<td>12.36</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>HA</td>
<td>5.37</td>
<td>8.26</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>LP</td>
<td>3.19</td>
<td>14.22</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>LA</td>
<td>2.93</td>
<td>18.45</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Control</td>
<td>2.41</td>
<td>12.06</td>
<td>13</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Positive Change</th>
<th>No or Negative Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Prestige</td>
<td>38</td>
<td>16</td>
</tr>
<tr>
<td>Control</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>30</td>
</tr>
</tbody>
</table>

Chi-squared = 3.81 (P = .05)

<table>
<thead>
<tr>
<th></th>
<th>Positive Change</th>
<th>No or Negative Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Prestige</td>
<td>38</td>
<td>16</td>
</tr>
<tr>
<td>Low Prestige</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>43</td>
</tr>
</tbody>
</table>

Chi-squared = 4.68 (P < .05, > .01)

<table>
<thead>
<tr>
<th></th>
<th>Change of 10 or more</th>
<th>Change of less than 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>37</td>
<td>71</td>
</tr>
<tr>
<td>Control</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>95</td>
</tr>
</tbody>
</table>

Chi-squared = 4.50 (P < .05, > .01)
changing in the predicted direction in the high prestige groups is significantly greater than the number changing in the low prestige groups. This hypothesis, then may be accepted. The fact that these groups received the same communication but were exposed to different communicators indicates that the result may be attributed to the difference in the prestige of the communicator.

Hypothesis II, which predicted a significant increase in the number of individuals changing their opinions in the two groups who were promised a personal appearance by the communicator must be rejected. In fact the frequencies are slightly in the "wrong" direction - 18 vs. 20, and 13 vs. 14. Although increasing the anticipation of reinforcement may serve to fixate the correct response (an hypothesis not under investigation here), it does not appear to influence the probability of making a new response under these conditions.

Again referring to Table VI the column in the upper right portion indicates the number of individuals in each group whose opinion change score was 10 points or more in the predicted direction. A Chi-squared test of the differences between all experimental groups and the control group yields a value of 4.50 which is significant beyond

---

3 The reasons for selecting this score as a cutting point to make the following test are given in the section entitled "Development of Suggestibility Measures," p. 74.
the .05 level of confidence. The differences among the experimental conditions are obviously not significant. This last analysis indicates that an opinion change was actually induced in the low prestige audience. A significantly greater number of individuals in these groups (9, LP and 9, LA) made large changes as compared to the number of individuals making such changes in the control group. These results mean that we must modify our previous conclusions with respect to Hypotheses I and III. While the number of individuals making any change at all is not significantly greater than the number for the control group, all experimental groups exceed the control in terms of marked opinion changes. But with respect to marked opinion changes, the experimental groups do not differ from each other. The lack of a difference between the high and low prestige groups in this last analysis is probably due to the restriction on the magnitude of opinion shifts imposed by the LAS.

Analysis of Content Test Scores

The reader will recall that Hypothesis Ia predicted that there would be no significant differences among the experimental group means on the Content Test. This was based on the hypothesis that obtained opinion changes could not be attributed to differential learning of the arguments and appeals contained in the address. Table VII gives the means, standard deviations and standard errors of the
### TABLE VII

**ANALYSIS OF CONTENT TEST SCORES**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>SDM</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>11.64</td>
<td>2.28</td>
<td>0.465</td>
<td>HP vs. HA: 1.48</td>
</tr>
<tr>
<td>HA</td>
<td>10.69</td>
<td>2.20</td>
<td>0.440</td>
<td></td>
</tr>
<tr>
<td>LP</td>
<td>10.83</td>
<td>2.64</td>
<td>0.550</td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>11.20</td>
<td>2.04</td>
<td>0.417</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>5.98</td>
<td>1.72</td>
<td>0.268</td>
<td>LP vs. Cont.: 7.93 $(P &lt; .001)$</td>
</tr>
</tbody>
</table>
means for all groups. For simplicity, only the largest obtained \( t \) has been included, the one testing the significance of the difference between the means of the two high prestige groups. This difference and all the others between the experimental groups' Content Test scores, are not significant. Thus the greater shift in opinion change induced in the high prestige groups cannot be attributed to the differential learning of the content of the communication, but must be attributed to the difference in prestige of the two communicators. (Hypothesis I)

The second portion of Hypothesis Ia dealt with a comparison of the experimental groups and the control group on this variable. This amounts to a check on the validity of the Content Test as the control group was not exposed to the communication at all. Again, for simplicity, only one obtained \( t \) is given. The smallest \( t \) obtained was 7.93 between the means of the control and LP groups. This is significant beyond the .001 level of confidence as are all the other \( t \)'s. Thus it appears that the Content Test is a valid measure of the content of the communication.

**Development of a Suggestibility Measure**

Before discussing the remaining hypotheses to be tested, it is necessary to describe the development of a measure of susceptibility to suggestion. Such a measure would serve as a criterion to which could be related the
various predictors mentioned in Hypotheses IV through X.

As indicated previously (p. 67) the differences between the pre and post-test means for the control and experimental groups did not differ significantly due to the marked heterogeneity of the sample. (Table V) Then opinion change scores were computed by subtracting each individual's pretest score from his post-test score. The means and standard deviations of these scores for each group were analyzed in Table VI (P. 70). Now we need a measure which will permit us to select the particular individuals in each of the experimental groups who made significant changes in opinion as compared to those who had a small or negative opinion shift. Our objective is, of course, to develop measures which will yield correlations which will not be spurious or attributable to chance factors. Accordingly, a cutting score was selected which would pick out those individuals in each group who shifted maximally in the predicted direction and whose shifts were significantly greater than the shifts obtained in the control groups. The mean of the control group opinion change scores was computed and a cutting score was selected at the mean plus one probable error.4 This cutting score designates all individuals making a shift of opinion of 10 or more points in the predicted direction.

4 The author would like to express his appreciation to Professor Robert J. Wherry for his advice and assistance in developing this criterion measure.
direction as susceptible to suggestion, or suggestible, under these conditions. A comparison of the number of individuals making such a shift in the experimental groups with those in the control yields a Chi-squared value of 4.68 (see Table VI). All individuals shifting 10 or more points were assigned a score of one, while those who shifted less than 10 points were assigned a score of zero. This then gives us a criterion of suggestibility which can be related to the predictors mentioned in Hypotheses IV through X.

The Relationship of Predictors to the Criterion

We are now ready to relate the various predictors to our criterion of suggestibility. Table IX presents a summary of the scores of all experimental groups on each of the variables predicted to be positively related to the criterion. Table X presents the means and standard deviations of variables predicted to be unrelated. Table XI, which contains the data which test our hypotheses, merits the most discussion, but the others will be referred to when appropriate. The data presented in these tables are for smaller N's than those given previously. Eight of the experimental subjects were omitted because of incomplete data on one or more measures.

It is to be noted that Table XI contains separate point biserial correlation coefficients for subjects exposed to the high prestige communicator and the low prestige
### TABLE IX
MEANS AND STANDARD DEVIATIONS OF VARIABLES PREDICTED TO BE
POSITIVELY RELATED TO OPINION CHANGE*

**Status Attitude Scale**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>56.34</td>
<td>7.44</td>
<td>25</td>
</tr>
<tr>
<td>HA</td>
<td>55.26</td>
<td>7.68</td>
<td>26</td>
</tr>
<tr>
<td>LP</td>
<td>55.34</td>
<td>8.76</td>
<td>24</td>
</tr>
<tr>
<td>LA</td>
<td>55.06</td>
<td>9.60</td>
<td>25</td>
</tr>
</tbody>
</table>

**Achievement Drive Scale of OARS**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>25.80</td>
<td>5.49</td>
<td>25</td>
</tr>
<tr>
<td>HA</td>
<td>23.57</td>
<td>6.87</td>
<td>26</td>
</tr>
<tr>
<td>LP</td>
<td>25.38</td>
<td>4.98</td>
<td>24</td>
</tr>
<tr>
<td>LA</td>
<td>24.48</td>
<td>5.79</td>
<td>25</td>
</tr>
</tbody>
</table>

**Participation in Extracurricular Activities**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>1.80</td>
<td>1.55</td>
<td>25</td>
</tr>
<tr>
<td>HA</td>
<td>1.00</td>
<td>1.59</td>
<td>26</td>
</tr>
<tr>
<td>LP</td>
<td>2.21</td>
<td>2.10</td>
<td>24</td>
</tr>
<tr>
<td>LA</td>
<td>1.32</td>
<td>1.29</td>
<td>25</td>
</tr>
</tbody>
</table>

**Number of Offices Held in Extracurricular Activities**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>0.48</td>
<td>0.85</td>
<td>25</td>
</tr>
<tr>
<td>HA</td>
<td>0.19</td>
<td>0.79</td>
<td>26</td>
</tr>
<tr>
<td>LP</td>
<td>0.71</td>
<td>1.37</td>
<td>24</td>
</tr>
<tr>
<td>LA</td>
<td>0.15</td>
<td>0.46</td>
<td>25</td>
</tr>
</tbody>
</table>

**Number of Offices Held in Fraternities or Sororities**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>0.16</td>
<td>0.54</td>
<td>25</td>
</tr>
<tr>
<td>HA</td>
<td>0.27</td>
<td>0.71</td>
<td>26</td>
</tr>
<tr>
<td>LP</td>
<td>0.29</td>
<td>0.74</td>
<td>24</td>
</tr>
<tr>
<td>LA</td>
<td>0.32</td>
<td>1.01</td>
<td>25</td>
</tr>
</tbody>
</table>

**Membership in Fraternities or Sororities (N)**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP</td>
<td>10</td>
</tr>
<tr>
<td>HA</td>
<td>8</td>
</tr>
<tr>
<td>LP</td>
<td>7</td>
</tr>
<tr>
<td>LA</td>
<td>11</td>
</tr>
</tbody>
</table>

* Means and sigmas for the Communicator Measures will be found in Table II, p. 61.
### TABLE X

**SUMMARY OF SCORES ON VARIABLES PREDICTED TO BE UNRELATED TO OPINION CHANGE**

<table>
<thead>
<tr>
<th>Occupation of Father</th>
<th>Strictness of Parental Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>HP</td>
<td>3.24</td>
</tr>
<tr>
<td>HA</td>
<td>3.08</td>
</tr>
<tr>
<td>LP</td>
<td>2.67</td>
</tr>
<tr>
<td>LA</td>
<td>2.96</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation of Mother</th>
<th>Quarters in College</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>HP</td>
<td>0.88</td>
</tr>
<tr>
<td>HA</td>
<td>0.88</td>
</tr>
<tr>
<td>LP</td>
<td>0.54</td>
</tr>
<tr>
<td>LA</td>
<td>0.60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Father's Education</th>
<th>Class Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>HP</td>
<td>3.48</td>
</tr>
<tr>
<td>HA</td>
<td>3.50</td>
</tr>
<tr>
<td>LP</td>
<td>2.79</td>
</tr>
<tr>
<td>LA</td>
<td>3.44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother's Education</th>
<th>Number of Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>HP</td>
<td>2.76</td>
</tr>
<tr>
<td>HA</td>
<td>3.04</td>
</tr>
<tr>
<td>LP</td>
<td>3.04</td>
</tr>
<tr>
<td>LA</td>
<td>3.36</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSPE Reading</th>
<th>OSPE Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>HP</td>
<td>50.90</td>
</tr>
<tr>
<td>HA</td>
<td>53.30</td>
</tr>
<tr>
<td>LP</td>
<td>53.30</td>
</tr>
<tr>
<td>LA</td>
<td>56.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAERs Economic Scale</th>
<th>Information Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td>HP</td>
<td>15.94</td>
</tr>
<tr>
<td>HA</td>
<td>19.26</td>
</tr>
<tr>
<td>LP</td>
<td>17.02</td>
</tr>
<tr>
<td>LA</td>
<td>13.86</td>
</tr>
</tbody>
</table>

* Scoring instructions for the Biographical Inventory will be found in Appendix A.*
### TABLE XI

**RELATIONSHIPS OF PREDICTORS TO CRITERION**

*Variables Predicted to be Related*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Predictor</th>
<th>$r_{XY}(HP &amp; HA)$</th>
<th>$r_{XY}(LP &amp; LA)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>SAS</td>
<td>.03</td>
<td>.31*</td>
</tr>
<tr>
<td>V</td>
<td>Achievement Drive of OARS</td>
<td>-.13</td>
<td>.39*</td>
</tr>
<tr>
<td>VIa</td>
<td>Participation in Extracurricular Activities</td>
<td>.00</td>
<td>.44*</td>
</tr>
<tr>
<td>VIb</td>
<td>Number of offices held in extracurricular activities</td>
<td>.08</td>
<td>.34*</td>
</tr>
<tr>
<td>VIc</td>
<td>Membership in fraternities</td>
<td>.03</td>
<td>-.17</td>
</tr>
<tr>
<td>VIId</td>
<td>Number of offices held in fraternities</td>
<td>.06</td>
<td>.10</td>
</tr>
<tr>
<td>VII</td>
<td>Perceived communicator's qualifications</td>
<td>.00</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>Perceived relatedness of issues raised</td>
<td>-.04</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Perceived fairness of communicator</td>
<td>.19</td>
<td>.29*</td>
</tr>
<tr>
<td>VIIa</td>
<td>Perceived opinion change</td>
<td>.25</td>
<td>.28*</td>
</tr>
</tbody>
</table>

* $r$ required for significance at .05 level of significance is 0.278. For the .01 level of confidence, 0.365.*
communicator. This separate analysis is dictated by the significant differences obtained in the perceived qualifications of the communicators by these two groups. (See Table II) On the other hand, the low and high prestige groups were pooled respectively because of lack of significance of the differences between them on these measures.

Starting at the top of Table XI, we find that responses on the SAS are significantly related to changes in opinion for the groups exposed to the low prestige figure. This relationship is not significant, however, for the high prestige groups. This same general relationship holds for scores on the Achievement Drive scale on the OARS, participation in extracurricular activities, number of offices held in extracurricular activities and the perceived fairness of the communicator. Other relationships predicted to be positive (membership and holding offices in fraternities or sororities, perceived communicator's qualifications, and perceived relatedness of the issues raised) are unrelated for both high and low prestige groups. Perceived opinion change is significantly related to the criterion in both cases.

Before we discuss the comparison of these two sets of correlation coefficients it should be recalled that the predictors mentioned above were operationally defined as motivational measures in Hypotheses IV through VII. More specifically, it was assumed that these measures could in
part be characterized as indicators of positive attitudes toward status and prestige symbols. We further indicated that a given attitude is not always in operation, but rather the arousal of that attitude depends upon stimuli impinging upon the individual at a given moment.

Table XII gives the intercorrelations for the five variables found to be positively related to the criterion, plus the relationship of these variables to the pretest scores on the LAS and to the criterion. An examination of the matrix, which contains the separate intercorrelations for the two prestige groups, throws some light upon the slight relationships between the various predictors and the criterion for the high prestige audience, as well as on the positive relationships found for the low prestige audience. Let us look first at the intercorrelations for the low prestige audience. The positive relationships found between participation in extracurricular activities, offices held therein and the Achievement Drive scale of the OARS suggest an underlying attitude which might be identified as an attitude toward recognition in collegiate life and its activities. Another attitude is indicated by the relationship between the Achievement Drive Scale of the OARS and the SAS

---

5 Ideally we would perform a separate factor analysis for each of the groups of a matrix consisting of the intercorrelations of all items of these instruments. This would give us two 103x103 matrices. Time limitations make such a step impossible.
### TABLE XII

**INTERCORRELATIONS OF PREDICTORS**

**POSITIVELY RELATED TO THE CRITERION**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Perceived Fairness</strong></td>
<td>(High)</td>
<td>07</td>
<td>-06</td>
<td>25</td>
<td>28</td>
<td>-19</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td>10</td>
<td>00</td>
<td>-03</td>
<td>01</td>
<td>04</td>
<td>29</td>
</tr>
<tr>
<td><strong>B. Extracurricular Activities</strong></td>
<td>(High)</td>
<td>--</td>
<td>69</td>
<td>16</td>
<td>-04</td>
<td>09</td>
<td>00</td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td>--</td>
<td>77</td>
<td>28</td>
<td>-16</td>
<td>-12</td>
<td>44</td>
</tr>
<tr>
<td><strong>C. Offices held in Extracurricular</strong></td>
<td>(High)</td>
<td>--</td>
<td>27</td>
<td>-20</td>
<td>12</td>
<td>08</td>
<td>08</td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td>--</td>
<td>34</td>
<td>-10</td>
<td>13</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td><strong>D. OARS Achievement Drive</strong></td>
<td>(High)</td>
<td>--</td>
<td>15</td>
<td>02</td>
<td>-13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td>--</td>
<td>31</td>
<td>-05</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E. SAS</strong></td>
<td>(High)</td>
<td>--</td>
<td>-42</td>
<td>03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td>--</td>
<td>-15</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F. LAS pretest</strong></td>
<td>(High)</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td><strong>G. Criterion of Opinion change</strong></td>
<td>(High)</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Low)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* No correlation coefficient is reported here as the criterion scores of opinion change were computed in part from the LAS pretest scores. Any reported correlations would be spurious.
- attitudes toward status and status symbols. The stimuli presented by Ross appear to arouse these attitudes which mediate the opinion change.

The same general relationship between the former three variables found for the high prestige groups suggests the same attitude toward recognition in collegiate life and its activities. These attitudes would not be aroused, however, by a figure possessing the communicator characteristics of Dr. Roberts. To state this differently, the stimulus characteristics of Dr. Roberts (author, Ph.D, professor, lecturer, labor mediator) are not appropriate for the arousal of this motive. The stimulus characteristics of Ross, on the other hand (fellow college student) are appropriate. Thus, we induce an opinion change in the latter group, but not in the former because of the differences in the motives aroused by the communicator.

We must, however, account for the fact that the SAS, our measure of attitudes toward status, does not correlate with opinion change scores for the high prestige group. One interpretation of this lack of relationship comes from the fact that the scores on the LAS pretest correlate \(-0.42\) with the SAS for the high prestige groups. This means that individuals who have positive attitudes toward status in this group also have strong negative attitudes toward labor and unions. Previous research by Lewis (38), Luchins (40), Asch (2,4), and Hovland and Weiss (24) and the logical
analysis of attitudes by Heider (21) throw some light on this problem. If a message which is repugnant to the audience is presented by a highly respected source there is a tendency to: 1) change one's attitudes toward the communicator, 2) change one's attitudes toward the communication, or, 3) change one's perception of the communicator's role in originating the message. Thus, one could: 1) change his attitudes toward the communicator, i.e., reevaluate his qualifications as an expert or authority in the field, 2) accept the communication or reinterpret it so that he gets at what he feels the speaker "really" means and still maintain his negative attitude toward labor, or, 3) change his perception of the communicator's role in originating the communication, i.e., he could change his evaluation of his trustworthiness or fairness or even deny his actual existence in a situation such as this. The lower relationship (.19) obtained between "fairness" scores and the criterion for the high prestige group suggests that this may have operated to some extent. Whatever the process, it seems reasonable to suggest that the lack of relationship between opinion change scores and the SAS is due to the incongruence of the communicator and communication in the eyes of some members of the high prestige group. The fact that we get a significant change in opinion may still be the result of the arousal of the status attitude by the communicator stimuli and an acceptance (see 2 above) of his recommendations.
by some of the prestige-oriented individuals. On the other hand, others in the audience who are so motivated may view the communicator as untrustworthy or suspect that he is fictitious and thus reject the communication. These different processes would result in a zero correlation, even though a significant opinion change is induced in the group as a whole. A logical extension of this study, then, would be to change the content of the communication to another topic or perhaps to an anti-labor address. Under these conditions, we would predict that the SAS would be positively related to opinion change.

Now let us examine the relationships found for the other variables predicted to be positively related to opinion change. Hypotheses Vlc and VId predicted that a positive relationship would be found between opinion change and membership in fraternities or sororities and offices held therein. But the relation was slight (Table XI). These variables were characterized as indications of positive attitudes toward status. We find that they correlated 0.09 and 0.10 respectively with the SAS. Their correlations with participation in extracurricular activities and offices held therein are also insignificant: membership in fraternities or sororities and participation in extracurricular activities, 0.15; membership in fraternities or sororities and offices held in activities, 0.24; offices held in fraternities or sororities and offices held in activities,
-0.03; offices held in fraternities or sororities and number of extracurricular activities, -.06. We may interpret these relationships as meaning that there are many different motives involved in participating in either fraternity or extracurricular activities and official duties. Thus membership in fraternities or sororities appears to be a very impure measure of either attitudes toward status or attitudes toward collegiate activities.

Hypothesis VII dealt with the various communicator measures. A positive relationship was predicted because these would in part reflect the attitudes toward the speaker and the communication. With respect to communicator qualifications, we find the correlations to be .00 and .01 for the high and low groups respectively. The marked restriction of variability (See Table IX) would indicate that the audience accepted the fictitious introductions uncritically. When the communicator is fictitious, it appears that he is accepted at face value and that the subject's evaluation of him is largely a function of the introduction. Perceived relatedness of the issues to the topic also shows no relationship with the criterion. This may be a function of the relative ignorance of the subjects with respect to this area. This plus the fact that the address was a simulated radio broadcast would tend to induce an acceptance of the fact that the issues were related, thereby reducing the relationship of these evaluations with the criterion to zero.
**TABLE XIII**

**RELATIONSHIP OF PREDICTORS TO CRITERION**

**Variables Predicted to be Unrelated**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Predictor</th>
<th>$r_{XY}(HP &amp; HA)$</th>
<th>$r_{XY}(LP &amp; LA)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIII</td>
<td>OSPE Total</td>
<td>-.01</td>
<td>-.02</td>
</tr>
<tr>
<td></td>
<td>OSPE Reading</td>
<td>-.11</td>
<td>-.02</td>
</tr>
<tr>
<td>IX</td>
<td>Information Test</td>
<td>-.13</td>
<td>-.18</td>
</tr>
<tr>
<td></td>
<td>Number of jobs held</td>
<td>0.18</td>
<td>-.01</td>
</tr>
<tr>
<td>IXa</td>
<td>Economic Scale of OARS</td>
<td>.10</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>Attitudes toward strictness of parental treatment</td>
<td>-.20</td>
<td>.20</td>
</tr>
<tr>
<td>Xa</td>
<td>Number of quarters in college</td>
<td>-.07</td>
<td>-.06</td>
</tr>
<tr>
<td></td>
<td>Class rank</td>
<td>-.11</td>
<td>-.08</td>
</tr>
<tr>
<td>Xb</td>
<td>Age</td>
<td>-.20</td>
<td>.04</td>
</tr>
<tr>
<td>Xc</td>
<td>Sex</td>
<td>0.04</td>
<td>.09</td>
</tr>
<tr>
<td>Xd</td>
<td>Level of father's education</td>
<td>.14</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Level of mother's education</td>
<td>.00</td>
<td>.11</td>
</tr>
<tr>
<td></td>
<td>Level of father's occupation</td>
<td>.00</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>Level of mother's occupation</td>
<td>-.05</td>
<td>.03</td>
</tr>
</tbody>
</table>
The evaluation of the fairness of the communicator seems to be more subject to the individual's judgment and reflects positive attitudes toward him, at least in the low prestige group. The correlation in the high prestige group is positive but not significant.

**Variables Unrelated to Suggestibility**

Table XI gives the correlation coefficients for the variables predicted to be unrelated to the criterion of suggestibility. As predicted, none of these relationships are significant.

Hypothesis VIII dealt with the expected lack of relationship between OSPE scores and the criterion. Previous research (23) has indicated that if a communication is presented at a level intelligible to all and on logical grounds, intelligence would be unrelated. The lack of relationship suggests that our objective of presenting a logical and intelligible communication was achieved.

Hypothesis IX predicted a zero relationship or a negative relationship between scores on the Information Test and the criterion. The results here are consistent with this hypothesis. While both correlation coefficients are negative, they are too low to be significant. Hypothesis IXa predicted no relationship between scores on the Economic scale of the OARS and the criterion because the stimuli which would be appropriate for the arousal of the attitudes of individuals scoring high on this scale are not offered.
The correlations of 0.10 and 0.04 confirm this hypothesis.

Hypothesis X dealt with various demographic variables which would be unrelated to opinion change. As noted previously, our theoretical system offers no justification for predicting such a relationship. Previous research has under different conditions, indicated positive, negative and zero relationships with variables such as age, sex, etc. (See pp. 17-19). These data, although not directly related to the problem at hand, are offered in support of previous studies finding no consistent relationship and to support the general contention that the study of such relationships is an unproductive approach to the area of communications research.
CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this research was to investigate the relationship between communicator stimuli and opinion change. Specifically, we were interested in determining whether individuals who indicated that they possess positive attitudes toward status will be more likely to change their opinions when presented with a communication from a prestige source than will individuals who do not possess such attitudes. Corollary problems dealt with the relationship of the learning of the content of the communication to opinion change, as well as the relationship of other variables such as age, sex, job experience, knowledge of the field dealt with in the communication to opinion change.

Procedures

The Hepler Labor Attitude Scale, the Seeman Status Attitude Scale, a Biographical Inventory and the Occupational Attitudes Rating Scales were administered to 356 elementary psychology students at The Ohio State University. Three weeks later, 164 of these participated in the experimental and control portions of the study. All four experimental groups were tested to determine their knowledge of labor and union affairs. Immediately following this, they were exposed to a tape-recorded, pro-labor address. For two of the experimental groups, this communication was presented
by a (fictitious) noted authority in the field of labor-management relations. The other two experimental groups were told that the address was made by a college senior. One group exposed to the high prestige figure (the authority) and one group exposed to the low prestige figure (the college senior) were told that the speaker would appear personally following the address. The other two groups were told nothing.

Immediately following the address, the Labor Attitude Scale was readministered. Next a short questionnaire was given to obtain the audiences' reactions to the communicator and the address. To check on the possible differential learning of the content of the communication when presented by the two communicators and its effect upon opinion change, a recall test was then given which covered the main arguments and evidence offered in the address.

The control group took the Labor Attitude Scale, the Status Attitude Scale and the Occupational Attitude Rating Scales for the second time and also took the test of the content of the address for the first time. Having the control group take the Content Test even though not exposed to the communication served to check on the validity of this instrument.

Opinion change scores were derived by subtracting the pretest scores from the post-test scores on the Hepler Labor Attitude Scale. All data were analyzed for the various
groups for the purpose of testing hypotheses concerning:
1) the perceived differences in the qualifications and
fairness of the communicators, 2) the perceived relatedness
of the issues raised to the topic of the address - Unions
and Industrial Democracy, 3) perceived opinion change, 4)
differences in the number of individuals changing their
opinions in a pro-labor direction under the four experiment­
al conditions, 5) the effect of differential learning of the
content of the address upon opinion change, 6) the relation­
ship of measures of attitudes toward status and prestige
symbols as measured by the Seeman Status Attitude Scale,
the Achievement Drive scale of the Occupational Attitude
Rating Scales, and participation in various collegiate
activities to opinion change under the different experimen­
tal conditions, and, 7) the relationship of non-attitudinal
individual characteristics such as intelligence and knowl­
edge of the field, and demographic variables to opinion
change.

Results

1. The communicator who was introduced as an authority
in the field of labor-management relations was perceived as
being significantly better qualified to speak on this topic
than was the communicator introduced as a college senior.

2. No differences were obtained among the four experi­
mental groups with respect to the perceived relevance of the
issues involved in the topic of the communication, *Unions and Industrial Democracy*.

3. The promise of a personal appearance of the high prestige communicator raised the audience's evaluation of his fairness significantly.

4. The promise of the personal appearance of the high prestige communicator also raised the audience's evaluation of their own degree of acceptance of his pro-labor recommendations.

5. An analysis of variance revealed that all experimental and control groups were matched on the basis of initial scores on the Labor Attitude Scale.

6. An analysis of covariance of pre- and post-test scores on the Labor Attitude Scale revealed no significant differences between the experimental and control conditions presumably because of the marked heterogeneity of the sample. Accordingly, opinion change scores were computed by subtracting the individual pretest from the post-test scores on the Labor Attitude Scale and cutting scores were assigned for the purpose of comparing the number of individuals making marked changes in the recommended direction.

7. The number of individuals in the two high prestige groups changing their opinions in the pro-labor direction by any amount was significantly greater than in the control group. No differences were found between the low prestige audiences and the control in this comparison.
8. The number of individuals showing a marked opinion change was significantly greater in all experimental groups (high and low prestige) than in the control.

9. The promise of the communicators' appearance had no effect on the actual opinion change scores of the audiences involved.

10. No significant differences were found among any of the experimental groups with respect to recall of the content of the communication. All experimental groups, however, scored significantly higher on the recall test than did the control group which was not exposed to the communication.

11. Three measures participation in extracurricular activities, holding offices therein, and the Achievement Drive Scale of the Occupational Attitudes Rating Scales, were positively related to opinion change scores for the combined low prestige groups. They appeared to reflect positive attitudes toward participation in and gaining recognition from collegiate life and its activities. These measures were not related to opinion change for the combined high prestige groups.

12. The Status Attitude Scale was positively related to measures of opinion change for the combined low prestige groups, but it was not so related for the combined high prestige groups. The lack of relationship found between positive attitudes toward status and opinion change under prestige suggestion in this case was probably due to the inverse
relationship found between positive attitudes toward status and pro-labor attitudes found in the two high prestige groups.

13. Participation in fraternities or sororities, offices held therein, evaluations of the speaker and the communication showed little relationship to the criterion of opinion change. While it would appear that participation in fraternities and sororities and participation in activities should be related and reflect positive attitudes toward recognition gained from participation in collegiate life, these variables showed only a low relationship.

14. Intelligence, knowledge concerning the field of labor-management relations, number of jobs held, scores on the Economic scale of the Occupational Attitudes Rating Scales, attitudes toward strictness of parents, the subject's class rank and number of quarters in college, the subject's age and sex, and parents' education and occupation were all unrelated to opinion change scores.

Conclusions

Much of the previous effort in the field of communication research has been directed at investigations of the types of arguments and appeals used in propaganda, the subject's attitudes toward the topic of the propaganda, the speaker's trustworthiness and the characteristics of the individuals who change their opinions as a result of suggestion. The principal purpose of the present research is
to investigate the role which the communicator plays in inducing an opinion change and the relationship of communicator stimulus characteristics to the attitudes of the audience.

The basic theoretical orientation offered here is that before an individual will change his opinion with respect to a given object or subject, he must be motivated to do so. The motives which mediate such a change will vary from individual to individual and from one communication situation to another. We assume that the various acquired motives of the individual which would motivate such a change depend upon stimuli for their arousal. Thus, while an individual may possess positive attitudes toward status, these would not be aroused unless the stimuli toward which these attitudes are directed are present.

On the basis of this assumption, we would predict that a status-seeking individual who is presented with a communication from a status figure would change his opinion due to the arousal of this particular motive. If the individual does not possess positive attitudes toward status, other things being equal, we would predict that he would not change his opinions concerning the subject matter area covered by the communication. Other factors, of course, such as those mentioned in the first paragraph of this section, will complicate the picture. It seems reasonable to assume that the communicator does play this motive-arousing
part in opinion change.

The hypothesis offered and refuted elsewhere under different conditions (25), that positive attitudes toward the communicator have the effect of increasing the attention of the audience and thereby increasing the learning of the arguments supporting an opinion change, is again refuted here. We find no significant differences in the recall scores of the high and low prestige groups despite the fact that a significantly greater number of individuals in the high prestige group changed their opinions in the proper direction than was the case in the low prestige audiences. Subsequent analysis which compared those who made a marked opinion change as opposed to those who did not reveal correlations with recall test scores of 0.09 and -0.13 for the high and low prestige groups respectively. As neither of these correlations is significant, we may conclude that the difference in the two communicators had little effect upon the learning of the communication content. Thus, the function of the communicator under these conditions does not appear to be one of attention-getting with a resulting increase of opinion change because of greater learning of the arguments presented.

The present research supports, to some extent, the general thesis proposed as to the role of the communicator in inducing an opinion change. We find that when a college senior makes the address, instruments tentatively identified
as measures of attitudes toward recognition-gain from collegiate life and activities are positively related to opinion change. This would seem to support the hypothesis that positive attitudes which mediate opinion change are aroused by the communicator. At the same time, scores on the Status Attitude Scale are positively related to opinion change in the low prestige group. This, plus the high evaluation of the speaker's qualifications made by the audience and the fact that he is supposedly making a radio address, might be interpreted as due to the arousal of status-seeking motives of the audience.

The fact that none of the variables identified as measures of attitudes toward collegiate activities is related to opinion change under high prestige suggestion supports our analysis also. The communicator stimuli are such as to be unrelated to these attitudes. The communicator is an authority in the field, author, lecturer and labor mediator. We would expect that opinion change scores would be related to positive attitudes toward status, inasmuch as the communicator certainly possesses numerous high status characteristics. The lack of relationship found for the high prestige audiences has been interpreted here as due to the negative correlation (-0.42) between pro-labor attitudes and positive attitudes toward status. Apparently some of the status-seeking individuals are motivated to accept what the communicator recommends - a shift in opinion in
favor of unions. Others, however, may either reinterpret what he says to fit into their already held anti-labor attitudinal system, or may suspect the communicator's motives or actual existence and thereby make possible the maintenance of their anti-labor attitudes. The net result of these different reactions to the communicator is to reduce the expected positive relationship between status attitude scores and opinion change scores under high prestige suggestion to zero. This interpretation, of course, should be tested by further research involving a change in the direction or topic of the communication. Under these conditions of congruence of attitudes toward the communication and the communicator, we would expect a positive relationship between opinion change and status attitudes.

The lack of relationship of the other individual and demographic variables to the criterion serves to highlight the fruitfulness of the present approach. Rather than deal with these relatively static variables such as age, sex and the like, it appears more profitable to examine the communicator stimuli, the content of the communication and the motivational variables operating in the situation. This approach should yield sufficient data for an adequate theory of communications.

**Implications for Future Research**

The results of the present investigation suggest a number of further interesting studies. First, we repeat that an
additional study is necessary to check on the hypothesis that the failure of the Status Attitude Scale to correlate with opinion change is due to the rejection of the communication and/or the communicator because of a clash or imbalance of two attitudinal systems. A study involving a change in the direction of the communication or its general topic would, according to the hypothesis offered here, result in a positive relationship between these two variables. Included in this investigation should be another comparison of the effects of increasing the audience's anticipation of reinforcement by promising that the communicator will appear to get their "personal reactions." It is quite possible that the use of cutting scores made necessary by the marked heterogeneity of the sample masked any possible effects of this manipulation. A replication therefore should involve the use of subjects from a restricted range of neutrality on the Labor Attitude Scale.

Following the investigation just proposed and the development of attitude scales which contain single factors, we could select our subjects for experimentation on the basis of strong positive or negative attitudes toward the communicator and the communication. We could then use more precise experimental designs and have to rely less heavily on correlational techniques. By manipulating one or both of these variables, we might then be able to determine more precisely the role which these factors play in opinion change.
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APPENDIX A

INSTRUMENTS USED IN THIS STUDY
EXHIBIT A:  
LABOR ATTITUDE SCALE (HEPLER)

PRELIMINARY REMARKS:

The purpose of this questionnaire is to determine the importance of some of the issues in the field of labor-management relations today, as well as to determine the positions that various groups take on these issues.

In filling out this questionnaire, it is extremely important that you answer them according to your own ideas on the subject and not as someone else thinks about it or the way that you think it should be answered.

The answers you give will be held confidential and will be used only as one of many in a large group.

MARKING THE QUESTIONNAIRE:

On the following pages, you will find various statements concerning one phase or another of an issue of present day labor-management relations. On the answer sheet are columns marked 1-5. If you mark in column:

-5- It means that you fully agree with the statement; that this statement fully represents or expresses your attitude on the issue involved.

-4- It means that you partially agree with this statement; that you stand on the middle of the road on this issue; that you don't know what it means.

-2- It means that you partially disagree with the statement; that you believe it to be more wrong than right.

-1- It means that this statement read opposite to your attitudes on this issue; that you definitely disagree with the statement.

Please fill in the space which most clearly represents your attitude about each statement. Be sure that you make only one mark beside each statement. Please do NOT mark this question booklet in any way.
1. Union leaders are more interested in their own financial welfare than in the worker's financial welfare.

2. It would be possible to raise wages without raising prices.

3. White collar workers should not be allowed to unionize.

4. Unions should not meddle in politics.

5. In a piece-rate system of payment, management should be allowed to set the piece rate since they have hired experts in the field to do the work.

6. The rank-and-file union members would sooner do without a union but consider it a necessary evil.

7. The union should be given equal representation with management on the Board of Directors.

8. Communists have infiltrated into and hold policy-making jobs in most unions.

9. The union should help management set the pricing policy of the company.

10. There will be no ends to union demands until they are in complete control of industry.

11. The actions of top union officials are more for their own benefit than for the worker's.

12. A closed shop is beneficial to the worker.

13. If the present high tax on corporations continue, it will eventually bring about the downfall of the free enterprise system.

14. John L. Lewis has gained much for his men, but most of the gains have been at the expense of the public.

15. The recent spiral in prices is due to price hikes on the part of management after which the unions demand pay hikes to keep up with the increased cost of living.

16. Unions will eventually bring about the downfall of the free enterprise system.

17. Foremen should not be unionized since they are a part of management.
18. There is no reason why high union officials should not be paid as much as high management officials.

19. The Democratic Party is being taken over by the unions and will soon be the Labor Party.

20. Unions are hastening the trend toward a socialistic form of government in the United States.

21. Strikes should be outlawed since everyone loses when a strike is called.

22. Some of the unions' power should be taken away from them.

23. The union is not interested in power itself but only in protecting the welfare of its members.

24. The motives governing the action of top union officials are prestige and financial gain, and not the welfare of the worker.

25. Labor controlled the Truman administration.

26. Unions are more to blame for inflation than are managements.

27. The higher standard of living that is enjoyed by the average American workingman today would have come about without the aid of unions.

28. Communications to the worker on plant affairs should be the joint responsibility of both unions and managements.

29. Unions weaken individual initiative.

30. Any changes in personnel procedures should be worked out in joint conferences between both union and management officials.

31. In all probability, managements will someday break all unions since they do not fulfill any duty which cannot be fulfilled by management itself.

32. Unions should lobby for labor legislation.

33. Management must preserve the sole right to govern the company's pricing policy if industry is to survive.

34. Union demands of excessive wage increases are primarily responsible for the large increases in prices.
EXHIBIT A (CONTINUED)

35. The unions no longer represent the interests of the workingman but that of top union officials.

36. Individual initiative is more important than collective security.
College Form

Below are presented some aspects, activities, and situations found in occupations. They are arranged in groups of four, and you are asked to rank the four choices in each group in order of your preference, from (1) first choice to (4) fourth choice.

Example:

1. eating meat
2. eating spinach
3. eating fruit
4. eating meat

First, read all four items in a group. Decide which you like most, and mark a line through (1) on the answer sheet for that item. Then mark your second choice (2), and your third choice (3) in the appropriate space on the answer sheet. Finally, mark a line through (4) on the answer sheet for the one you like least. Fill in the space completely, but do not make stray marks on the answer sheet as they are scored electrically.

Do NOT mark this page in any way.

1. make big money
2. heavy responsibilities
3. using mathematics
4. initiate group activity
5. recognition for achievement
6. a methodical approach
7. help the unfortunate
8. economic security
9. working with theory
10. change people for the better
11. regular salary
12. looked up to in the community
13. being patient with people
14. using hands skillfully
15. be able to assert yourself
16. easy to find employment
17. quick financial returns
18. help others to help themselves
19. an orderly routine
20. achieve something on your own
21. being good in your work
22. being highly respected
23. being prosperous
24. being well-liked
25. using tools skillfully
26. improve social conditions
27. provide leadership
28. regular hours
29. influence people's lives
30. glamor and excitement
31. working in privacy
32. be the "top man"
33. not much responsibility
34. room for self expression
35. attention to details
36. be of service to others
37. not take orders from above
38. working with figures
39. hearing people's troubles
40. lots of overtime pay

41. make a name for yourself
42. earn fat bonuses
43. right social wrongs
44. scientific method

45. getting ahead rapidly
46. taking the initiative
47. systematic planning
48. provide help and guidance
EXHIBIT C

COMMUNICATOR MEASURES

The following questions refer to your reactions to the speaker's address. Answer the questions on the same answer sheet, but do NOT change any of your answers on the preceding part after you have started on this page. In each case, select the alternative which best describes your reactions.

37. Did you feel that the speaker was qualified to talk about this topic? (1) very poorly qualified; (2) fairly poorly qualified; (3) about average or undecided; (4) fairly well qualified; (5) very well qualified.

38. Do you think that the issues he raised were related to the topic? (1) definitely unrelated; (2) more unrelated than related; (3) about even or undecided; (4) more related than unrelated; (5) definitely related.

39. Do you think that he was fair in his presentation? (1) very fair; (2) more fair than unfair; (3) about even or undecided; (4) more unfair than fair; (5) very unfair.

40. Do you think that this address had any effect on your attitude toward unions? (1) a definitely favorable effect; (2) a slightly favorable effect; (3) very little or no effect; (4) a slightly unfavorable effect; (5) a definitely unfavorable effect.
EXHIBIT D

CONTENT TEST

Answer the following questions as if each statement were preceded by: "According to the speaker..."

1. An important factor in the increased proportion of non-managerial employees has been: (1) an increase in the number of small businesses; (2) an increase in job specialization; (3) an emphasis on higher education; (4) an increase in the total number of employees.

2. Eighty years ago, what proportion of the working population was included in the self-employed and managerial group? (1) one-fifth; (2) one-fourth; (3) two-fifths; (4) one-half.

3. Approximately what proportion of the working population is classified as employees today? (1) 60%; (2) 70%; (3) 80%; (4) 90%.

4. Of all employees, what proportion is classified as managers? (1) 1%; (2) 3%; (3) 5%; (4) 10%.

5. Sixty years ago, approximately what percent of the people between 14 and 17 years were going to high school? (1) 5%; (2) 10%; (3) 15%; (4) 20%.

6. According to a study conducted in New England during 1947, with increased years of schooling a worker is more likely to express a strong desire for: (1) more authority; (2) decent treatment; (3) interesting work; (4) economic security.

7. Which of the following was NOT a reason given by the speaker for an increase in job dissatisfaction? (1) job specialization; (2) loss of individuality; (3) loss of control over one's work; (4) increased difference between wages and what they can buy.

8. Which of the following is NOT one of the four strong human desires listed by the speaker? (1) economic security; (2) opportunities for leadership; (3) decent treatment; (4) a chance to better oneself.

9. The Director of the Opinion Research Center at Princeton University is: (1) George Gallup; (2) Richard Centers; (3) Clark Hull; (4) Elmo Roper.

10. In the study which compared the job desires of workers with those of professional and managerial groups, workers listed as of first importance, the desire for: (1) freedom from supervision; (2) opportunities for leadership; (3)
security; (4) opportunities for self-expression.

11. In contrast to this, the professional managerial group stressed as most important: (1) opportunities for self-expression; (2) security; (3) freedom from supervision; (4) opportunities for leadership.

12. The study mentioned in the preceding two questions was conducted by (1) Elmo Roper; (2) Richard Centers; (3) George Gallup; (4) Robert Franz.

13. The speaker sees the union as an instrument for giving the worker: (1) higher wages; (2) shorter hours; (3) some control over his working life; (4) more interesting work.

14. Workers give many reasons for joining unions. Pay or better wages is usually given as: (1) first; (2) third; (3) fifth; (4) eighth.

15. Approximately how many people are eligible to join a union? (1) 30 million; (2) 50 million; (3) 70 million; (4) 90 million.

16. Of this number, what proportion are already union members? (1) one-fourth; (2) one-third; (3) one-half; (4) two-thirds.

17. The name of the speaker was: (1) Richard Centers; (2) Paul Ross; (3) Thomas Robinson; (4) Frank Roberts.

18. At the time of the recording, the speaker was at the: (1) University of Pennsylvania; (2) Ohio Wesleyan University; (3) Princeton University; (4) University of Michigan.

19. The name of program was: (1) University Symposium; (2) The Campus Speaks; (3) Campus Roundtable; (4) University Forum.

20. The title of the address was: (1) Management and Unions; (2) Psychology of the Worker; (3) Social Forces in Labor; (4) Unions and Industrial Democracy.
EXHIBIT E

INFORMATION TEST

Choose the best answer. If you are not sure, guess. Answer every question.

1. Which of the following was the earliest labor union organization in the United States? (1) Knights of Labor; (2) American Federation of Labor; (3) Congress of Industrial Organizations; (4) International Labor Organization. P = .68

2. The first Secretary of Labor under the Eisenhower administration was (1) Martin Durkin; (2) Francis Perkins; (3) Samuel Gompers; (4) Eugene V. Debs. P = .66

3. A shop steward is a representative of (1) the local union; (2) the national union; (3) the Personnel department; (4) management. P = .57

4. The president of the United Mine Workers is: (1) Phillip Murray; (2) John L. Lewis; (3) Samuel Gompers; (4) Herbert Brownell. P = .89

5. The "check-off" system is used in: (1) checking on the worker's attendance on the job; (2) periodic physical examinations; (3) strike votes; (4) deducting dues from the worker's pay. P = .48

6. The present president of the C.I.O. is: (1) John L. Lewis; (2) Walter Reuther; (3) Phillip Murray; (4) Martin Durkin. P = .36

7. Unions were first established in the United States about: (1) 1800; (2) 1825; (3) 1850; (4) 1875. P = .08

8. Which of the following unions would best be characterized as a craft union? (1) United Mine Workers; (2) International Union of United Brewery Workers; (3) United Automobile, Aircraft and Agricultural Implement Workers of America; (4) Marine Engineers' Beneficial Association. P = .26

9. The First Federal law to guarantee labor's right to engage in collective bargaining was the: (1) Taft-Hartley Act; (2) Clayton Act; (3) Norris-Laguardia Act; (4) Wagner Act. P = .44

10. The first president of the American Federation of Labor was: (1) Phillip Murray; (2) John L. Lewis; (3) Eugene V. Debs; (4) Samuel Gompers. P = .74
11. Noncommunist affidavits must be filed by union leaders under the provisions of the: (1) Wagner Act; (2) Taft-Hartley Act; (3) McCarran Act; (4) Clayton Act. P = .41

12. Federal minimum wage laws require that employees working for organizations engaged in interstate commerce must be paid a minimum hourly rate of: (1) $.50; (2) $.60; (3) $.75; (4) $1.00. P = .70

13. Which of the following statements is TRUE? Strike votes: (1) must be supervised by the Federal government; (2) must be supervised by the state government; (3) must be supervised by the local government; (4) are supervised by the union. P = .82

14. The U.A.W. is affiliated with the: (1) A.F. of L.; (2) C.I.O.; (3) U.M.W.; (4) I.L.U. P = .48

15. I.W.W. stands for: (1) Industrial Workers of the World; (2) Individual Workers of the World; (3) International Welding Workers; (4) Industrial Welding Workers. P = .48

16. During depressions (before 1925) union membership tended to: (1) increase a great deal; (2) increase slightly; (3) decrease a great deal; (4) decrease slightly. P = .42

17. The law which first made "yellow-dog" contracts illegal was the: (1) Taft-Hartley; (2) Wagner; (3) Norris-LaGuardia; (4) Clayton. P = .34

18. A principal difference between the Wagner Act and the Taft-Hartley Act is that the Taft-Hartley Act: (1) added several new employer unfair practices; (2) added several new union unfair practices; (3) outlawed any closed-shop agreements; (4) established the National Labor Relations Board. P = .28

19. Under the Taft-Hartley Act, which of the following types of employees may NOT join unions? (1) machinists; (2) clerical workers; (3) truckers; (4) foremen. P = .47

20. Under the Taft-Hartley Act, if either employer or the union wants to change or end the agreement, he (they) must give the other how many days notice? (1) 2 weeks; (2) 30 days; (3) 60 days; (4) 90 days. P = .25
EXHIBIT F

STATUS ATTITUDE SCALE

The following statements are concerned with your attitudes and opinions. There are no right or wrong answers. You are simply expressing your own opinion on each statement. Please fill in the appropriate blank on the answer sheet.

"5" means you definitely or strongly agree
"4" means you agree somewhat or tend to agree
"3" means you are undecided or in between
"2" means you disagree somewhat or tend to disagree
"1" means you definitely or strongly disagree

1. Those who have a larger investment in an enterprise ought to have greater power in determining policy.
2. In America, there are too many people in the lower social and economic brackets.
3. Differences in prestige among the various occupations should be reduced.
4. Social clubs which restrict membership on a racial basis ought to be considered as being against American principles.
5. People of about the same social or economic position ought to pretty much mingle with their own kind.
6. For men to do their best there must be a possibility of earning a higher reward than the next fellow.
7. The army system of keeping the officers and enlisted men pretty distinct was not a bad thing during the war.
8. It would avoid awkwardness and embarrassment if people who are qualified to use certain titles (e.g. an M.D. or Ph.D.) would do so regularly.
9. In most organizations the by-passing of lines of authority ought not to be permitted.
10. The incomes of most people are a fair measure of their contribution to human welfare.
11. Differences in rank within an organization should be kept clearly before the members to increase their incentive to do good work and rise within the organization.
12. It is unwise to try to run a business on a completely democratic basis where all members have an equal voice in the making of decisions.
13. High social or economic position in America are a pretty good sign of an individual's superior ability or efforts.
14. It is better to set a high ranking position as one's goal and fall short of it than to set a moderately low one and achieve it.
15. Differences in rank among people are o.k. since they are chiefly the result of the way individuals have made use of the opportunities open to them.

16. We ought to encourage competition between individuals since this is one of the most important ways in which progress is made.

17. We should not be too concerned if there are many people in low positions in our society since most of them do not want the responsibility of higher positions.

18. If all the money in the United States were equally distributed among all the population, sooner or later it would be back in just about the same hands it is now due to the superior ability of some individuals.
EXHIBIT G

BIOGRAPHICAL INFORMATION

Name _____________________________________________

A. Family Background:

1. Father's occupation: (If father deceased, give former occupation)
   a. Name of company _____________________________________________
   b. Type of business _____________________________________________
   c. Position held ________________________________________________
   d. Is (or was) he a labor union member? Yes___ No ______

2. Mother's occupation: (If mother is deceased, give former occupation)
   a. Name of company _____________________________________________
   b. Type of business _____________________________________________
   c. Position held ________________________________________________
   d. Is (or was) she a labor union member? Yes___ No ______

3. Parents education: (Check one of the following for your father and one for your mother)

<table>
<thead>
<tr>
<th>Father's Education</th>
<th>Mother's Education</th>
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<tbody>
<tr>
<td>Did not finish 8th grade</td>
<td>Did not finish 8th grade</td>
</tr>
<tr>
<td>Finished 8th grade</td>
<td>Finished 8th grade</td>
</tr>
<tr>
<td>Some high school - didn't graduate</td>
<td>Some high school - didn't graduate</td>
</tr>
<tr>
<td>Graduated high school</td>
<td>Graduated high school</td>
</tr>
<tr>
<td>Some college - didn't graduate</td>
<td>Some college - didn't graduate</td>
</tr>
<tr>
<td>Graduated college</td>
<td>Graduated college</td>
</tr>
<tr>
<td>Postgraduate work - no advanced degree</td>
<td>Postgraduate work - no advanced degree</td>
</tr>
<tr>
<td>Postgraduate work - advanced degree</td>
<td>Postgraduate work - advanced degree</td>
</tr>
</tbody>
</table>

4. Brothers and Sisters:
   a. Number of older brothers and sisters (do NOT count yourself) ______
   b. Number of younger brothers and sisters (do NOT count yourself) ______

(If none for either (a) or (b), write "none")
5. Pick one statement which best describes your attitude toward your parent treatment of you when you were young (check one):
   a. They were very strict with me
   b. They were more strict than the average parents
   c. They were as strict as the average parents
   d. They were more lenient than the average parents
   e. They were very lenient with me

B. Educational Background:
1. Number of quarters in college (include other colleges, but not junior colleges)

2. Class rank in quarters: (Circle one)
   1 2 3 4 5 6 7 8 9 10 11 12 Spec. Grad.

3. List the extracurricular (nonfraternity or sorority) activities in which you have engaged at OSU. Indicate any office(s) now or previously held in the space after each.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>OFFICE(S)</th>
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</thead>
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</tbody>
</table>

4. Are you a member of a fraternity or sorority (other than professional or honorary)? Yes ___ No ___

   Name of fraternity or sorority

5. List the office(s) held (now or previously) in fraternity or sorority.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Office(s)</th>
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C. Work Experience:
1. At what age did you hold your first full- or part-time job? 
   (DO NOT include employment with family members) (If none, write none)

2. List jobs you have held:
3. Are (or were) you a labor union member?   Yes ___ No ___
What labor union? ________________________________

D. Personal Information:
1. Age at last birthday ______
2. Sex: Male_____ Female_____
EXHIBIT H

SCORING INSTRUCTIONS FOR BIOGRAPHICAL INVENTORY

Item 1. Father's occupation:
   4- Professional, managerial
   3- White collar, sales
   2- Skilled labor
   1- Semiskilled and unskilled labor
   0- None

Item 1d. Father's union membership
   1- Yes, he is (was) a union member
   0- No, isn't (wasn't) a union member

Item 2. Mother's occupation
   4- Professional, managerial
   3- White collar, sales
   2- Skilled labor
   1- Semiskilled and unskilled labor
   0- Housewife and none

Item 2d. Mother's union membership
   1- Yes
   0- No

Item 3. Parent's education: (Scoring is the same for both parents)
   0- Did not finish 8th grade
   1- Finished 8th grade
   2- Some high school - didn't graduate
   3- Graduated high school
   4- Some college - didn't graduate
   5- Graduated college
   6- Postgraduate work - no advanced degree
   7- Postgraduate work - advanced degree

Item 4. Number of brothers and sisters
   Scored on basis of N - (not used)

Item 5. Attitude toward parental treatment:
   5- Very strict
   4- More strict than average
   3- As strict as average parents
   2- More lenient than average
   1- Very lenient

Item 81. Number of quarters in college
   Scored on basis of N (0-12)
EXHIBIT H (CONTINUED)

Item B2. Class rank in quarters
    Scored on basis of class rank (0-12)

Item B3. Extracurricular activities and offices held therein:
    Scored on basis of N.

Item B4. Membership in fraternity or sorority
    1 - Yes
    0 - No

Item B5. Offices held in fraternity or sorority:
    Scored on basis of N

Item C1. Age of first full-time employment:
    Scored on basis of age. If had not been employed
    at time of study, age at graduation was estimated
    by adding number of years until graduation to
    present age. (Not used)

Item C2. Jobs held
    Scored on basis of N

Item C3. Subject's union membership:
    1 - Yes
    0 - No

Item D1. Age at last birthday
    Scored on basis of age

Item D2. Sex
    1 - Female
    0 - Male
APPENDIX B

COMMUNICATION AND COMMUNICATOR INTRODUCTIONS
EXHIBIT I

INTRODUCTION FOR HIGH PRESTIGE COMMUNICATOR

Today, we are fortunate to have with us. Dr. Frank Roberts of the University of Pennsylvania. Dr. Roberts is well known to those in the field of labor-management relations as an outstanding author and lecturer on labor economics. Besides his academic training, Dr. Roberts has had considerable experience as a consultant not only for business, but also for the government, as an advisor to the National Labor Relations Board. In addition, he has participated in a number of major negotiations between labor and management as a representative of the American Arbitration Association, a group of experts in the field who are called in jointly by both labor and management to help bring about a fair and equitable solution to their problems.

Today, Dr. Roberts will speak to us on the subject of: Unions and Industrial Democracy. Dr. Roberts-------

(Roberts speaks here---"can we ever hope to approach industrial democracy.")

You have been listening to an address by r. Frank
Roberts, author, lecturer and authority in the field of labor-management relations. A member of the American Arbitration Association and at present teaching at the University of Pennsylvania, Dr. Roberts has been speaking to us on the subject: Unions and Industrial Democracy.

Tune in next week to your University Forum when we will present another leader from an American University to speak to us on one of the vital issues of the day. This is your announcer, Bob Richardson.
INTRODUCTION FOR LOW PRESTIGE COMMUNICATOR

ANN. This is your University Forum. Another in a series of addresses by leaders from various universities on important political, social and economic issues.

Today, we are fortunate to have with us a senior from Ohio Wesleyan University, Paul Ross. Mr. Ross has been interested in the field of labor-management relations. Although his training has been entirely academic he plans a career in labor-management relations following graduation.

Today, Mr. Ross will speak to us on the subject: Unions and Industrial Democracy. Mr. Ross-------

(Ross speaks here ------" can we ever hope to approach industrial democracy.")

You have been listening to an address by Mr. Paul Ross, a senior at Ohio Wesleyan University. Mr. Ross has been speaking to us on the subject, Unions and Industrial Democracy.

Tune in next week to University Forum when we will present another leader from an American university to speak to us on one of the vital issues of the day.

This is your announcer, Bob Richardson.
The growth of large-scale industry, large corporations and the trend toward job specialization has created a variety of social and psychological problems. These problems exist not only in the administration of employees and production in industry, but also in the reactions of the individual worker to the work setting.

Before we can go into a discussion of unions and industrial democracy, we must first examine the worker's characteristics, his wants and desires, and what needs are unfulfilled. We must also find out who is included under the term employee or worker.

Labor issues are of primary importance in our daily economic life principally because so much of the population earns a living by selling its services. Where an individual works for himself or sells the product he makes, labor problems do not exist. Eighty years ago, the self-employed and managerial group comprised two-fifths of the nation's working population, but today they make up only one-fifth. The majority of the self-employed, however, are engaged in agriculture. We see then, that 92% of our working population are classified as employees. And of all employees, only 5% are classified as managers.
With more and more people getting an advanced education, the competition for managerial positions is getting tougher. Whether you go into sales or production, your chances of being an employee are increasingly greater.

This would not be important if it were not for the fact that a significant psychological line exists between the worker and manager in industry. The worker, who may be anything from a common laborer, to a skilled craftsman, a white-collar worker, or a salesman, usually exercises no managerial authority at all. He often performs the routine work, does his duties under the direction of a boss, is told what to do, how to do it, where to do it, and when to do it. Most of the thinking and planning is done in the managerial ranks, from foreman on up to corporation president. The fact that a dividing line does exist with respect to governing, planning and thinking is very significant psychologically.

Sixty years ago, this dividing line was less important, when less than 6% of the people between the ages of 14 and 17 were going to high school. Now, however, more and more of the population is going to school. Just what relationship exists between education and work? A study conducted in New England during 1947 showed that with more years of schooling, a worker is more likely to express a strong desire for interesting work. More than ever before, we are beginning to hear the term, industrial democracy, and also hear complaints against employer paternalism. When the
EXHIBIT K (CONTINUED)

individual, through education, has increased his potential to govern his own life he becomes more resentful of management domination during working and nonworking hours.

Employee dissatisfaction has also tended to increase as jobs have become more and more specialized and factories have become larger and more impersonal. In very large factories, jobs have been narrowed down to what has been called the "simplest element" of the job. This may mean turning a bolt on an endless number of parts as they come by on the assembly line. Orders come down from above and the worker is more and more separated from the real decision-makers. All of these things mean that we have a loss of individuality, loss of control over one's own work, and loss of independent thinking. Too often, we underestimate what the worker is capable of and force him into a mold which makes him very uncomfortable.

A few years ago, Elmo Roper, the Director of the Opinion Research Center at Princeton University, conducted a series of surveys of people in all walks of life. On the basis of these studies, he concluded that there are four very strong human desires relevant to our discussion.

1. Economic security, which includes stable employment at good wages with protection from arbitrary dismissal.

2. A chance to better oneself. This refers to a desire
for the opportunity to advance both for oneself and for one’s children.

3. Decent treatment, which refers to a recognition of the dignity of the individual.

4. A sense of community contribution, or the feeling that one is performing something that society wants done.

Generally, people want to fulfill all of these desires, not just one or two.

In the light of these four strong human desires, let us now look at another study. Dr. Richard Centers compared job desires of workers with those of professional and managerial groups. Unskilled and semiskilled workers listed as of first importance, security, then freedom from supervision, and then the possibilities for self-expression. Contrast this with the answers of the professional-managerial group regarding their jobs. They stressed self-expression, then interesting experience and leadership and completely ignored security and freedom from supervision. But we have just said that people want to fulfill all of these desires. It would appear that these two desires are ignored by the higher level group because these desires are already satisfied. Freedom from supervision as well as security seems to be an important need for the worker and would not be emphasized by him, if it were not for the fact that this desire is not satisfied.
But what does all this have to do with unions? Just this: the union, for the worker, is an instrument which makes it possible for him to have some control over his own working life. He cannot exert this control alone without endangering his position, and even if he does, his single voice would have little effect compared to that of the union. Although the physical, social and supervisory conditions in the plant are of vital concern to the worker, they are mostly laid out for him in advance. He has little, if any, voice in the matter. Yet he must spend most of his waking hours in this situation. In accepting employment, he joins a social, psychological and productive group about whose purposes and policies he has little to say.

Well, is this so different from the university or the classroom situation? You as students sit in a classroom where the teacher is selected by some higher authority, the subject matter is chosen by that teacher or someone above him, the way in which the course is taught is decided by someone else, and the method of remuneration - in this case grades - is decided by someone else.

"But this is the way things must be," you say. "We are students and not qualified to take part in these decisions. The decisions are made by experts." Are you sincere in saying that you cannot make any contribution? I am sure that you can think of many instances in which the contributions of students in the classroom have made all the difference be-
tween an effective, stimulating course and a dull, ineffective one. Don't underestimate yourselves as learners and don't belittle the contributions you can make.

Supposing you are dissatisfied with your classroom and extracurricular life. Most universities have a student government which has jurisdiction over many important areas of student life. In many instances, these organizations exert a great deal of influence in determining the rules under which the individual must live. Some universities, under the student government, have a means of evaluating instructors and proposing new courses that would fit the needs of the individual student better. Others have students courts which make all decisions on disciplinary problems. In many instances, students govern almost all of the extracurricular activities and even serve in an advisory capacity on important faculty committees.

In the case of the worker, this need for some means of expressing his opinion is even more accentuated. Here we have people with a formal education, which may be 8 grades at a minimum, but may go as high as work for advanced degrees. In addition, these people have had a number of years of experience in the working situation. They know their job, they know its problems. They can—and should—be able to make a contribution. The union provides a channel for expression which management could not provide, just as your student government provides a channel for expression which
the administration, through your advisor, could not provide. Without such a channel for expression, democracy is preached but not practiced.

It is my contention that the union is a means by which the strong desires of the worker mentioned previously may be satisfied and by which he has a voice in the governing of his working life. It is extremely naive to believe that a worker joins a union and pays his dues just so that he can get better wages. A number of careful investigations have dealt with this problem, and we repeatedly find that wages are placed well down on the list of reasons, usually about 5th or 6th. Persons from middle- and upper-class backgrounds tend to overestimate the effectiveness of wage incentives upon the worker, and to underestimate the motivating power of these other desires.

The average person fails to understand the issues involved in the lengthy labor-management negotiations. Examine a union contract and you will see that the clauses referring to wage structure and methods of bargaining make up only a small part of it. Other clauses deal extensively with such things as vacations, sick leave, seniority, grievance procedures for disciplining workers and similar issues. Much of the contract may be concerned with establishing the union's position so that it can satisfy these basic needs. If its position is not firm, it cannot adequately serve as a chan-
nel of expression for the worker.

Whether or not you ever become a union member, it is important for you to recognize the motives of the worker which he hopes to satisfy in joining a union. The union very often serves as a means of satisfying or guaranteeing the satisfaction of these four very important desires: economic security, a change to better oneself, decent treatment, and a sense of community contribution. You may become a member of management and as such, be put in a position where you must deal with union representatives. The chances of this are pretty great. Of the 50 million people eligible to join unions, about one-third are union members. By understanding the motives of the employes and by recognizing that the union is a means for satisfying these motives, you will be better able to promote mutual understanding.

The union gives the worker an opportunity to voice his opinion in the regulation of his working life - a most important part of his life. Only where the worker has this opportunity to voice his opinion can we ever hope to approach industrial democracy.
I, Paul William Thayer, was born in Birmingham, Alabama, July 18, 1927. I received my secondary school education in the public schools of the borough of Swarthmore, Pennsylvania. My undergraduate training was obtained at The United States Merchant Marine Academy, from which I received the degree Bachelor of Science in Marine Engineering in 1948. In addition, from the Pennsylvania State University, I received the degree Bachelor of Science in Psychology in 1950. During the year 1950-51, while in residence at The Ohio State University, I acted as Graduate Assistant in the Department of Psychology. During the Summer of 1951, I was appointed Research Assistant at the Personnel Research Board. In the Autumn of 1951 I received the appointment of Assistant in the Psychology Department at The Ohio State University and taught elementary psychology courses. I continued in this position, and later in the position of Assistant Instructor, while completing the requirements for the degree Doctor of Philosophy.