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THE EFFECT OF EXPECTANCY ON ATTITUDE CHANGE IN COMMUNICATION

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THE EFFECT OF EXPECTANCY ON ATTITUDE CHANGE IN COMMUNICATION

CHAPTER I

INTRODUCTION

Scholars of communication from ancient to modern times have recognized the impact of the speaker's character in effecting persuasion. While the studies of communication have separated the source from the message for purposes of examining traits that are unique to each, the partition is difficult to handle in actual communication situations. From the vantage point of a listener, the source of a message and the message are an entity--the second being an extension of the first.

Classical rhetorical theorists recognized the interaction of source and message and have both described and prescribed techniques and traits which a speaker can use to enhance the effectiveness of his speech. Originating with Aristotle and still widely used by communication theorists, the term ethos has been assigned to the type of proof which is found in the character of the speaker.

Aristotle recognized three modes of artistic proofs which belong to the art of rhetoric. Ethos is one of these. He writes:

Persuasion is achieved by the speaker's personal character when the speech is so spoken as to make us think him credible. We believe good men more fully and more readily than others: this is true generally whatever the question is, and absolutely true where exact certainty is impossible and opinions are divided.

This kind of persuasion, like the others, should be achieved by what the speaker says, not by what people think of his character before he begins to speak. It is not true, as some writers assume in their treatises on rhetoric, that the personal goodness revealed by the speaker contributes nothing to his power of persuasion; on the contrary, his character may almost be called the most effective means of persuasion he possesses.¹

Here Aristotle is reluctant to recognize the ethos or "reputation" that a speaker often brings with him from outside the communication situation; however, Aristotle's discussion of language provides an indirect handling of an ethos which deals with factors outside a specific communication situation. In other words, the speaker, in order to have his listeners think favorably of him, must display signs of genuineness that are unique to persons the audience thinks well of. Aristotle writes:

This aptness of language is one thing that makes people believe in the truth of your story: their minds draw the false conclusion that you are to be trusted from the fact that others behave as you do when things are as you describe them; and therefore they take your story to be true whether it is so or not. . . . This way of proving your story by displaying these signs of its genuineness expresses your personal character. Each class of men, each type of disposition, will have its own appropriate way of letting the truth appear. . . . By 'dispositions' I here mean those dispositions only which determine the character of a man's life, for it is not every disposition that does this. If, then, a speaker uses the very words which are in keeping with a particular disposition, he will reproduce the corresponding character; for a rustic and an educated man will not say the same things nor speak in the same way.²

Aristotle is obviously aware of the speaker and message interaction. Also, the speech and speaker are mutually interdependent; that is to say,

¹Rhetoric, tr. W. Rhys Roberts, in Aristotle, ed. F. Solmsen (New York: Modern Library Press, 1954), 1356a.

²Ibid., 1408a.

the speaker, by illustrating good character can enhance the effectiveness of his speech and, also, the speech, with the proper content, delivery techniques, etc., can enhance the speaker's character in the eyes of the audience.

In the Roman period, writers discussed the interaction of speaker and speech within a concept of the "ideal orator." While they used the term ethos, they also used other terms to refer to this interaction. For example, Cicero, referring to the forensic advocate, writes:

A potent factor in success . . . is the characters, principles, conduct and course of life of both of those who are to plead cases . . . and for the tribunal to be won over, as far as possible, to good will toward the advocate. . . . So much is done by good taste and style in speaking, that the speech seems to depict the speaker's character. For by means of particular types of thought and diction . . . speakers are made to appear upright, well-bred and virtuous men.³

Also writing during the Roman period, Quintilian states:

. . . being not only mild and placid, but for the most part, pleasing and polite, and amiable and attractive to the hearers; and the greatest merit in the expression of it, is that it [ethos] should seem to flow from the nature of the things and persons with which we are concerned, so that the moral character of the speaker may clearly appear, and be recognized as it were, in his discourse.⁴

Following the fall of the Roman Empire, rhetorical theorists propagated the basic concept of Aristotle's ethos, but often assigned different terminology to it. "Ethical," "character," "propriety," and "the becoming," are some of the names substituted for a similar concept;

³De Oratore, tr. E. W. Sutton (Cambridge, Mass.: Harvard University Press, 1942), I, 327-329.

⁴Institutes of Oratory, tr. John S. Watson (London: George Bell and Sons, 1891), VI, 423-424.

however, the concept remained largely as Aristotle had defined it.⁵

Following the Renaissance, the Aristotelian concept of ethos was clarified and expanded in the works of the eighteenth and nineteenth centuries. One of the many examples is in George Campbell's Philosophy of Rhetoric. Discussing the effect of speaker ethos on the success of the speech, he writes:

. . . for to be good is the only sure way of being long esteemed good, and to be esteemed good is previously necessary to one's being heard with due attention and regard.⁶

Here Campbell does not limit the effect of ethos to the immediate speaking situation, but expands it to include the entire reputation of the speaker as a good man. Campbell also recognizes the effect the speech might have upon the audience's estimation of the speaker. He states:

Sympathy in the hearers [approval of the speaker] may be lessened several ways, chiefly by these two: by a low opinion of his intellectual abilities and by a bad opinion of his morals.⁷

In contemporary times, the concept of ethos in the field of speech is still prominent. Modern rhetors reassert the "modes of ethical proof" which stem from the original Greek and Roman formulations.⁸ Modern researchers have subjected the concept to more rigorous empirical investigation, studying the interaction between the source of a message and the message. Some of the empirical studies of this concept will be

⁵William M. Sattler, "Conceptions of Ethos in Rhetoric" (unpublished Ph.D. dissertation, Northwestern University, 1941), p. 232.

⁶George Campbell, Philosophy of Rhetoric (New York: Harper and Brothers, 1871), p. 119.

⁷Ibid.

⁸Such as Donald C. Bryant and Karl R. Wallace, Fundamentals of Public Speaking (New York: Appleton Century Croft, Inc., 1959), p. 298.

discussed in Chapter II.

The concept of source and message interaction has practical as well as theoretical popularity. The politician and other speakers have long relied upon "I am against sin" speeches to enhance their "characters" before their audiences. Likewise, proponents of specific causes have long sought prestigious sources (the classical good man) to lend credence to their purposes. Kate Smith selling war bonds, John Glenn speaking for the Boy Scouts, President Johnson's election year "war on poverty" campaign, are but a few examples in which the cause benefits from its source or the source benefits from the concept he is associated with.

Most of the empirical studies of source credibility have been studies of the effect relative degrees of speaker influence have in the audience's acceptance of the content of the message. Relatively little research has been conducted to determine the effect of message content on the audience's acceptance of the speaker.

The interaction between source and message is the area which this study proposes to investigate. The study will deal with three general variables which may account for the largest portion of attitude change toward both source and the topic of a message. These variables are: (1) the expectancy of the recipient, (2) incongruency perceived by the recipient, i.e., the recipient's awareness of the difference between his attitudes toward the two major sources of stimulation (source and topic) in a communication event, and (3) the position (pro or con) supported by the source's assertion about the topic. The rationale of these variables will be developed in Chapter III and they will be defined below, along with other pertinent terms used in this paper.

Generally this study will partition the experimental audience into sixteen categories resulting from all possible combinations of the three major variables, i.e., (1) expectancy--recipients expecting a (a) favorable assertion or (b) an unfavorable assertion; (2) incongruency (or congruency)--resulting from attitudes measured prior to the communication event which are (a) favorable toward the source-favorable toward the topic, (b) favorable toward the source-unfavorable toward the topic, (c) unfavorable toward the source-favorable toward the topic, or (d) unfavorable toward the source and unfavorable toward the topic; and (3) the position supported by the assertion (a) favors the topic and (b) opposes the topic. Within and between the categories attitude change will be analyzed.

Definition of Terms

For purposes of clarity the most pertinent terms of this study will be theoretically defined and then operationally defined according to their use in this study.

Source. The source of an assertion is defined as the person to whom the recipient attributes the assertion. In this study, each assertion will be attributed to four different sources; therefore, the sources will be systematically manipulated by the experimenter.

Assertions. An assertion is defined as a message attributed to a source, which contains arguments and persuasive comments which are perceived by the recipient to either favor or oppose a given topic. In this study, the assertions are operationally defined as tape recorded messages identified as press releases.

Recipients. A recipient is defined as an individual who perceives

an assertion. Recipients for this study are students who served as experimental subjects.

Expectancy. The concept of expectancy will be of major concern to this study and is defined generally as an individual's prediction of conditions that will exist in a forthcoming event. Within the framework of communication theory, expectancy is defined as a recipient's prediction of the position a given source will support in an assertion about a given topic. In other words, if President Johnson was scheduled to speak on the topic "communism," most citizens of the United States would expect him to oppose the topic.

Expectancy is operationalized in this study by an indication from each experimental subject, prior to the communication event, whether they expect a given source to favor or oppose a given topic.

Incongruity. Several research programs in communication theory have been based on the human tendency to resolve perceived conflict by some form of psychological compromise. While the theories differ from each other in terms of the theoretical constructs or systems which attempt to explain or provide rationale for the occurrence of this phenomenon, all of the theories support the basic "strain toward symmetry" concept; that is to say, if the human organism perceives two objects or concepts which are in conflict, but which are related to each other in some meaningful fashion, the result of such perception is a psychological lessening of the conflict.

This lessening or resolution of psychological conflict has been assigned different terminology within different theoretical systems.

Some of the terms assigned are "dissonance,"⁹ "imbalance,"¹⁰ "conflict,"¹¹ and "inconsistency."¹² The authors of the various theories acknowledge the similarities between their theory and the theories of other writers; for example, Festinger states:

The notions introduced thus far are not entirely new; many similar ones have been suggested. It may be of value to mention two whose formulation is closest to my own. Heider, in an as yet unpublished manuscript /now in book form: The Psychology of Interpersonal Relations/, discusses the relationships among people and among sentiments. . . . If one replaces the word 'balance' with 'consonance' and 'imbalance' with 'dissonance', . . . /this work/ by Heider can be seen to indicate the same process with which our discussion up to now has dealt. . . . Osgood and Tannenbaum recently published a paper in which they also formulated and documented a similar idea with respect to changes in opinions and attitudes. . . . The particular kind of 'incongruity' or cognitive dissonance with which they deal in their study is produced by the knowledge that a person . . . supports an opinion which the subject regards negatively. . . . They proceed to show that under such circumstances there is a marked tendency to change either the evaluation of the opinion involved or the evaluation of the source in a direction which would reduce the dissonance.¹³

The similarity of basic concepts and the near synonymy of terms is readily apparent in Festinger's writing. Also, in Osgood, Tannenbaum and Suci's 1957 statement of their "congruity principle" they write:

The congruity principle appears to be a very general process operating whenever cognitive events interact. . . . So far our

⁹Leon Festinger, A Theory of Cognitive Dissonance (Evanston, Ill.: Row, Peterson and Company, 1957).

¹⁰F. Heider, "Attitudes and Cognitive Organizations," Journal of Psychology, XXI (April, 1946), 107-112.

¹¹T. Newcomb, "An Approach to the Study of the Communication Arts," Psychological Review, LX (1953), 393-408.

¹²Prescott Lecky, Self Consistency: A Theory of Personality (New York: Island Press, 1945).

¹³Festinger, A Theory of Cognitive Dissonance, pp. 8-10.

experiments have dealt mainly with congruity phenomena as they occur in language behavior, in the attitude area, in word meanings and in the aesthetics area. But it seems likely to us that congruity will also apply to overt behavioral situations, e.g., to changes in the like-dislike structure of interacting groups (sociometry and group dynamics) and to the interactions between individuals and objects in their environment. Using notions very much like these, Festinger (in a forthcoming book) has done many experiments in this behavioral area. Newcomb (1953) has also utilized similar notions in his theoretical analysis of interpersonal communication. The earliest expression of ideas dealing with 'congruity' in human thinking, at least in contemporary psychology, may be found in a paper by Heider (1946).¹⁴

Because the "incongruity" of Osgood, Tannenbaum and Suci is directly applied to communication (as stated in the citation above) and is defined within this context, the present study, rather than introduce still another set of terms, will incorporate their system (with some refinement). The rationale for the congruity principle is based on Osgood, Tannenbaum and Suci's mediational response theory of meaning which is set forth at length in The Measurement of Meaning and will not be discussed here.¹⁵ In defining incongruity within the context of communication, Osgood, Tannenbaum and Suci state that incongruity is perceived by a recipient when:

1. Favorable (or unfavorable) sources and topics are disassociated by a negative assertion linking them.
2. Oppositely evaluated signs (favorable source, unfavorable topic, or vice versa) are associated by a positive assertion.¹⁶

These two incongruent situations are based on the general assumption that:

¹⁴Charles Osgood, Percy Tannenbaum and George Suci, The Measurement of Meaning (Urbana: University of Illinois Press, 1957), p. 216.

¹⁵Ibid., pp. 1-30.

¹⁶Ibid., p. 203.

We expect sources we like to sponsor ideas we favor and denounce ideas we are against and vice versa.¹⁷

Their operational definition of incongruity, then, is any difference in a recipient's attitudinal positions for source and topic as measured by a pre-communication attitude test. It is at this point the pretest study will diverge from Osgood, Tannenbaum and Suci's operational definition of an incongruous situation.

Inherent in Osgood, Tannenbaum and Suci's theoretical definition of incongruity are the elements of "expectancy" and "opposing or conflicting pre-communication attitudes"; however, in their operational definition, one (pre-communication attitudes) is measured and the other (expectancy) is inferred from the measurement of the first. The present study, on the other hand, will measure both and, therefore, must define them separately.

The nature of expectancy is defined above under its own heading; however, expectancy may be either confirmed--the speaker supports the position the recipient expected him to--or it can be disconfirmed--the speaker does not support the position the recipient expected him to. In the latter case, incongruity (consistent with Osgood, Tannenbaum and Suci's theoretical definition) is produced between the recipient's expectation of the speaker's position and the recipient's perception of the speaker's position. This source of incongruity will be called disconfirmed expectancy in this paper. In other words, if President Johnson was scheduled to speak on the topic of "communism," most United States citizens would expect him to oppose the topic; however, if

¹⁷Ibid.

Johnson spoke in favor of communism an incongruous situation would exist.

A disconfirmed expectancy will be operationally defined in this study as existing when the recipient indicates an expectancy prior to hearing a communication that is in conflict with that same recipient's perception of the communication. Each recipient will indicate his expectancy of each communication situation prior to hearing the communication. Each recipient's perception of each assertion will be measured immediately following each communication.

The second source of incongruity results when a recipient holds conflicting attitudes toward the source and the topic of a communication. This conflict is operationally defined by situations in which a recipient's attitude toward the source is favorable and his attitude toward the topic is unfavorable, or vice versa. The conflict produced by opposing source-topic attitudes will be called "incongruity" in the same fashion that Osgood, Tannenbaum and Suci use the term to describe the phenomenon in their "adjective-noun" study (this study is discussed in Chapter II).

Position supported by the assertion. The position supported by the source in his assertion about a topic can generally be defined in terms of "favor" or "oppose," i.e., the source is either in favor of or opposed to a topic. The topics in this study are: (1) A proposal to finance medical care for the aged by increasing social security assessments, (2) A treaty between Russia and the United States banning underground nuclear testing, (3) A voluntary boycott in America of British-made products to discourage Britain from selling goods to Cuba, and (4) The Supreme Court ruling which bans prayer in the public schools. If the source's assertion is perceived to favor a treaty with Russia, a

proposal to finance medical care, etc., it will be operationally defined as favoring the topic. Conversely, if the assertion is perceived to oppose a treaty with Russia, etc., it will be operationally defined as opposing the topic.

The author of the assertions to be used in this study (the experimenter) had an intended direction in mind when each assertion was written; however, studies such as the Cooper and Jahoda study indicate that the intended direction is not always the perceived direction, i.e., as perceived by the recipient.¹⁸ To guard against such possible misperceptions, each experimental recipient will indicate the direction he perceived the assertion to favor immediately following his exposure to the assertion. If the perceived direction of the assertion is the same as the intended direction, the conditions for defining the position supported by the assertion will have been satisfied.

Preattitudes of the recipient toward the source and topic of the communication. Throughout this study the terms "preattitude" and "post-attitude" will be used. Preattitudes will be defined as the attitudes held by recipients prior to hearing the communication. Postattitudes are the attitudes the recipient holds after hearing the communication. Both preattitudes and postattitudes will be operationally defined by a recipient's score on the semantic differential test of attitude administered before and after the communication, respectively. The semantic differential attitude test is discussed more fully in Chapter IV.

¹⁸Eunice Cooper and Marie Jahoda, "The Evasion of Propaganda," Journal of Psychology, XXIII (1947), 15-25. Also see: Muzafer Sherif and Carl Hovland, Social Judgment (New Haven: Yale University Press, 1961), p. 149.

Attitude Change. Attitude change in this study will be determined in the fashion prescribed and used by Osgood, Tannenbaum and Suci.¹⁹ Each individual recipient's postattitude score on the semantic differential will be subtracted from his preattitude score. For ease of reference in this study, the difference between postattitude score and preattitude score for each individual will be called an "I-score" (individual score). Also, in this study, the difference between the experimental categories, each of which contain several individual recipients, will be used in the analysis; therefore, when categories are compared, the data used will consist of the mean of the I-scores in each category. The difference between the mean I-score in two different categories will be called a "C-score" (category score). Both in the case of individual attitude changes (I-scores) and of differences between two categories (C-scores), the sign (+) which accompanies the scores will indicate the direction of the change--the minus sign (-) indicating a change in attitude toward the "dislike" dimension, the plus sign (+) indicating a change in attitude toward the "like" dimension.

¹⁹Osgood, Tannenbaum and Suci, The Measurement of Meaning, p. 212.

CHAPTER II

REVIEW OF RELEVANT RESEARCH

Theories dealing with inconsistencies in perceptual fields are certainly not new to psychological research. A large body of research has either implicitly or explicitly indicated that individuals strive for perceptual internal consistency; however, most of research relevant to communication theory has occurred during the last two decades. As mentioned in Chapter I, a focal point of research relevant to this study is found in the studies of Heider,¹ Newcomb,² Festinger,³ Tannenbaum,⁴ and Bettinghaus.⁵ The studies cited here deal more explicitly with communication than studies of general perceptual inconsistencies.⁶

The first of these studies and one which provided a basis for

¹Heider, Journal of Psychology, XXI, 107-112.

²Newcomb, Psychological Review, LX, 393-408.

³Festinger, A Theory of Cognitive Dissonance.

⁴Osgood, Tannenbaum and Suci, The Measurement of Meaning.

⁵Erwin Bettinghaus, "The Operation of Congruity in an Oral Communication Situation," Speech Monographs XXVIII (August, 1961), 131-142.

⁶Such as Gestalt psychology.

most of the others was Heider's logically derived analysis of cognitive relations in 1946.⁷ Using a simple form of symbolic logic, Heider formulated relational structures for first two, then three cognitive elements within a single context. Following each logical formulation, he subjected his hypotheses to several example situations to illustrate their "goodness of fit." The hypotheses he derives are: (1) in the case of two entities a balanced state exists if the relation between them is positive (or negative) in all respects, i.e., if the element linking the two entities is always either good or bad, positive or negative, etc., in all situations where the two entities appear together, and (2) in the case of three entities, a balanced state exists if all three relations are positive in all respects, or if two are negative and one positive.⁸

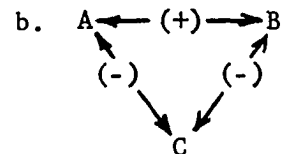
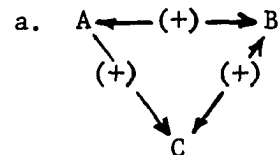
The two hypotheses can be graphically illustrated as follows:

I.

a. $A \longleftrightarrow (+) \longrightarrow B$

b. $A \longleftrightarrow (-) \longrightarrow B$

II.



It should be noted that the positive and negative signs used in the illustrations above substitute for verbs in Heider's original logical versions. For example, if (+) represents "love," it must also be

⁷Heider, Journal of Psychology, XXI, 102-112.

⁸Ibid., p. 110.

functional for "admire," "like," "esteem," etc., and it must be reciprocal (i.e., A "loves" B; B "loves" A) or the relation may not be made. Heider summarizes his analysis.

An examination of the discussed examples suggests the conclusion that a good deal of inter-personal behavior and social perception is determined--or at least co-determined--by simple configurations. . . . However, the understandable human behavior often is not of this sort [complex and sterile psychological theory based on empirical studies], but is based on the simple configurations. . . . Since they [simple configurations] determine both behavior and perception we can understand social behavior of this kind.⁹

It should be noted before progressing that Heider's construct is relatively passive, i.e., he does not consider the possibility of his linking elements undergoing change through communication; however, he does recognize the forces which are created by an incongruous situation:

Summarizing this preliminary discussion of balance, or harmonious, states, we can say that they are states characterized by two or more relations which fit together. If no balanced state exists, then forces toward the [balanced] state will arise. Either there will be a tendency to change the sentiments involved, or the unit relations will be changed through action or cognitive reorganization. If a change is not possible, the state of imbalance will produce tension, and the balanced states will be preferred over the states of imbalance.¹⁰

Although Heider's formulations and methods were admittedly rough, his theory was instrumental in encouraging continued study of psychological conflicts.

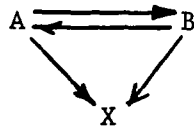
In 1953, Newcomb advanced a more sophisticated and empirically supported discussion of the relations suggested by Heider.¹¹ Utilizing

⁹Ibid., p. 111.

¹⁰Fritz Heider, unpublished manuscript cited in Festinger's Cognitive Dissonance, p. 121.

¹¹Newcomb, Psychological Review, LX, 393-408.

the group communication research of Festinger and Thibaut,¹² Back,¹³ and Schachter,¹⁴ Newcomb reinterpreted their data in terms of Heider's principles. However, Newcomb couched the principles in a communication situation, thereby overcoming the passive qualities of Heider's original hypotheses. A graphic schematic of Newcomb's reformulation is presented below, where A and B are communicating by means of assertion X.



Newcomb states:

The foregoing propositions represent only a slight extrapolation of Heider's general principle of 'balanced states' in the absence of which unit relations will be changed through 'action or through cognitive reorganization.'¹⁵

The similarity between Heider and Newcomb's models is readily apparent. However, by placing his model in a communication situation and making the third element the communicative assertion, Newcomb provides a means by which the cognitive elements may be changed by communication. Also, the observable nature of the communication (X) provides a convenient and observable phenomenon from which the cognitive structures of A and B can be inferred. In Newcomb's model a higher degree of symmetry among the elements can be obtained due to the increased flexibility provided

¹²L. Festinger and J. Thibaut, "Interpersonal Communications in Small Groups," Journal of Abnormal and Social Psychology, XLVI (1951), 92-99.

¹³K. Back, "The Exertion of Influence Through Social Communication," Journal of Abnormal and Social Psychology, XLVI (1951), 9-23.

¹⁴S. Schachter, "Deviation, Rejection, and Communication," Journal of Abnormal and Social Psychology, XLVI (1951), 92-99.

¹⁵Newcomb, Psychological Review, LX, 399.

by a communication channel. A and B can resolve any incongruity and, in addition, could potentially attain similar intensities of attitudes.

Newcomb continues the application of this construct through a small group situation which results in his conclusions:

Communicative acts are distinctive in that they may be aroused by and may result in changes anywhere within the system of relations between two or more communicators and the objects of their communications. It seems likely that the dynamics of such a system are such that from an adequate understanding of its properties at a given moment there can be predicted both the likelihood of occurrence of a given act of communication and the nature of changes in those properties which will result from that act.¹⁶

Newcomb's conclusion has broad implications concerning the applicability of an incongruity theory to communication. He suggests that the communication itself can be predicted as well as the results that communication has upon a recipient.

The research and theories of Heider, Newcomb and others whose research has led them to formulate theories concerned with states of incongruity were incorporated by Festinger in a theory of "cognitive dissonance." Festinger defines "dissonance" as "the existence of non-fitting relations among cognitions" which is "a motivating factor in its own right." "Cognition" is defined as any "knowledge, opinion, or belief about the environment, about oneself, or about one's behavior." Cognitive dissonance, then, is defined as "an antecedent condition which leads to activity oriented toward dissonance reduction just as hunger leads to activity oriented toward hunger reduction."¹⁷

¹⁶Ibid., p. 403.

¹⁷Festinger, A Theory of Cognitive Dissonance, pp. 3ff.

If a logical chronology of theory was the purpose of this review, Festinger's theory would, also, be considered as a direct extension of Heider's formulation.

Festinger's purpose was to generate an explicit, yet broadly generalizable theory that could find valid application in all areas of perception. In his words, "The task we are attempting is to formulate the theory of dissonance in a precise yet generally applicable form, to draw out its implication to a variety of contexts, and to present data relevant to the theory."¹⁸ Unlike Newcomb's theory, Festinger does not restrict his handling of dissonance to communication situations; rather, he attempts to include all types of dissonant situations.

Cognitive dissonance, according to Festinger, concerns itself with the conditions that arouse nonfitting relations in the perceptual field of an individual and the ways in which that dissonance can be reduced. The psychological strain created by the dissonance is toward consonance, i.e., a lessening of the conflict. The units of the theory are cognitive elements and the relationship between them. He defines cognitive elements as:

. . . elements [which] refer to what has been called cognition, that is, the things a person knows about himself, about his behavior, and about his surroundings. These elements, then, are 'knowledges,' if I may coin the plural form of the word. . . . It is clear that the term 'knowledge' has been used to include things to which the word does not ordinarily refer--for example, opinions. A person does not hold an opinion unless he thinks it is correct, and so, psychologically, it is not different from a 'knowledge.' The same is true of beliefs, values, or attitudes, which function as 'knowledges' for our purposes.¹⁹

¹⁸Ibid., p. 9.

¹⁹Ibid., p. 10.

His definition of "knowledge" would, of course, include expectancy.

The three methods of dissonance reduction given above are applicable to a wide range of situations. Festinger applies these methods to several actual situations, two of which are of particular interest to communication situations. He writes:

1. Dissonance introduced by disagreement expressed by other persons may be reduced by changing one's own opinion, by influencing others to change their opinion, and by rejecting those who disagree.
2. Influence exerted on a person will be more effective in producing opinion change to the extent that the indicated change of opinion reduces dissonance for that person.²⁰

The two applications of dissonance theory to communication illustrate the general nature of source and topic interaction within Festinger's theory.

A fourth major theoretical formulation of perceived incongruities grew out of the efforts of Tannenbaum.²¹ His research deals directly with the "conflict" a recipient perceives in a communication situation. Also, with Osgood and Suci, Tannenbaum developed an attitude measuring device which lends itself to measuring attitude change in communication (or other) situations.²²

Note that the theories of Festinger and Tannenbaum, et al., were developed almost simultaneously and exclusively. The slight effect one

²⁰Festinger, A Theory of Cognitive Dissonance, p. 256.

²¹The original work on congruity in communication is found in Percy Tannenbaum, "Initial Attitude Toward Source and Concept as Factors in Attitude Change through Communication," (unpublished Ph.D. dissertation, University of Illinois, 1953). Refinements of the theory are: Charles Osgood and Percy Tannenbaum, "The Principles of Congruity in the Prediction of Attitude Change," Psychological Review, LXII (1955), 42; Percy Tannenbaum, "Initial Attitude Toward Source and Concept as Factors in Attitude Change Through Communication," Public Opinion Quarterly, XX (1956), 413; and Osgood, Tannenbaum and Suci, The Measurement of Meaning.

²²Osgood, Tannenbaum and Suci, The Measurement of Meaning.

theory had on the other is reflected by each authors' in passing reference to a "forthcoming book" by the other. The basic difference in the theories is that Festinger's theory is formulated generally and then empirically tested in several categories of behavioral responses (choice, decision, forced compliance, etc.), while Osgood, Tannenbaum and Suci's theory grows out of their concern with semantics (word meaning) and attitude change.²³

One of the major contributions of Tannenbaum's congruity principle is his definition of incongruity in a communication situation. He chose the major sources of stimulation (source and topic) in a communication as elements most likely to account for most incongruity in communications. The "field," "ground," or "link," which unites the source of stimulation in the perceptual field of the recipient is called an assertion. Assertion is defined only by examples of communication situations.²⁴ In the examples, assertions vary from brief headlines to complete newspaper articles.

According to Osgood, Tannenbaum and Suci, congruity is perceived by the recipient when:

1. Favorable (or unfavorable) sources and topics are disassociated by a negative assertion linking them;
2. Oppositely evaluated signs (favorable source, unfavorable topic, or vice versa) are associated by a positive assertion.²⁵

The two hypotheses are based on the assumption:

We expect sources we like to sponsor ideas we favor and denounce ideas we are against and vice versa.²⁶

²³Ibid.

²⁴Ibid., p. 202.

²⁵Ibid., p. 203.

²⁶Ibid.

Tannenbaum tested these hypotheses in a written communications situation. The experimental situation consisted of a newspaper article in which certain sources asserted favorably or unfavorably on certain topics. The criterion measure for attitude change was the semantic differential and the results supported the predictions almost perfectly. Owing to the accuracy with which the data supported the predictions, Tannenbaum posits a model of attitude change in communication.²⁷ The model is summarized in Figure 1.

Hoping to extend Tannenbaum's congruity principle to oral communications situations, Bettinghaus conducted a study using "live" speakers in a face-to-face communication.²⁸ In addition to attitude measures of source and topic, Bettinghaus included the audience's estimate of the speaker's delivery, and an index of the relative intensity of the assertion, i.e., a "weak" and a "strong" assertion about each topic. The study was based on the general hypothesis that "listeners will tend to balance their attitudes toward the [total] elements of the oral communication situation."²⁹ Adopting the basic assumption of Tannenbaum, Bettinghaus bases his hypothesis on the assumption:

Incongruity, or what Festinger calls dissonance, actually involves 'a violation of expectations.' Listeners expect favored sources to support concepts which they favor. They expect disliked sources to support concepts which they dislike. When a favored source supports a disliked concept, a violation of expectation takes place, and incongruity is produced.³⁰

²⁷Tannenbaum, unpublished Ph.D. dissertation, p. 58.

²⁸Bettinghaus, Speech Monographs XXVIII, 131-142.

²⁹Ibid., p. 133.

³⁰Ibid.

FIGURE 1

TANNENBAUM'S PREDICTIVE MODEL AND RESULTS OBTAINED

Preattitudes of Recipients		Predicted Direction of Change on		Obtained Change on ^a	
Source	Topic	Source	Topic	Source	Topic
Positive Assertions					
+	+	+	+	25	51
o	+	+	+	150	39
-	+	+	-	49	-24
+	o	o	+	16	245
o	o	o	+	25	80
-	o	o	-	13	-52
+	-	-	+	-42	107
o	-	-	+	-94	48
-	-	-	-	- 7	-10
Negative Assertions					
+	+	-	-	-45	-88
o	+	-	-	-68	-72
-	+	-	+	-33	19
+	o	o	-	1	-180
o	o	o	-	17	-79
-	o	o	+	- 3	22
+	-	+	-	34	-39
o	-	+	-	96	-34
-	-	+	+	34	16

+ = Favorable attitude or attitude change.

o = "Neutral" attitude or no attitude change.

- = Unfavorable attitude or attitude change.

^aNumbers represent the total change score for 45 subjects (each subject has a possible change score of 36 which yields a possible total change score of 1620).

Source: Tannenbaum, unpublished Ph.D. Dissertation, p. 58.

Generally, Bettinghaus' results in the oral communication situation did not support the predictions of Tannenbaum's written communication model (see Figure 2). In many cases, Bettinghaus' results were in direct contradiction to Tannenbaum's predictions. The general theory of congruity (i.e., dissimilar elements tend to move toward congruity) was tentatively supported by Bettinghaus.

The conclusions Bettinghaus tentatively drew from his data are:

1. The experimental subjects did tend to shift their attitudes toward the speaker and the speech topic to more congruous positions.
2. The shift toward congruity in the oral communication situation seems to be determined more by the listener's attitude toward the speaker than by the listener's attitude toward the speech topic.
3. The listener tends to balance the impression he received from the speaker's delivery with his impressions of the speaker. Specifically the listener's attitude toward the speaker's delivery is made congruous with his attitude toward the speaker as a function of initial attitude toward the speaker and of perceived effectiveness in speaker delivery.
4. Attitude toward the treatment of the speech topic is not shown as significant in determining the listener's attitude toward the speech topic. Differences between 'strong' and 'weak' speech treatment are not shown to have significant effects in determining the listener's final attitude toward the speech topic.³¹

On the basis of his results, Bettinghaus also constructs a model for predicting attitude change. The model's prerequisites include preattitudes toward both source and topic and a measure of attitude shift toward the source. Given these three factors, the model is about 80 percent efficient in predicting the direction of attitude shift toward the topic.³² Bettinghaus' model is reproduced in Figure 3.

One possible affective factor in Bettinghaus' research was the use of relatively unknown speakers. The preattitude toward the source

³¹Ibid., p. 142.

³²Ibid., p. 141.

FIGURE 2

RESULTS OF BETTINGHAUS STUDY

Preattitudes of Audience		Predicted Change (Tannenbaum)		Obtained Change (Bettinghaus)		Percentage of Correct Predictions ^a (From Bettinghaus)	
Source	Topic	Source	Topic	Source	Topic	Source	Topic
Positive Assertions							
+	+	+	+	-	-	.245	.410
+	o	o	+	-	-	---	.729
+	-	-	+	-	+	.727	.889
o	+	+	+	+	-	.676	.270
o	o	o	+	+	+	---	.710
o	-	-	+	-	+	.333	.889
-	+	+	-	+	-	.333	1.000
+	o	o	+	-	-	---	0.000
-	-	-	-	+	+	.400	.400
Negative Assertions							
+	+	-	-	-	-	.542	.729
+	o	o	-	-	+	---	.500
+	-	+	-	-	+	.351	.270
o	+	-	-	-	+	.351	.270
o	o	o	-	+	+	---	.403
o	-	+	-	+	+	.666	.250
-	+	-	+	+	-	.286	.214
-	o	o	+	+	-	---	.428
-	-	+	+	+	+	1.000	1.000

+ = Indicates a favorable attitude or attitude change.

- = Indicates an opposing attitude or attitude change.

o = Indicates a neutral attitude.

^aNumbers are decimal fractions indicating the number of subjects in each category whose attitude changed in the predicted direction (based on Tannenbaum's model).

Source: Bettinghaus, Speech Monographs. XXVIII, 133.

FIGURE 3

PREDICTIVE MODEL OF ATTITUDE CHANGE PROPOSED BY BETTINGHAUS^a

Original Attitudes	If Speaker shift is	With Positive Assertions Topic Shift will be	With Negative Assertions Topic Shift will be
S+I+	+	+	-
	o	+	-
	-	-	+
S+To	+	+	-
	o	+	-
	-	-	+
S+T-	+	+	-
	o	+	-
	-	-	+
SoT+	+	+	-
	o	+	-
	-	-	+
SoTo	+	+	-
	o	+	-
	-	-	+
SoT-	+	+	-
	o	+	-
	-	-	+
S-T+	+	+	-
	o	-	+
	-	-	+
S-To	+	+	-
	o	+	-
	-	-	+
S-T-	+	+	-
	o	-	-
	-	-	+

^aThis model accurately accounted for 77.5% of 160 individual attitude change measures made in the Bettinghaus study.

Source: Bettinghaus, Speech Monographs, XXVIII, 141.

was based on a brief one-exposure introduction of the speaker to the audience. It is doubtful that the attitudes formed during that brief introduction were very stable (see conclusion number 2 above).

Bettinghaus reports that the greatest change in the recipient's attitudes was toward the source, while Tannenbaum found the greatest change toward the topic. The explanation offered by both authors was that the greatest source of stimulation was the source or the topic, respectively, in the two studies. Because the studies differed in the type of communication situation involved (oral and written), this explanation has some face validity.

As mentioned earlier in this discussion, both Tannenbaum and Bettinghaus base their concept of congruity on the assumption that "we expect sources we like to sponsor ideas we favor and denounce ideas we are against, and vice versa." In light of the examples they offer to support this assumption, it seems to have great face validity. As a result of this assumption, the writers infer the expectancy of each recipient from indices of the recipient's preattitudes. Closer scrutiny of this assumption reveals a possible validity problem in the two studies, i.e., possibly they are not measuring the expectancy variable as they purport.

A single example can adequately illustrate the obvious nature of this validity problem. A person (recipient) might like the preacher of his local parish (source) and he might also like alcoholic beverages (topic); however, it's doubtful he would expect the preacher to preach in favor of alcoholic drinks. Placing this example within the procedures and basic assumptions of Tannenbaum and Bettinghaus' studies, the measure

of the recipient's attitude toward the source and the topic would indicate that the recipient was favorable toward both the preacher (source) and alcoholic beverages (topic). The basic assumption that "we expect sources we like to support topics we favor, etc." subscribed to by both Tannenbaum and Bettinghaus, would predict that the recipient would expect the preacher to speak in favor of alcoholic beverages. This same criticism would be extended into other combinations of favorable and unfavorable attitudes toward sources and topics. It should also be noted that the example given above is not an unlikely occurrence--preachers often preach on alcoholic intake to recipients who drink. Rarely is the assertion favorable.

To test the validity of this logical observation, a pilot study was conducted in which a group of twenty-seven students were asked to register their attitudes toward four sources and four topics.³³ The semantic differential was used as an attitude measuring instrument and was composed of the scales that Bettinghaus and Tannenbaum had used in their studies. Also, the same procedure for administering the semantic differential used by Tannenbaum and Bettinghaus was used in this pilot study. Two days after indicating their attitudes toward the sources and topics, the subjects were asked to indicate their expectation of sixteen possible communication events. The communication events were simulated by placing all possible combinations of the sources and topics into the following instrument:

The position on the scale I would expect (source) to support when speaking on (topic) is:

³³Resume' and statistical computations of this study are reported in Appendix A.

Favor____:____:____:____:____:____:____Oppose

The experimental recipients were divided according to their scores on the attitude test into the categories of: (1) favorable toward source-favorable toward topic; (2) favorable toward source-unfavorable toward topic, (3) unfavorable toward source-favorable toward topic, and (4) unfavorable toward source-unfavorable toward topic. The results of the study indicate that over 30 percent of the time, the assumption that "we expect sources we like to support topics we like," which forms the basis of Tannenbaum and Bettinghaus' studies, was not accurate in predicting the expectancy the experimental subjects registered on the expectancy scale. In other words, the expectancy of the subjects could not be reliably predicted from a measure of their preattitudes.

The results of this pilot study coupled with the congruity principle's reliance upon a violation of expectations suggests a more thorough investigation of the effects actual expectancy has on a communication situation. Actual expectancy is here defined as the expectancy experienced by a person confronted with a specific situation. This variable becomes increasingly important in communication situations where the source is as likely to support one position as another. To cite an example, politicians often seem to chose the position on controversial questions that will provide the widest approval of their choice, thus winning the politician the most possible votes. Similarly different recipients have different reasons for expecting a source to support a particular topic. To cite a more specific example, President Kennedy was faced with taking a position on a "federal aid to parochial schools" issue. Many persons decided that since Kennedy was Catholic,

and that the largest portion of parochial schools were operated by the Catholic religion, that he (Kennedy) would "naturally" favor the use of federal aid to the parochial schools. This expectation was not necessarily limited to persons who happened to have a proper (in the congruity theory sense) combination of attitudes toward Kennedy and parochial schools. Other persons were just as likely to have different reasons for their expectancies of Kennedy in this situation, e.g., "he'll lose a good percentage of the Protestant vote if he favors the federal aid," or "Catholic or not, federal aid to parochial schools is bad business and I think that Kennedy, even though he is a Democrat, can see that it is wrong."

The examples cited above illustrate the potential for expectancies that are divorced from a recipient's attitudes toward a given source or topic. Logically, then, if incongruity is contingent upon expectancy or on a violation of expectancies, a primary consideration would be the determination of actual expectancy violations. As Brehm and Cohen have stated it, "taking account of the individual's expectancy is necessary in order to determine what is inconsistent with what."³⁴

Expectancy, as it has been discussed above and within the confines of the congruity principle, is defined as an expectation a recipient has of a source's assertion. Such a definition is perhaps adequate for further investigation of expectancy within this context; however, much can be learned from a broader concept of expectancy that enjoys recurring popularity in psychological research. The discussion of expectancy in terms of incongruity, above, represents a focal point to which the

³⁴Jack W. Brehm and Arthur R. Cohen, Explorations in Cognitive Dissonance (New York: John Wiley and Sons, Inc., 1962), p. 178.

following discussion of a more "general expectancy" will return³⁵ after searching out other areas of research that might provide a better understanding of the expectancy concept.

A body of research evidence applicable to a type of expectancy (i.e., "self" expectancy) was conducted in the late 1930's and early 1940's under the generic term "aspiration level." Various types of studies contributing to this area were conducted by Lewin, et al.,³⁶ Hilgard, et al.,³⁷ Frank,³⁸ Anderson and Brandt,³⁹ Chapman and Volkmann,⁴⁰ Whyte,⁴¹ Festinger,⁴² and others. Generally, the results indicated that an individual's behavior seemed to be affected by his expectancy in certain situations (especially groups situations⁴³); however, the results were ungeneralizable and inconclusive.

³⁵The "focal point" will again be reached in the Ewing study discussed in the final pages of this chapter.

³⁶K. T. Lewin, et al., "Level of Aspiration," Personality and the Behavior Disorders, ed. J. McV. Hunt (New York: Ronald Press, 1944), p. 333.

³⁷E. R. Hilgard, et al., "Level of Aspiration," Journal of Experimental Psychology, XXVII (1939), 411.

³⁸J. D. Frank, "Individual Differences in Certain Aspects of the Level of Aspiration," American Journal of Psychology, LXVII (1935), 119.

³⁹N. Anderson and J. Brandt, "Fifth Grade Children and Level of Aspiration," Journal of Social Psychology, X (1939), 209.

⁴⁰D. W. Chapman and J. A. Volkmann, "A Social Determinant of Levels of Aspiration," Journal of Abnormal Psychology, XXIV (1939), 209.

⁴¹William F. Whyte, Street Corner Society (Chicago: University of Chicago Press, 1943).

⁴²L. Festinger, "A Theoretical Interpretation of Shifts of Level of Aspiration," Psychological Review, XLIX (1942), 235.

⁴³Muzafer Sherif and Carolyn Sherif, An Outline of Social Psychology (rev. ed.; New York: Harper and Brothers, 1956), p. 302.

A second area of research--a bit closer to the problem--is the large body of "credibility" and "prestige" studies. Moos and Koslin,⁴⁴ Lurie,⁴⁵ Haiman,⁴⁶ Paulson,⁴⁷ Hovland and his associates,⁴⁸ and others have suggested or shown that sources who are assigned differing degrees or kinds of status by a recipient are more or less effective in changing attitudes of that recipient. Stating these findings in terms of a recipient's expectancy, it might be suggested that the varying degrees of attitude change are a consequence of varying degrees of recipient expectancy. Sources high on a credibility index are probably expected to be more knowledgeable, trustworthy, etc. Moreover, the assertions attributed to high credibility sources are probably expected to be more persuasive, more truthful, etc. This interpretation of aspiration and credibility, of course, goes beyond the existing evidence.

Two early theories which are more direct in handling expectancy were published by Tinklepaugh⁴⁹ and Lecky.⁵⁰ The earliest study, by

⁴⁴M. Moos and B. Koslin, "Prestige Suggestion and Political Leadership," Public Opinion Quarterly, XVI (1952), 77.

⁴⁵W. Lurie; "The Measurement of Prestige and Prestige-Suggestibility," Journal of Social Psychology, IX (1938), 278-284.

⁴⁶F. Haiman, "An Experimental Study of the Effects of Ethos on Public Speaking," Speech Monographs, XVI (June, 1949), 190-202.

⁴⁷S. Paulson, "The Effects of the Prestige of Speaker and Acknowledgment of Opposing Arguments on Audience Retention and Shift of Opinion," Speech Monographs, XXI (November, 1954), 267-271.

⁴⁸A majority of the studies referred to are summarized in Persuasion and Personality by Hovland and Janis. Also see: K. Anderson and T. Clevenger, "A Summary of Experimental Research in Ethos," Speech Monographs, XXX (June, 1963), 59.

⁴⁹O. Tinklepaugh, "An Experimental Study of Representative Factors in Monkeys," Journal of Comparative Psychology, VIII (1928), 197.

⁵⁰Prescott Lecky, Self Consistency, A Theory of Personality (New York: Island Press, 1945).

Tinklepaugh, was based on the theory that a deviation from a habitual task would cause "disappointment." Using monkeys as subjects, Tinklepaugh's results were only partially supported--monkeys that were accustomed to finding bananas under their feeding plates were "disappointed" when lettuce was substituted for bananas; however, the monkeys conditioned to expect lettuce were not disappointed, but pleased to find bananas.

Lecky's theory was a bit more sophisticated, but offered little concrete data to support his theory of "consistency" and "expectation" based on personality traits. However, Lecky's theory accurately predicts the results obtained by Aronson and Carlsmith almost twenty years later.⁵¹

The series of studies conducted by Aronson and Carlsmith were based on Festinger's dissonance theory and dealt explicitly with expectancy. The results of their studies indicate definite relations between expectancy and behavior.

In the first study of the series, Aronson and Carlsmith created situations of expectancy by having subjects judge several sets of pictures.⁵² Each subject judged 100 sets of three pictures each. They were told that one of the three photographs in each set was of a hospitalized schizophrenic and that the test was designed to measure their ability to "pick" the schizophrenic. The 100 individual judgment tasks were divided into five sessions of 20 judgments each. By false feedback during the first four sessions, half the subjects were led to believe that

⁵¹E. Aronson and J. Carlsmith, "Performance Expectancy as a Determinant of Actual Performance," Journal of Abnormal and Social Psychology, LXV (September, 1962), 178-187.

⁵²Ibid., p. 178.

they had scored consistently high--the other half were led to believe they had scored consistently low. Therefore, at the beginning of the fifth session, half the subjects expected to score high while the other half expected to score low. Following the fifth session, half the subjects in each condition had their expectancies confirmed by false feedback--half had their expectancies disconfirmed. Then, under a pretext, the experimenter allowed the subjects to judge the fifth set again. The dependent variable was the number of judgments made on the "repeated" trial that differed from the judgments made on the original trial. Results indicate that subjects whose expectancy was disconfirmed in the first experimental condition changed significantly more of their judgments in the second experimental condition. The conclusion drawn was that those subjects whose expectancies are confirmed are content with their score, while those whose expectancies are disconfirmed change their responses in an attempt to re-establish a consistent self-concept regarding their performance.

A second study by Carlsmith and Aronson created a psychological situation which pitted expectancy against perception of taste.⁵³ Two liquids, one sweet and one bitter, were given to subjects in such a fashion as to create an expectancy of one or the other. The results generally support the conclusions that when the subject was expecting a sweet liquid but received the bitter liquid, his judgment was that the bitter liquid he received was "less bitter" or "sweeter" than the other bitter liquids he had sampled. Both liquids used in the study were

⁵³J. Carlsmith and E. Aronson, "Some Hedonic Consequences of the Confirmation or Disconfirmation of Expectancies," Journal of Abnormal and Social Psychology, LXVI (January, 1963), 151.

uniformly bitter or sweet. In all cases the judgment had moved in the direction of the expectancy.

A third experiment conducted by Aronson, Carlsmith and Darley involved the use of subjects to make judgments of small weights and bitter liquids.⁵⁴ Two groups of subjects were used. One of the groups was asked to make a series of judgments using weights (neutral task), the other group judged bitter liquids (unpleasant task). After both groups completed the "test" with their respective tasks, they were informed that "something had gone wrong" and that they would have to make the judgment tasks again. The second time each subject was asked to make judgments, he was given a choice of judging weights or bitter liquids. Results show that 100 percent of the subjects who had originally judged weights chose to do so again. A significant number of the subjects that had tasted bitter liquids also, chose to repeat their task despite the unpleasantness of the situation. The authors attribute the persistence of choice to the intensity of expectancy.

A final study to be considered was conducted by Ewing in 1942 which has considerable influence on the hypothesis to be posited by the present study.⁵⁵ Ewing's study was relatively unsophisticated according to present standards of measurement and quantification but his results are sufficiently obvious to merit consideration.

Ewing established situations of "unfavorable expectancy" and

⁵⁴E. Aronson, J. Carlsmith and J. Darley, "The Effects of Expectancy on Volunteering for an Unpleasant Experience," Journal of Abnormal and Social Psychology, LXVI (March, 1963), 220.

⁵⁵T. Ewing, "A Study of Certain Factors Involved in Changes of Opinion," Journal of Social Psychology, XVI (1942), 63-88.

"favorable expectancy" by using introductory material which led the experimental audiences to "expect" favorable or unfavorable communications about the Ford Motor Company. The communication, which the subjects read, was the same for both audiences and was highly unfavorable to the Ford Company. The first introduction, "Numerous people have pointed out that Ford represents 'Big Business' at its worst; however, some of the following facts hardly justify this view,"⁵⁶ was designed to cause the audience to expect an assertion that was favorable to the Ford Company. The second introduction, "Numerous people have pointed out that Ford represents 'Big Business' at its best; however, some of the following facts hardly justify this view," was designed to create an expectation of an unfavorable assertion. Both groups of subjects' original "opinions" were generally favorable toward the Ford Company and both groups read the same unfavorable assertion. Results indicated that the group whose expectancy was confirmed changed their opinions significantly more in the direction advocated by the assertion than those whose expectancy was disconfirmed.

The general conclusion to be drawn from the expectancy studies cited above is that expectancy when it exists in a given situation does influence perception, resultant behavior, and "opinion change." All authors are careful to point out that the generalizability of conclusions is limited to situations which follow adequate training or orienting periods, or situations in which expectancies might be assumed.

Applying this principle to a communicative situation, it would

⁵⁶Ibid., p. 80.

be necessary to assume each subject's knowledge of the elements of the communication (i.e., source and topic) is sufficient to cause an expectancy to be formulated. In other words, a communication involving "Joe Doakes" speaking on "table scraps" would probably not generate a sufficient expectancy for most recipients to influence them significantly.

CHAPTER III

THE RATIONALE FOR THE STUDY

The literature reviewed in the preceding chapter has summarized the potential effect of expectancy and incongruity on behavior and attitude change. Both of these experimental concepts appear to be "powerful" variables, i.e., they account for major adjustments of behavior or attitude in the situations in which they are studied.

The studies of Tannenbaum and Bettinghaus comprise most of the research in which source and topic are selected as the major sources of stimulation. Both studies combine expectancy and incongruity into a single variable. Situations of incongruity are defined by various combinations of pre-communication attitudes and by the authors' inference of where expectancy will be "violated."

Both Tannenbaum and Bettinghaus' studies used essentially the same procedure and methodology; however, their results are obviously contradictory (see Figure 2). An attempt to account for the differences in their results according to the differences in the medium used by each study (Tannenbaum's was written, Bettinghaus' was oral communication) does not seem wholly adequate. Neither does it seem likely that either studies' results were spurious; therefore, a closer investigation of the studies, in light of the literature reviewed in Chapter II, might provide a rationale for explaining the difference in results.

Tannenbaum defines his primary variable, congruity, as a contingent of expectancy (here defined as the recipient's expectation of the assertion).¹ After partitioning his experimental audience according to their attitudes toward source and topic, Tannenbaum infers the expectancy of each classification of recipients on the basis of their pre-communication attitude configurations. His results support his predictions well (see Figure 1). However, the pilot study reported in Chapter II gives reasonable assurance that expectancy is not necessarily a function of a recipient's pre-communication attitudes (see Appendix A). Therefore, to explain the perfect accuracy of Tannenbaum's results, one must assume that either (1) the sources and topics used in the Tannenbaum study elicited expectancies common to all the experimental recipients, (2) some other variable or variables are closely correlated, but undefined, or (3) that expectancy does not affect congruity.

Bettinghaus' study employed the same procedure as Tannenbaum's. Bettinghaus' study was designed to study the oral communication situation, but otherwise the experimental population, the attitude measuring instrument, methods of testing, etc., were very similar to Tannenbaum's. The results Bettinghaus reports, however, are highly contradictory to the predictions and results of the Tannenbaum model (see Figure 2). The obvious questions raised are "why do two similar studies yield different results?" and "what trends in each study's results might explain the reasons for the differences?"

To answer the first of these questions, the most obvious, of course, is the difference between the media used by the studies; however

¹Tannenbaum, unpublished Ph.D. Dissertation, p. 17.

while evidence exists to illustrate that different media may be more or less effective in producing amounts of attitude change,² no evidence indicates that the medium through which the communication is transmitted is capable of effecting such wide divergences in direction of attitude change. Therefore, it would appear unlikely that the differences in media alone are capable of accounting for the different results.

Another possible answer to the question is the different natures of the communications (sources and topics) the respective studies used. Tannenbaum's sources were "popular" or "authoritative" (Labor unions, The Chicago Tribune, and Labor leaders), while Bettinghaus' sources were relatively unknown undergraduate students. Here, perhaps, a distinction in expectancy can be made.

In the studies of expectancy reviewed in Chapter II (see page 31) one of the most uniform conclusions drawn by the researchers was that expectancy must exist, in fact, before it can be expected to have an effect on the dependent variable.³ In other words, there are some situations for which the participant does not generate an expectancy. Moreover, the Aronson and Carlsmith study indicates that expectancy is subject to degrees of intensity, i.e., the "stronger" the expectancy is,

²See R. H. Henneman, "Vision and Audition as Sensory Channels for Communications," Quarterly Journal of Speech, XXXVIII (April, 1952), 161-166; E. Kramar and T. Lewis, "Comparison of Visual and Non-Visual Listening," Journal of Communication, I (November, 1951), 16-20; Joseph T. Klapper, The Effects of Mass Communication (Glencoe, Ill.: The Free Press, 1960), pp. 106ff.

³The "level of aspiration" studies almost unanimously conclude this; also Aronson and Carlsmith, Brehm and Cohen are careful to state that not all situations create an "expectancy."

the greater the persistence of choice becomes.⁴ The subjects who were required to wait 20 minutes before repeating their judgment tasks were significantly more likely to repeat the task of their first judgment. The authors interpret this finding as a variable of expectancy "strength," i.e., the longer the subject had to wait to repeat his judgments, the more time he had to develop a strong expectancy. It seems reasonable to assume that this same phenomenon could be generalized to Tannenbaum and Bettinghaus' more limited definition of expectancy since the sources (unknown graduate students) of Bettinghaus' study do not seem as conducive to generating a recipient expectancy of the assertion as the sources used in Tannenbaum's study.

Assuming for the moment that the effect of expectancy was less (or did not exist) in Bettinghaus' study, the second question (i.e., what trends in each study's results might explain the differences?) becomes pertinent. Since Tannenbaum's results are consistent with his predictions, we will assume that the variables he is studying are stable within his experimental situation; however, Bettinghaus working with the same predictions does not get consistent results; therefore an attempt must be made to determine what factors were active in one study which were not active in the other.

One consistent trend in Bettinghaus' study and perhaps one of the reasons for his "divergent" results, is that in cases where the pre-communication attitudes toward source and topic are sufficiently different or far apart to result in the attitude toward source appearing in a

⁴Aronson and Carlsmith, Journal of Abnormal and Social Psychology, LXVI.

different category (+, 0, -) than the attitude toward the topic, the post-communication attitude measure indicates that the respective attitudes have moved closer together (see Figure 2). This effect can be seen in 11 of 12 categories in Bettinghaus' results.⁵ Such a consistent trend does not seem too surprising in light of the "adjective-noun" research Osgood, Tannenbaum and Suci have reported.⁶ In this study, the authors juxtapose two conflicting "signs," such as "lazy-athlete." The resultant shift in evaluative meaning a recipient has for each of the words in isolation undergoes change (always in the direction of the other word) toward compromise when they are perceived together.

If Bettinghaus' experimental communication stimuli did not generate a recipient expectancy of the assertion, the consistent trend in results along with a similar phenomenon demonstrated in the adjective-noun study, suggest that conflicting attitudes or signs are capable of producing incongruity merely by being related to each other in some meaningful manner; in the adjective-noun study the relationship is syntactical and in Bettinghaus' study the relationship is produced between the source and the topic merely by their being combined in the same total perception, i.e., the communication event. In other words, the relationship between source and topic is not absolutely dependent upon the position supported by the assertion--the simple presence of the objects (source and topic) of conflicting attitudes in a single perceptual experience seems adequate to

⁵Bettinghaus, Speech Monographs, XXVIII, 138. In some cases, both attitudes have changed in the same direction, but the amount of change one or the other underwent is sufficient to bring them "closer" together than they originally were.

⁶Osgood, Tannenbaum and Suci, The Measurement of Meaning, p. 275.

produce incongruity. Also, if the presence of opposing attitudes toward source and topic creates an incongruous situation despite the direction of the assertion, it might explain the difficulty Osgood, Tannenbaum and Suci have in defining an assertion. They write:

We realize that these examples do not provide a precise definition of 'assertion.' Although we are able to distinguish situations involving assertions (and hence dynamic interaction among sign-processes) from situations not involving assertions on an intuitive basis, so far we have not been able to make explicit the criteria on which we operate.⁷

In other words, the authors are saying that interaction occurs when conflicting signs or attitudes are related, but that they are not sure how the relation is effected in all cases. In communication situations, a link is established between source and topic regardless of the direction the assertion takes. As such, the assertion can be considered a separate factor in affecting attitude change.

This study, then will distinguish between: (1) incongruity which results from disconfirmed expectancy, and (2) incongruity which results from the presence of two conflicting attitudes (source and topic) sharing a single perceptual event (the communication event). In the research cited above, both of these concepts seem to coincide with psychological conflict, therefore, to differentiate between them as sources of incongruity, the first will be referred to as "disconfirmed expectancy," the second as "incongruity."

A third factor affecting attitude change in communication is the assertion itself. In the discussion above the assertion was important only in that it confirmed or disconfirmed an expectancy; however, the assertion

⁷Ibid., p. 203.

is obviously a major factor in producing attitude change. By considering the assertion as an affective factor, additional ambiguity is encountered. In the example situations provided by Osgood, Tannenbaum and Suci, assertions varied from a single verb (John is communistic) to a complete newspaper article. Length, strength, style, organization, and choice of arguments are but a few of the elements in an assertion that may be capable of changing its effectiveness in causing attitude change. The persuasive elements of an assertion are obviously capable of becoming more than a mere directional link between the source and topic as Tannenbaum's original study implied.⁸ Bettinghaus, of course, recognized the potential affective power of an assertion and attempted to account for it in his design.⁹ He attempted to provide an absolute measure of "strong" or "weak" assertions; however, there is data to indicate that the relative effectiveness of an assertion depends upon whether the recipient perceives it to be strong or weak.¹⁰ Whether a recipient perceives an assertion as weak or strong is reliant upon the particular point of reference with which he compares it. The lack of some common reference point could have been an affective factor in Bettinghaus' study which prevented him from obtaining significant results.

Relative strength of the assertion cannot be demonstrated in this study; however, an effort was made, on an intuitive basis, to equate the assertions in as many aspects as possible. The lengths of the assertions, the strength and number of major arguments are designed to equalize the

⁸Tannenbaum, unpublished Ph.D. Dissertation, p. 21.

⁹Bettinghaus, Speech Monographs, XXVIII, 131-142.

¹⁰Sherif and Hovland, Social Judgment, p. 148.

differences among the assertions (see Appendix D). Also, the order in which the assertions are presented, and the manner in which the assertions are attributed to sources are attempts to equate the experimental assertions. These procedures are discussed in Chapter IV. Because of the difficulty in determining absolute strengths of different assertions, this study will necessarily assume that the assertions were successfully designed and are of similar strength.

In the discussion above, three factors have been theoretically distinguished which seem to be major factors in affecting attitude change through communication. They are: (1) disconfirmed expectancy, (2) incongruity, and (3) the assertion. The discussion has attempted to show the nature of the three factors and how they have been demonstrated in analogous settings. They must now be related directly to a communication situation.

The first factor, expectancy, is the recipient's expectation of the position the source will support in his assertion. If the assertion supports the position the recipient expected it to support (i.e., the expectancy is confirmed), no incongruity is produced by this factor and any observed change in attitude will be attributed to other factors. If the expectancy is disconfirmed, a shift in attitude toward both the source and topic will be affected.

If the expectancy is disconfirmed, attitude change toward the source will be a function of whether expectancy was (a) favorably disconfirmed, i.e., recipient expects opposition to his original attitude toward the topic, but perceives support of it, or, (b) unfavorably disconfirmed, i.e., the recipient expected support of his original attitude

toward the topic but perceives opposition to it.

In the case of favorable disconfirmation of expectancy, the recipient's estimation of the source will become more favorable (or less unfavorable)--especially if his attitude toward the source was originally unfavorable. In the case of disconfirmed expectancy, the recipient's attitude toward the source will be negatively affected--especially if it was positive originally.

Attitude change toward the topic will also be affected by disconfirmed expectancy; however, whether the disconfirmed expectancy is favorably or unfavorably disconfirmed will have no differentiating effect on the attitude change toward the topic. The incongruity produced in this case for the recipient is created by the difference in his expectancy of the assertion and his perception of the assertion. This difference between expectancy and perception will be resolved by the recipient by adjusting his attitude toward the topic toward his expectancy. In other words, if a recipient has a favorable attitude toward a topic but expects a source to speak unfavorably about it, if the expectancy is disconfirmed, his attitude toward the topic will shift to a position of less favorableness.¹¹

To summarize, the effect of expectancy will be tested across four different groups of recipients' source-topic preattitudes (i.e., favorable toward source-favorable toward topic; favorable toward source-unfavorable toward topic, unfavorable toward source-favorable toward topic, and unfavorable toward source-unfavorable toward topic). In cases where

¹¹The effect of expectancy on attitude toward the topic is inferred from the Ewing study, see p. 35.

expectancies are confirmed, attitude changes toward the source should be similar--despite the position supported by the assertion. On the other hand, attitude change toward the source in cases of disconfirmed expectancy, will differ from attitude changes in confirmed expectancy cases and attitude change resulting from disconfirmed expectancies (favorable and unfavorable disconfirmation) will differ from each other.

The second major factor affecting attitude change is the incongruity created by opposing attitudes of a recipient being combined in a single perceptual event--the communication event. This type of incongruity will influence attitude change toward both source and topic in cases where recipient attitudes toward source and topic in cases where recipient attitudes toward source and topic are different in terms of direction (i.e., favorable toward source-unfavorable toward topic, unfavorable toward source-favorable toward topic). In such cases, the attitudes toward source and topic will shift toward a "central" compromise, i.e., each attitude will shift toward the other attitude position.¹² In cases where recipient preattitudes are not in conflict (i.e., favorable toward the source-favorable toward topic, unfavorable toward source-unfavorable toward topic), the effect of this factor will be negligible.

The effect of this second factor will be studied by comparing cases in which all conditions of the communication event are similar except the condition of conflicting preattitudes. In this comparison, the cases in which preattitudes are in conflict should illustrate more of the central compromise qualities than those cases in which preattitudes are not in conflict.

¹²This attitude change is inferred from Osgood, Tannenbaum and Suci's adjective-noun study and from Bettinghaus' results.

The third factor affecting attitude change is the arguments and persuasive elements contained in the assertion. The assertion, obviously, concentrates its influence upon changing the recipient's attitude toward the topic. The success in accomplishing this goal is largely a function of the recipient's susceptibility to the rhetorical devices utilized by the source. The influence of this third factor is typically in the direction advocated by the assertion (i.e., the direction perceived by the recipient). For the purposes of this experiment, the assertions will be written to be as uniform as possible. This effect of assertion strength will be minimized by systematically varying the source and topic combinations and groups of recipients (this procedure is discussed in detail in Chapter IV). Also, there is a possibility of the assertion having some effect on attitude toward the source due to delivery variables (e.g., voice quality, rate, fluency, etc.); however, this possibility will also be minimized by the design of the study (see Chapter IV).

The effect of the assertion will be observed, in this study, by comparing all cases in which only the direction of the assertion varies. Attitude change toward the topic should always be affected by the differences in assertion direction.

Now that each of the three factors have been theoretically defined and operationalized in terms of this study, it is important to point out that the order in which they were discussed--with the possible exception of the first factor--does not necessarily suggest a natural or logical ordering of these factors. Moreover, the resultant influences of each factor is cumulative with the effect of each of the others, i.e., the influences exerted on attitudes by each of the factors will either add

to or subtract from influences of the other factors. Also, the influences of each of the three factors relative to each other cannot be absolutely quantified prior to a communication situation.

Some examples may help to clarify this point. Often expectancy is perhaps the most important factor, i.e., "I don't care who runs for President, as long as he opposes (or favors) the Civil Rights bill, I'll vote for him." In other cases, preattitudes may be most important, i.e., for a person who likes boxing, but dislikes Cassius Clay, the fact that the two attitudes are inextricably related might cause a compromise of the two regardless of any assertion by or expectation of Clay. Also, in many cases the assertion becomes primarily important--such as an unknown speaker who must rely almost wholly upon the effectiveness of his speech.

Realizing that any one of the three factors could have a disproportionate effect, each of the factors will be studied in relative terms as discussed above, i.e., each will be studied and compared in cases where only the factor in question varies.

Investigation of these three factors will be made by combining them in all possible combinations. The combinations result in sixteen different arrangements which will be called categories and are defined in Figure 4. For convenience, the categories will be referred to by their appropriate numbers.

On the basis of the rationale suggested above, the following hypotheses will be tested:

I. The expectancy a recipient has for a given communication situation cannot consistently be inferred from the indices of his preattitudes toward the source and topic.

FIGURE 4

THE SIXTEEN EXPERIMENTAL CATEGORIES

No.	Categories		Assertion		Situation Summarized by Symbols
	Preattitudes Source	Topic	Expect	Perceive	
1.	+	+	F	F	Recipient has favorable attitudes toward source and topic; expects favorable assertion and perceives favorable assertion.
2.	+	+	0	F	Recipient has favorable attitude toward source and topic; expects source to oppose topic, perceives source favoring topic.
3.	+	+	F	0	Recipient has favorable attitude toward both source and topic; expects source to favor topic, perceives source opposing topic.
4.	+	+	0	0	Recipient has favorable attitude toward both source and topic; expects source to oppose topic, perceives source opposing topic.
5.	+	-	F	F	Recipient has favorable attitude toward source, unfavorable attitude toward topic; expects source to favor topic, perceives source favoring topic.
6.	+	-	0	F	Recipient has favorable attitude toward source, unfavorable attitude toward topic; expects source to oppose topic, perceives source opposing topic.
7.	+	-	F	0	Recipient has favorable attitude toward source, unfavorable attitude toward topic; expects source to favor topic, perceives source opposing topic.
8.	+	-	0	0	Recipient has favorable attitude toward source, unfavorable attitude toward topic; expects source to oppose topic, perceives source opposing topic.

FIGURE 4--Continued.

No.	Categories		Assertion		Situation Summarized by Symbols
	Preattitudes Source	Topic	Expect	Perceive	
9.	-	+	F	F	Recipient has unfavorable attitude toward source, favorable attitude toward topic. He expects source to favor topic, perceives source favoring topic.
10.	-	+	0	F	Recipient has unfavorable attitude toward source, favorable attitude toward topic; expects source to oppose topic, but perceives source favoring topic.
11.	-	+	F	0	Recipient has unfavorable attitude toward source, favorable attitude toward topic; expects source to favor topic, perceives source opposing topic.
12.	-	+	0	0	Recipient has unfavorable attitude toward source, favorable attitude toward topic; expects source to oppose topic, perceives source opposing topic.
13.	-	-	F	F	Recipient has unfavorable attitude toward source, unfavorable attitude toward topic; expects source to favor topic, perceives source favoring topic.
14.	-	-	0	F	Recipient has unfavorable attitude toward source, unfavorable attitude toward topic; expects source to oppose topic, perceives source favoring topic.
15.	-	-	F	0	Recipient has unfavorable attitude toward source and topic; expects source to favor topic, perceives source opposing topic.
16.	-	-	0	0	Recipient has unfavorable attitude toward source and topic; expects source to oppose topic, perceives source opposing topic.

II. Different recipient expectancies in similar communication situations will effect different amounts or direction of attitude change.

- A. In similar communication situations, attitude change toward source will be different when recipient expectancies are confirmed than when recipient expectancies are disconfirmed.
- B. In similar communication situations, attitude change toward source will not be affected by the assertion, when the recipient expectancy of the source is confirmed.
- C. In similar communication situations, recipient attitudes toward the topic will change more in the direction advocated by the assertion (or less in the direction not advocated by the assertion) when the recipients' expectancies are confirmed than when the expectancies are disconfirmed.

Based on the three factors discussed above in the rationale of this study, the sixteen directional predictions of attitude change in Figure 5 are expected.

FIGURE 5

DIRECTIONAL PREDICTIVE MODEL BASED ON THE HYPOTHESES OF THIS STUDY

Category Number	Preattitudes		Assertion		Attitude Change Predicted for	
	Toward Source	Topic	Expectancy	Perceived	Source	Topic
1.	+	+	Favor	Favor	+ (LS)	+ (L)
2.	+	+	Oppose	Favor	+ (L)	- (S)
3.	+	+	Favor	Oppose	-	-
4.	+	+	Oppose	Oppose	+ (LS)	-
5.	+	-	Favor	Favor	-	+
6.	+	-	Oppose	Favor	-	+
7.	+	-	Favor	Oppose	+ (L)	+ (S)
8.	+	-	Oppose	Oppose	- (S)	- (LS)
9.	-	+	Favor	Favor	+	+ (LS)
10.	-	+	Oppose	Favor	+	- (S)
11.	-	+	Favor	Oppose	+ (S)	+ (L)
12.	-	+	Oppose	Oppose	+	-
13.	-	-	Favor	Favor	- (LS)	+
14.	-	-	Oppose	Favor	-	+
15.	-	-	Favor	Oppose	+	+ (S)
16.	-	-	Oppose	Oppose	+ (S)	- (L)

L = The measure of more extreme attitude if they exist, is limited in these instances due to the limitations of the semantic differential scales.

S = Attitude change in these instances is expected to be slight owing to cancelling effect of affective factors hypothesized by this study.

CHAPTER IV

PROCEDURE

Eight sections of students in beginning speech courses at Oklahoma University served as subjects for this study. A total of 185 students completed the first test session. The section size averaged 23 and ranged from 20-26. All classes used for this study completed both testing sessions during regular class meetings. All classes met between 8:00 and 11:00 a.m.

Of the 185 subjects participating in the first testing session, four failed to complete or incorrectly marked their test booklets. The design of the study required that each student's pretest be matched with his posttest; therefore, thirteen subjects were lost because of absence during the second testing session, due to marking the second test booklet incorrectly, or because the experimenter was unable to match their first test booklet and their second test booklet with any reasonable degree of certainty. Two other subjects were dropped because their written remarks on the second test booklet invalidated their judgments.¹ The final number of students participating in the study was 160. The experimental population consisted of 89 male and 71 female subjects. The mean age of the subjects was 19.

¹One student caustically remarked that he had marked his booklet at random, another subject was late to both testing sessions and volunteered that she didn't know what she was doing.

This study will be discussed in terms of pretest and posttest; however, it should be noted that the subject expectancy (part of the pretest) was not measured until the second testing session (see Illustration 1). Each subject's expectancy of each communication event was measured immediately before hearing the recorded communication; however, since each subject heard four different communications, the expectancy measure was taken at four different times during the second testing session. The pretest and posttest, then, are divided by the communication stimulus which does not coincide with the two-week pause between first and second testing sessions.

The pretest of this study was designed to measure three dimensions of the experimental population. Two of these three measures were made during the first testing session. The first testing session measured: (1) the recipients' attitudes toward the experimental sources and topics (preattitudes), and (2) the relative degree of "openmindedness" (dogmatism). The dogmatism test was included in the study more as an addendum than as a central issue of the study. It was included to provide a rough measure of whether the dogmatic personality trait was correlated with the subject's tendency to violate the assumption that favored sources are expected to favor topics we favor, etc. The procedures and results of this test are discussed separately in Appendix B and will not be enlarged upon here.

The test booklet used in the first testing session was represented to the subjects as a public opinion survey which was being conducted by the Research Institute. The semantic differential was used as the attitude measure and appeared first in the booklet. The instructions for

COMMUNICATION STIMULI*

Group No.	TOPIC A (Speaker and direction of assertion)		TOPIC B (Speaker and direction of assertion)		TOPIC C (Speaker and direction of assertion)		TOPIC D (Speaker and direction of assertion)	
	1+	1-	2+	2-	3+	3-	4+	4-
1.	Pretest of attitudes toward sources and topics (also, Dogmatism test administered).		Pretest of recipient expectancy.		Pretest of recipient expectancy.		Pretest of recipient expectancy.	
2.								
3.	Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).		Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).		Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).		Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).	
4.								
5.	Pretest of attitudes toward sources and topics (also, Dogmatism test administered).		Pretest of recipient expectancy.		Pretest of recipient expectancy.		Pretest of recipient expectancy.	
6.								
7.	Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).		Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).		Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).		Posttest of attitude toward source and topic. Also, test of recipient's perception of the assertion (favor or oppose).	
8.								

TWO WEEK DELAY

*1+, 1-, 2+, 2-, etc. = Source #1 asserting in favor, Source #1 asserting in opposition, Source #2 asserting in favor, Source #2 asserting in opposition, etc.

Illustration 1.--Schematic of Experimental Procedure.

using the semantic differential were printed on the cover of the test booklet (see Appendix C). The experimenter read the instructions aloud while the subjects followed the printed form. The subjects then indicated their attitudes toward nine sources and eight topics (only four of each were later chosen to be used--this procedure is discussed on page 58). At the end of the attitude testing portion of the booklet was a "stop" page. When all students had completed the first portion of the booklet, they were asked to turn the page and follow the written instructions for the dogmatism test as the experimenter read them aloud.

The final page of the first booklet was an identification sheet. Provisions were made for indicating name, sex, age, major, college and the subject's written reaction to the survey. The subjects were again informed that their responses in the booklet would not affect their grade in the class nor would they be asked to explain any of their responses. They were informed that if they did not want to place their name on the paper, that it would be "all right" but they should be sure to give accurate accounts of the other information called for. The purpose of the identification sheet was; of course, to enable the experimenter to match each student's pretest with his posttest. When the name was omitted (as it seldom was) the other information, especially the handwriting of the subject's comments, was used to match each subject's first booklet with his second booklet.

During the two weeks between the first and second testing session, the distribution of preattitudes toward each of the nine sources and eight topics was compiled and analyzed (see Table 1). Four sources and four topics were chosen to be used in the communication stimuli on the

TABLE 1

DISTRIBUTION OF FAVORABLE AND UNFAVORABLE PREATTITUDES TOWARD THE EXPERIMENTAL SOURCES
AND TOPICS IN THE ORDER OF APPEARANCE IN PRETEST BOOKLET

Group Number	Sources and Topics																	
	1*	2	3*	4	5*	6	7*	8*	9*	10*	11	12*	13	14	15	16	17	
1 (n=20)	Pos. Att.	1	12	0	4	2	0	4	10	2	11	12	5	10	2	10	14	3
	Neg. Att.	10	1	9	9	9	11	8	1	8	1	0	5	2	7	3	0	7
2 (n=23)	Pos. Att.	5	15	2	5	2	0	11	18	1	19	17	13	13	2	13	21	14
	Neg. Att.	11	1	16	15	11	16	7	1	15	20	1	8	4	15	5	0	14
3 (n=23)	Pos. Att.	7	15	4	1	0	0	9	18	0	17	17	13	11	1	9	18	7
	Neg. Att.	8	1	10	18	13	16	6	1	18	0	0	3	3	15	5	0	7
4 (n=24)	Pos. Att.	8	19	2	4	2	2	7	18	4	21	18	7	9	1	18	21	6
	Neg. Att.	8	0	17	14	22	19	12	2	16	0	3	10	8	19	2	0	11
5 (n=26)	Pos. Att.	2	13	2	1	3	0	8	13	2	12	14	8	7	0	15	16	5
	Neg. Att.	10	0	11	12	8	15	6	3	11	0	0	5	7	14	0	0	5
6 (n=24)	Pos. Att.	9	19	1	0	1	0	11	19	4	22	20	15	15	0	20	21	7
	Neg. Att.	6	0	19	20	14	14	8	1	15	0	0	4	4	20	2	0	5
7 (n=25)	Pos. Att.	6	13	4	2	1	0	10	12	2	12	15	11	10	0	8	12	7
	Neg. Att.	5	0	8	8	10	9	5	2	8	2	1	4	4	11	2	1	8
8 (n=20)	Pos. Att.	4	14	2	4	0	0	7	15	2	16	15	10	8	1	10	15	4
	Neg. Att.	7	0	6	9	10	13	6	1	13	0	0	2	2	11	0	0	5
Total (N=185)	Pos. Att.	42		17		11		67	123	17	130		82					
	Neg. Att.	65		96		97		58	12	104	3		41					

*Experimental Sources and Topics chosen to be used: 5. Robert Welch; 8. Robert McNamara; 9. Bobby Baker; 10. Scott Carpenter; 1. A Boycott of British-made goods; 3. Prayer in the public schools; 7. medicare for the aged; 12. Nuclear treaty with Russia.

basis of the following criteria:

1. Sources and topics toward which the subjects held the largest total number of favorable (+) and unfavorable (-) attitudes.

2. Sources (or topics) toward which the subject's attitudes had approximately the same frequency of favorable and unfavorable attitudes when combined with the other experimental sources (or topics).

Two generally favorable sources (Scott Carpenter and Rober McNamara) and two generally unfavorable sources (Robert Baker and Robert Welch) were chosen to be used in the study. Four topics were chosen. For two of the topics, subjects' attitude scores were about evenly distributed in favorable and unfavorable ranges. For the other two topics, the subjects' attitude scores were generally favorable for one and generally unfavorable for the other.

Two 3-4 minute press releases were written for each of the four topics. One press release favored the topic and the other press release opposed the topic. Trained speakers were used to record the releases to minimize distinctive voice qualities or other delivery quirks.

There were three factors in the communication stimuli which were systematically varied. The factors were: (1) the four sources, (2) the four topics, and (3) the direction of the assertion (favor or oppose). Each experimental group of subjects heard assertions about the same four topics in the same order; however, four of the groups heard assertions that favored a given topic, while the other four groups heard assertions that opposed that same topic.

Each topic was attributed to each source two different times (once favoring the topic, once opposing the topic) to two different

groups. While each group heard an assertion about each topic, no two groups heard the same assertion (they heard either favor or oppose) attributed to the same source. In other words, all eight assertions (one favoring, one opposing each of four topics) were attributed once to each of the four sources, with no single group hearing the same assertion attributed to the same source as any other group. This procedure is summarized in Figure 6.

On the recorded versions of each press release identification tag lines were placed just prior to the message and immediately following the message. A typical tag line was, "UPI press release, number (a four digit number). (Name of source) on (topic). UPI (A date, in numerical form). The press releases and tag lines were arranged for presentation according to the combination of sources and topics illustrated in Figure 6.

Some effort was made to disassociate the posttesting session from the pretesting session. This effort was made to reduce the possibility of the subjects remembering or being biased by their responses on the semantic differential in the first testing session.² The posttest was attributed to a "Dr. Rogers from another university who had asked that a sample opinion survey be taken on Oklahoma University's campus because much of the research at the respective universities was very similar and could be compared." Having thus revealed the purpose of the task, the instructions printed on the cover sheet of the test booklet were read aloud as the subjects followed (see Appendix C for instructions).

The posttesting session of the study involved four judgments of

²The procedure here is similar to the procedure used by Tannenbaum. See his "Initial Attitude Toward Source and Concept . . .," in unpublished Ph.D. Dissertation, or (same title), in Public Opinion Quarterly, p. 417.

FIGURE 6

ORDER OF PRESENTATION OF COMMUNICATION STIMULUS

Topics ^a	Experimental Groups							
	1	2	3	4	5	6	7	8
1	Welch Favor	Welch Oppose	McNamara Oppose	McNamara Favor	Baker Favor	Baker Oppose	Carpenter Oppose	Carpenter Oppose
2	McNamara Oppose	McNamara Favor	Baker Favor	Baker Oppose	Carpenter Oppose	Carpenter Favor	Welch Favor	Welch Oppose
3	Baker Oppose	Baker Favor	Carpenter Oppose	Carpenter Favor	Welch Oppose	Welch Favor	McNamara Favor	McNamara Oppose
4	Carpenter Favor	Carpenter Oppose	Welch Favor	Welch Oppose	McNamara Favor	McNamara Oppose	Baker Favor	Baker Oppose

- ^aTopics: 1. A Proposal to Finance Medical Care for the Aged by Increasing Social Security Assessments.
 2. A Treaty Between Russia and the U. S. Banning Underground Nuclear Testing.
 3. A Voluntary Public Boycott in America of British-made Products to Discourage Britain from Selling Goods to Cuba.
 4. The Supreme Court Ruling Banning Prayers in Public Schools.

each of the four communication stimuli. First the subjects were told the topic of the release and the name of the person to whom it was attributed. They were asked to indicate their expectancy (favor or oppose) of the assertion. They then turned to the next page of the booklet which was blank, while they listened to the press release. Immediately following the recording, the subjects indicated their attitudes, via the semantic differential, for both source and topic (and in that order). The fourth judgment task required the subjects to indicate the actual position (favor or oppose) they believed the speaker had supported in his release. This final measure assured the experimenter that the message had been perceived as it was intended to be. The procedure explained above was repeated for each of four recordings that each of the eight groups heard.

Again, as in the first testing session, an identification sheet was the last page of the booklet. Considerably more pressure was exerted to get the names of the subjects on the booklets. Names, obviously, made matching the first booklet with the second booklet for each subject more reliable. Also, the actual testing was complete at this point; therefore no danger of contaminating the judgments remained. With the consent of the instructor of each speech class, the students were told that the class roll would be determined by the names on the booklets. Only a small percentage of the booklets did not have the subject's name on them.

The semantic differential. The semantic differential was used to measure attitudes in this study. The logic of the semantic differential is fully developed in Osgood, Tannenbaum and Suci's book and will not be discussed here.³ Essentially, the technique involves the judgment of a

³Osgood, Tannenbaum and Suci, The Measurement of Meaning.

concept such as "A public boycott of British-made goods" or "Scott Carpenter" against a series of scales (see Appendix C for instruments used in this study). Each of these scales is defined by a pair of polar adjectives placed at opposite ends of a seven point continuum. The subject is asked to check the position on the scales which best represents his feelings about the concept. So that this study could be compared with the studies of Tannenbaum and Bettinghaus, the scales used by both authors were used in this study. The scales were clean-dirty, fair-unfair, tasty-distasteful, reputable-disreputable, valuable-worthless, and pleasant-unpleasant.

To compute the value of each set of scales, the favorable or "good" pole of the scale is assigned a value of seven, the unfavorable or "bad" pole is assigned a value of one. Each scale position between extremes is assigned a value from two to six in series. Each experimental scale is scored according to the position of the subject's mark. The score for each individual scale is combined with the score of every other experimental scale yielding a total or composite index of the subject's attitude toward the concept. On the instrument used in this study the six experimental scales could yield a range of scores from 6 to 42.

In addition to the six experimental scales used in this study, four additional scales were added (but not scored) to minimize the possibility of subjects remembering their markings from one test to the next thereby introducing an order bias among the concepts. Also, four different arrangements of the same scales were used in the study. The different arrangements were effected by changing the order of the scales and by reversing the polarity of some of the scales. This procedure was followed

to minimize the possibility of the subjects establishing a pattern or "set" for marking the scales.

The measure of expectancy. One of the most important aspects of this study is the explicit measure of expectancy. Prior studies dealing with source and topic interaction have provided only implicit indications of what a recipient expects from a given communication.⁴ The earlier discussion of studies by Tannenbaum and Bettinhaus suggests that inferring expectancy from measured attitude toward source and topic may not be valid. This study will provide an explicit measure of expectancy rather than infer expectancy from measures of attitude.

A pilot study (see page 29 and Appendix A) was conducted to provide a preliminary test of the validity of inferring expectancy from attitude measures. The attitudes of twenty-seven students toward four sources and four topics were measured. Following the attitude measure, each subject was asked to indicate the position he would expect each source to support on each topic. The instrument used in this preliminary study was:

The position on the scale I would expect (source) to support when speaking on (topic) is:

Favor ____:____:____:____:____:____:____ Oppose

All combinations of sources and topics were inserted. Analysis of the results indicated that over 30 percent of the responses were not predicted by the assumption that favored sources are expected to favor topics that are favorable, etc. The relatively high percentage of

⁴See page 22.

responses that could not be accounted for suggested that either (1) the assumption was not valid or (2) the expectancy instrument, above, was not measuring the real expectancy of the subjects.

To test the validity of the expectancy measuring instrument, a second pilot study was conducted. The procedure of the second study was essentially the same as the first (see Appendix A). Attitudes toward four sources and four topics were measured with a semantic differential attitude test. Each of the four sources was paired with one of the four topics and inserted into the following measure:⁵

The position I expect (source) to support in his press release on (topic) is:

_____ Favor

_____ Oppose

Again over 30 percent of the responses on the expectancy measure were not accurately predicted by the assumption of favored sources supporting favorable topics.

The same subjects were then given a list of twelve statements for each of four source-topic combinations, i.e., each source was paired with one of the topics yielding four source-topic pairs. Each list of statements was prefaced by the following instruction:

In (source's) statement about (topic), I would expect that some of the following arguments or statements would be used: (circle the arguments you think he will most likely use.)

⁵The "neutral" position was omitted from this scale when the first study illustrated that it was used only in rare instances. This deletion of the neutral position is discussed fully in Appendix A. Since the scale units on the prior measuring instrument could not be assumed to have equal intervals for all subjects, they, also, were deleted.

Of the twelve statements which followed the instructions for each of the four source-topic combinations, six statements favored the topic and six statements opposed the topic. The twelve statements for each of the source-topic combinations had been previously validated in terms of the direction they supported (this validation is discussed in Appendix A).

The results of the pilot study indicated that with 100 percent reliability, subjects who expected a source to favor a topic chose only from the statements which favored the topic. In other words, the expectancy the subjects indicated on the expectancy measure were perfectly reflected by the type of arguments they expected the source to use. The same results were obtained for subjects expecting a source to oppose a topic.

The conclusions tentatively drawn from the pilot studies discussed above are:

1. The expectancy a recipient has of the assertion in an announced communication event is not predictable from measures of his attitudes toward the source and the topic of the proposed communication event.

2. The expectancy measuring device used in the studies measures a real expectancy that a recipient has of a proposed communication event.

The second instrument measuring expectancy described above was used in the present study and was administered to the experimental subjects immediately before they heard the particular communication event whose source and topic were inserted.

Sources for the communication stimulus. The experimental sources used in this study were chosen on the basis of several criteria. The messages or assertions were to take the form of tape recorded press

releases enabling the experimenter to choose from a wide range of possible sources.

Three different possibilities were considered. The sources could be actual persons who read short manuscripts which reflected their own opinions about certain topics. Such a procedure would have required some technique (such as Bettinghaus used) to acquaint the persons with the audience prior to the delivery of the communication so that the audience would have the opportunity to form an opinion or attitude toward the source. However, Bettinghaus' results imply that his experimental audiences held their attitudes toward the topics much more strongly than their attitudes toward the recently introduced sources, resulting in a noticeably larger shift in attitudes toward the speaker than toward the topics.

The second possibility was to use sources of a fictitious nature, e.g., the "director of Social Security," or "a soldier," "a communist" or "John Malone, Under-Secretary of State." Using fictitious sources creates the possibility that different recipients may have different referents for the same term. "Communist," for example, may refer to "Khrushchev," "underground agents," or a variety of other concepts for different recipients. This variability of reference would be extremely difficult to assess; therefore, this possibility was rejected.

The third possibility for selection of sources was to use well-known persons. This alternative presented the problem of either acquiring the assistance of well-known persons in preparing the communication stimuli or using the well-known person's name and simulating an assertion which could be attributed to the person. The third method was

chosen because it seemed a more realistic method. The experimental subjects could be expected to have more meaningful attitudes toward real sources than they would have toward fictitious, unknown, or ambiguous sources.

After choosing the third method, the following additional criteria were established to serve as guidelines for choosing the nine sources to be included in the pretesting attitude measure.

1. Names chosen must be sufficiently well known to allow the a priori assumption that most experimental subjects hold relatively well-formed attitudes toward each source.
2. Source's voice must not be readily identified because of: (a) regional dialects (such as Robert Kennedy's Bostonian dialect), (b) age, or (c) extensive public exposure (appearances on television, radio, etc.).
3. Sources must reasonably be expected to speak on the topics to be chosen for the assertions, i.e., one would probably not expect Premier Khrushchev to speak on the beauties of democratic living.
4. Sources must be male.

Nine sources were chosen which the experimenter felt adhered most closely to the criteria above. These nine sources were included in the pretests of attitude. The success of the criteria would be indicated by the experimental subject's reaction to the communication stimuli. If the subjects questioned the authenticity of the simulated press releases, the criteria probably had not been satisfied.

Following the first testing session, the distribution of favorable and unfavorable attitudes toward each of the nine sources was determined (see Table 1). Four names--two generally unfavorable, two generally favorable--were chosen to be used as sources in the communication stimuli.

The names chosen were Robert McNamara (Secretary of Defense), Robert "Bobby" Baker (former Secretary to the Senate Democrats), Robert Welch (author of the John Birch Society's Blue Book), and Scott Carpenter (astronaut).

Topics for the communication stimuli. The following criteria were established by the experimenter to serve as guidelines in choosing the topics to be used in this study:

1. The topics should be of timely interest. Timely interest was defined as a popular controversy which had received rather extensive publicity in the mass media within six months of the time when the experimental subjects would hear the experimental assertions.

2. The topics should be of sufficient significance to warrant the assumption that the subjects have some knowledge of them. This criterion limited the topics to controversies of national importance and excluded controversies of a local or state level.

3. It should be reasonable to assume that the subjects have a relatively stable attitude toward the topics. This criterion is actually contingent upon the first two criteria. In other words, the experimental subjects should have had ample time and/or opportunity (because of the publicity each controversy enjoyed) to form attitudes toward the topics.

4. The topics should be stated in a manner that is sufficiently specific. Many studies (including Tannenbaum and Bettinghaus') use relatively ambiguous topics such as "labor unions." Such a term might refer to something different for each experimental subject; therefore, this study narrowed relatively ambiguous references as "prayer in the public schools" to "the Supreme Court ruling banning prayer in the public

schools. Such a procedure would seem to provide a more specific focal point for the attitudes of the experimental subjects.

5. The nature of each topic should provide a believable circumstance when attributed to any of the four experimental sources. This criterion is the same as no. 3 under "sources" above. In other words, the combining of a source with a particular topic should not produce distrust or disbelief of the situation in the minds of the subjects.

On the basis of the criteria above, eight topics were chosen and included in the pretest. Following the pretesting sessions, the distribution of attitudes toward each of the topics was determined (see Table 1). Four of the eight original topics were chosen on the basis of the experimental subjects' attitude toward them. The topics chosen represent one topic toward which attitudes were generally favorable, one topic toward which attitudes were generally unfavorable, and two topics toward which the number of favorable and unfavorable attitudes was approximately equal. The topics were:

1. A voluntary boycott in America of British-made products to discourage Britain from selling goods to Cuba.
2. A proposal to finance medical care for the aged by increasing social security assessments.
3. A treaty between Russia and the United States banning underground nuclear testing.
4. The Supreme Court ruling banning prayer in the public schools.

For each of the experimental topics, two 3-4 minute press releases were written--one favoring the topic, the other opposing the topic. The procedure for recording the releases is discussed below.

Press releases. Having chosen the sources and topics, it was necessary to simulate press releases that would be believable. The four topics chosen for this study and the four sources are discussed separately above. Eight 3-4 minute press releases were written (one favoring and one opposing each of the four topics). Four male speakers were chosen from among the Oklahoma University speech department staff to record the releases. The speakers were instructed to read the material in a manner suitable to the usual prepared statement type of press release, i.e., a dry, rather monotonous voice, substituting loudness for pitch variation, etc. The recordings were made in four different rooms giving each recording a different sound location. The occasional hesitations or background noises that occurred during the taping session were not edited out.

To enhance the concept of press releases each individual recording had a brief instruction and tag line added to it before it was heard by the experimental audiences. The introduction and tag line identified the recording as a press release. The delivery techniques of the speakers were not good as judged by public speaking standards (as would be expected in a press release), but the physical qualities of the recordings (intelligibility, etc.) was good.

The final recordings sounded quite authentic to the experimenter and apparently sounded authentic to the experimental audiences since not one subject questioned the authenticity of the releases and several subjects indicated their delight in hearing "real, unedited press releases."

Summary

Eight sections of students in beginning speech classes at the University of Oklahoma participated in this experiment. The total number

of students who completed all phases of the testing procedures was 160.

The first testing session measured the subjects' attitudes toward nine sources and eight topics. Four sources and four topics were chosen on the basis of the distribution of favorable and unfavorable attitudes toward each. Eight assertions--one favoring and one opposing each of the four topics--were prepared and recorded on tape.

Two weeks later, each of the eight groups of subjects heard four assertions which were attributed to the four sources; however, the sources, and the direction of the assertion (favor or oppose) were systematically varied so that none of the groups heard an assertion whose direction and apparent source was the same as any other group. The purpose of this variation was to broaden the scope of the stimuli to better determine if the effects hypothesized by this study were in fact dominant factors in accounting for attitude change through communication.

Immediately before hearing each communication, each subject indicated the direction he expected the assertion to support relative to the topic. The subjects then heard a simulated press release which was attributed to one of the four experimental sources. Following the communication stimulus, each subject's attitude toward both source and topic was measured. After indicating their attitudes, the subjects each indicated which direction they perceived the assertion to actually support. The procedure described in this paragraph was repeated for each of the four communications each group heard.

The responses of subjects in the eight groups who completed the testing procedure were partitioned according to all possible combinations of preattitudes, expectancies, and direction of the assertion, into

sixteen categories. The attitude change observed in each of the categories served as the basic elements for analyzing the results of this study.

CHAPTER V

RESULTS AND CONCLUSIONS

The 160 subjects composing the experimental population for this study were each exposed to four different source-topic-assertion combinations (see Chapter IV). This procedure could have resulted in 640 individual measures of attitude change; however, owing to the ambiguity of the neutral position on the semantic differential attitude measure (see Appendix C, "Instructions for Semantic Differential") only the subjects whose preattitudes conformed with source-topic combinations of favorable-favorable (S+T+), favorable-unfavorable (S+T-), unfavorable-favorable (S-T+), and unfavorable-unfavorable (S-T-), were used for the analysis. The rationale for this method of subject selection is discussed on page 37 of Chapter II. Essentially, the choice of subjects according to their favorable and unfavorable attitudes is based on the assumption that a "directional" attitude (as opposed to a "neutral" attitude) would be more conducive to generating an expectancy of the attitude's referent. In other words, this study assumes that a recipient with a directional attitude (i.e., favorable or unfavorable) toward a concept such as "Barry Goldwater" would generate an expectancy of an announced communication by Goldwater more readily than a recipient who didn't know or didn't care about Goldwater. This assumption is based on the theories and results of studies of general expectancy (see

Chapter II, pp. 31 ff).¹

The semantic differential attitude measure used in this study provided a range of possible scores from 42 to 6: 42 was the most favorable response possible, 6 the most unfavorable. The arbitrary division assigned to the range of scores was: 6-20, unfavorable; 28-42, favorable. Two hundred fifty-nine cases met the criteria set forth in the paragraph above. In other words, the 160 subjects in the eight experimental groups resulted in 259 cases in which a subject heard a source-topic combination (press release) toward which his preattitudes were favorable-favorable (S+T+), favorable-unfavorable (S+T-), etc. The relatively low number of cases fulfilling the selection criteria indicates a low percentage of involvement in the experimental population relative to the particular source-topic combinations each group heard.

The 259 individual cases which met the criteria of this study were assigned to categories according to their preattitudes toward source and topic, their expectancy, and direction they perceived the assertion to support. As this study predicted, categories representing all possible combinations of preattitudes, expectancies, and perceived directions of the assertion, were created by this partitioning. The number of subjects in each category varied from 3 to 43. Tannenbaum's prediction that "we expect sources we favor to favor topics we favor, etc.," would have predicted only eight of the sixteen categories resulting from this procedure. In other words, by actually measuring each recipient's expectancy rather than inferring expectancy as earlier studies have done,

¹Especially "level of aspiration" studies and Aronson and Carlsmith studies.

this study has, in effect, divided the original categories established by Tannenbaum and copied by Bettinghaus.

Over one-third of the cases violated Tannenbaum's assumption that favored sources favor favored topics, etc. A chi-square test of frequencies was applied to provide a statistical estimate of the difference. The test yielded a chi-square value of 31.23, which with 3 degrees of freedom, is significant beyond the 0.005 level of confidence (see Table 2). The evidence supports hypothesis I which suggests that expectancy is not predictable from pre-communication measures of attitude toward a source and a topic. It should be noted that categories 1, 3, 6, 8, 10, 12, 13, and 15, are the same as eight categories used in the Tannenbaum and Bettinghaus studies. The other categories, i.e., 2, 4, 5, 7, 9, 11, 14, and 16, respectively, represent categories in which the basic assumption of the "congruity theory" we expect sources we favor to favor topics we favor, etc., was not valid. In this study, the major analyses will compare the two categories in each of the category pairs, 1-2, 4-3, 5-6, 8-7, 9-10, 12-11, 13-14, and 16-15, to test the relative effect of expectancy on attitude change toward source and topic.

Before analyzing attitude change, it was first necessary to determine if the communication stimuli had, in fact, effected attitude changes among the experimental recipients. T-tests were applied between the pre-test and posttest attitude scores for both source and topic within each category. In 14 of the 32 cases, attitude change amounts were statistically significant beyond the .05 percent level. The 14 cases significant beyond the .05 level exceed chance probability; therefore, the assumption that the communication stimuli would effect attitude

change was supported (see Table 3). It should be noted that in several categories, attitude change was predicted to be slight; therefore, the fact that some categories did not show significant attitude change is not unexpected.

TABLE 2

SUMMARY OF DATA ILLUSTRATING NUMBER OF RECIPIENTS WHO VIOLATED
EXPECTANCY ASSUMPTION OF EARLIER STUDIES

Preattitudes of Recipients Source	Topics	Predicted Expectancy According to Earlier Studies	Number of Recipients' Expectancies That		Chi- Square Value
			Conformed	Violated	
+	+	Favorable Assertion	52	16	
+	-	Unfavorable Assertion	45	28	
-	+	Unfavorable Assertion	32	24	
-	-	Favorable Assertion	37	25	
Total			166	93	31.23 (p. < .005) (d.f. = 3)

A main objective of this study is to determine if expectancy has an effect on attitude change. The test of this factor is readily made by comparing category pairs in which expectancy is the only variable factor. The difference in attitude change effected by corresponding differences in expectancy could vary in two different dimensions, i.e., in mean difference (i.e., amount of change as tested by t-tests) or in variance

TABLE 3

MEAN ATTITUDE CHANGE TOWARD SOURCE AND TOPIC WITHIN CATEGORIES

Category Number	Categories					Mean Attitude Change and Direction of Change ^a	
	Preattitude		Assertion		N	Source	Topic
	Source	Topic	Expect	Perceive			
1	+	+	F	F	43	+0.78	+1.46
2	+	+	O	F	13	-0.08	-7.00 ^b
3	+	+	F	O	9	-2.67	-7.33
4	+	+	O	O	3	+1.37	-17.00 ^b
5	+	-	F	F	17	-2.41	+15.88 ^c
6	+	-	O	F	25	-1.28	+8.08 ^c
7	+	-	F	O	11	+2.00	+3.37
8	-	-	O	O	20	-1.55	-0.80
9	-	+	F	F	17	+9.06 ^c	-1.95
10	-	F	O	F	19	+12.15 ^b	-1.37
11	-	+	F	O	7	+7.00	-3.63
12	-	+	O	O	13	+9.31 ^c	-9.47 ^c
13	-	-	F	F	19	+8.79 ^c	+10.31 ^c
14	-	-	O	F	8	+13.45 ^b	+11.87 ^c
15	-	-	F	O	18	+8.17 ^c	-0.30
16	-	-	O	O	17	+7.77 ^c	-0.97

^aBased on a maximum possible change of 36.00.

^b.05 level of confidence.

^c.01 level of confidence.

(as tested by F-tests). In other words, if attitude change in a confirmed expectancy category was generally in the same direction, but smaller (or larger) than the measured attitude change in a disconfirmed expectancy category, the variance of scores in each category would be similar, but the mean amount of attitude change would differ. Such a difference should be shown to be significant by t-tests between the respective means. On the other hand, if one or the other categories differing only in terms of expectancy resulted in individual attitude changes that were largely inconsistent with the attitude changes in the other category, a test comparing the variance of the two categories (i.e., the F-test) would likely show statistically significant differences. This study is interested in either or both types of differences; therefore, both the F-test and the t-test were applied to the data.²

The test of variance was applied to the measured individual attitude change scores (I-scores) in each of the category pairs for both source and topic. Of the 16 comparisons made, two were significant at the .02 level (see Table 4). Both of the significant differences were found in attitude change toward the topic. The number of significant comparisons was not sufficiently consistent to attribute to factors other than chance.

To test the significance of mean attitude change between the categories which differ only in recipient expectancy, t-tests were applied. The category pairs used in this analysis are the same as those used in the variance test described above. The t-test would indicate if the

²Helen Walker and Joseph Lev, Statistical Inference (New York: Henry Holt and Co., 1953), pp. 143, 185 ff.

TABLE 4

TESTS FOR VARIANCE RATIO OF CATEGORY PAIRS

Cate- gory Number	Categories				N	Test of Variance ^a			
	Preattitudes		Assertion			Source		Topic	
	Source	Topic	Expect	Perceive		S ²	F	S ²	F
1	+	+	F	F	43	17.9	N.S.	21.4	6.19 ^b
2	+	+	O	F	13	20.9		132.7	
3	+	+	F	O	9	46.2	N.S.	129.0	N.S.
4	+	+	O	O	3	10.4		25.4	
5	+	-	F	F	17	38.9	N.S.	46.6	N.S.
6	+	-	O	F	25	38.5		67.1	
7	+	-	F	O	11	20.8	N.S.	83.6	3.99 ^b
8	+	-	O	O	20	20.8		20.9	
9	-	+	F	F	17	145.5	N.S.	32.0	N.S.
10	-	+	O	F	19	93.8		46.5	
11	-	+	F	O	7	60.3	N.S.	12.95	N.S.
12	-	+	O	O	13	36.6		48.3	
13	-	-	F	F	19	72.9	N.S.	79.0	N.S.
14	-	-	O	F	8	122.8		49.3	
15	-	-	F	O	18	61.9	N.S.	15.27	N.S.
16	-	-	O	O	17	52.0		34.4	

$$a_F = S^1/S^2$$

^bSignificant at .02 level of confidence.

N. S. = Not significant above .20 level.

amount of change in the two categories of each category pair was statistically significant. The nature of this measure in this study requires prefacing.

The dynamic interaction between source and topic has been repeatedly demonstrated (see Chapter II). To cite the two examples most cogent to this study, Tannenbaum found most attitude change occurred toward the topic in his study. Bettinghaus, on the other hand, reports a dominant amount of change toward the sources. Both authors measured the total effect of their communication stimuli by D-scores which are computed by comparing the difference between source and topic scores on the pretest with the difference between source and topic on the posttest. The direct comparison of the attitude score for source with the attitude score for topic necessitates the assumption that the scale intervals (i.e., the distance between any two scale positions) are the same for both concepts (i.e., source and topic). While such a procedure is convenient, it is not necessarily valid. The semantic differential is not necessarily comparable across concepts. Osgood, Tannenbaum and Suci write:

Several conclusions seem justified by these studies of comparability across concepts. In the first place, it is clear that there is a high degree of concept-scale interaction; the meaning of scales and their relation to other scales vary considerably with the concept being judged.³

For this reason, this study will not duplicate Tannenbaum's and Bettinghaus' procedures; rather, it will compare attitude change toward the source in one category with the attitude change toward the source in the other category within each category pair and attitude change toward the topic with attitude change toward the topic (this prevents having to

³Osgood, Tannenbaum and Suci, The Measurement of Meaning, p. 187.

compare source with topic as Tannenbaum and Bettinghaus did), This method of comparison does not deny existence of source-topic interaction-- it just does not attempt to measure it directly.

In the eight possible category comparisons, if t -test indicates a significant difference between either source or topic comparisons, Hypothesis II (i.e., differences in expectancy will cause differences in attitude change) will be supported.

The t -tests were applied between mean attitude change scores (C-scores) for sources and again for topics within each category pair. Both categories in each category pair were similar except for the difference in expectancy. Results indicate that four of eight possible category comparisons yielded t -values beyond the .05 level of confidence between either source or the topic differences (see Table 5). One category comparison shows significant difference between attitude change toward source, while three show significant different attitude changes toward the topic.

The evidence supports Hypothesis II--that expectancy is an affective factor in attitude change in some cases, i.e., different expectancies result in differences in attitude change. This result would obviously have been more powerful if it had been consistently significant in all comparisons of categories differing in expectancy; however, since the trends appear consistent, but the differences in all comparisons do not indicate statistical t -values, a more generalized analysis is needed.

Such an analysis is provided by a generalized distance formula of solid geometry.⁵ The rationale for using this formula to analyze

⁵C. Osgood and G. Suci, "A Measure of Relation Determined by Both Mean Difference and Profile Information," Psychological Bulletin, XLIX (1952), 251-262. Also, see: H. Webster, "A Note on Profile Similarity," Psychological Bulletin, XLIX (1952), 538-39.

TABLE 5

T-TEST COMPARISON OF TOTAL ATTITUDE CHANGE IN CATEGORIES
DIFFERING IN EXPECTANCY ONLY

Category Number	Subjects Per Category	Mean Change for		T-test Values
		Source	Topic	
1	43	+0.89	+0.77	3.626 Tb
2	13	-0.15	-7.00	
3	9	-2.67	-7.33	N.S.
4	3	+1.37	-17.00	
5	17	-2.41	+15.88	3.333 Tb
6	25	-1.28	+8.08	
7	11	+2.00	+3.27	2.109 Sa
8	20	-1.55	-0.80	
9	17	+9.06	-1.95	N.S.
10	19	+12.15	-1.37	
11	7	+7.00	-3.63	2.180 Ta
12	13	+9.31	-9.47	
13	19	+8.79	+10.31	N.S.
14	8	+13.45	+11.87	
15	18	+8.17	-0.30	N.S.
16	17	+7.77	-0.97	

T = Difference due to expectancy significant on Topic comparison.

S = Difference due to expectancy significant on Source comparison.

^a.05 level of confidence.

^b.01 level of confidence.

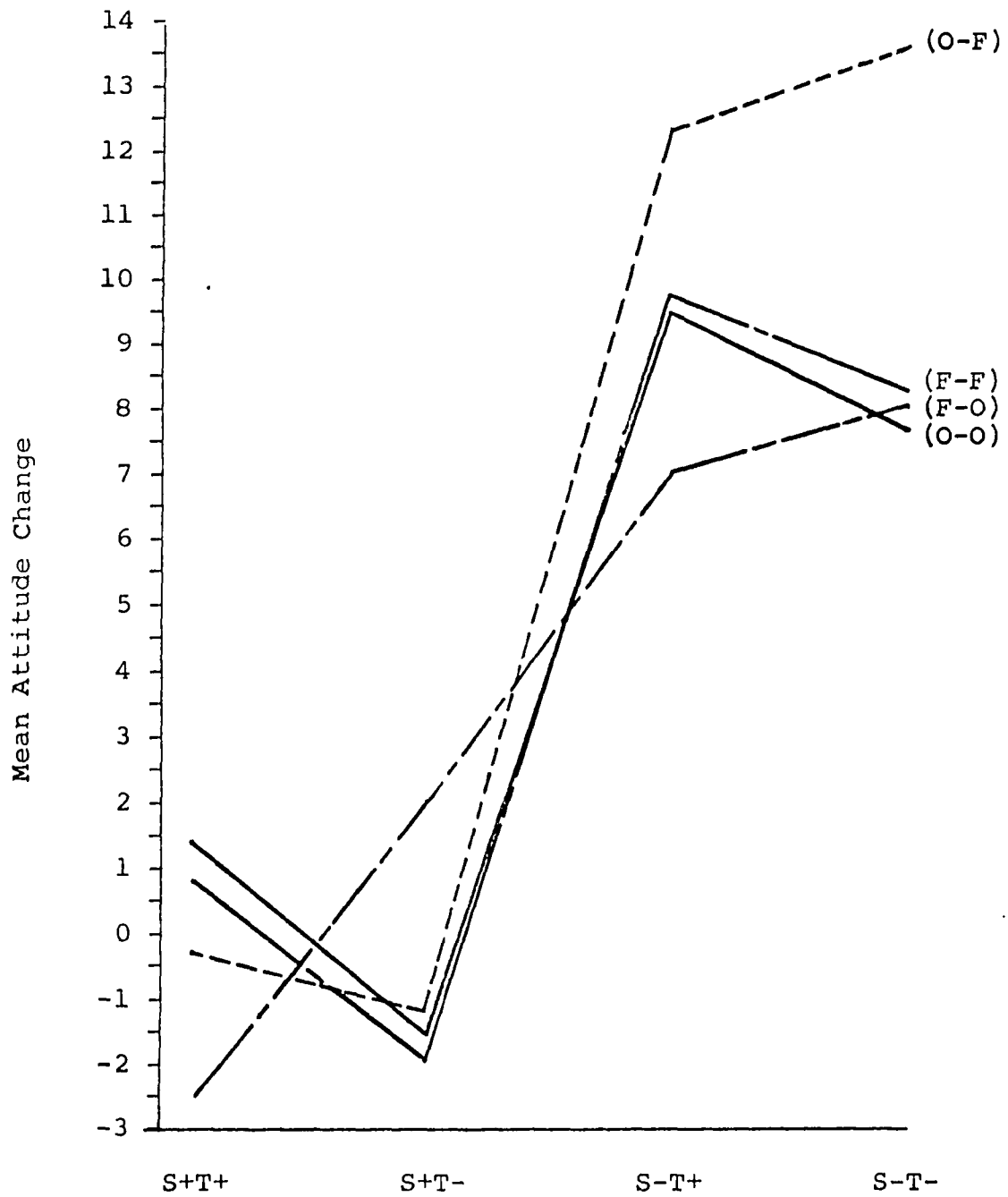
response profiles is discussed at length in other sources and will not be discussed here. This is the same statistic discussed above concerning Tannenbaum and Bettinghaus' direct comparison of attitude change toward source with attitude change toward topic; however, it should be noted that the use of the D-score at this point in this study is not inconsistent with the discussion of the measure above. This study questioned using the D-score between different concepts (source and topic). This study will use the D-score within concepts of source and topic. As discussed earlier, the bases for this procedure are much more concrete. The use of D-scores within concepts leaves only the question of comparing attitude change across subjects (i.e., does the semantic differential scale unit vary from one person or group to the next?). Considerable evidence exists to illustrate that scale units of the semantic differential do not vary significantly across subjects or groups drawn from a common parent population.⁶

It should also be noted that D-score analysis is not unrelated to the correlation coefficient "r."⁷ However, r gives only information describing how two sets of data vary in a serial relation. It gives no estimate of the "distance" between two profiles. D-score, on the other hand, gives an estimate of this distance component.

An hypothesis of this study (Hypothesis II-A) suggests that expectancy will produce different amounts and/or directions of attitude change toward source depending upon whether it is confirmed or disconfirmed. Illustration 2 provides graphic illustration of differences in attitude

⁶Osgood, Tannenbaum and Suci, The Measurement of Meaning, p. 170 ff.

⁷Webster, Psychological Bulletin, XLIX, 539.



Preattitudes of Recipients Toward Source and Topic

Illustration 2. Profiles of Mean Attitude Change Toward Source for Four Conditions of Expectancy.

change for the four conditions of expectancy. To analyze the data relative to this hypothesis, the D-score analysis was applied to the mean attitude change profile of the four different expectancy conditions (F-F, O-F, F-O, O-O) across the four combinations of preattitudes toward source and topic used in this study (S+T+, S+T-, S-T+, S-T-). Table 6 summarizes the results of the D-score analysis. The table compares each profile with every other profile and the relative size of the number represents the relative distance between compared profiles.

TABLE 6
D-SCORE VALUES FOR ATTITUDE CHANGE TOWARD SOURCE ACROSS THE FOUR
EXPECTANCY PROFILES

	(O-F)	(F-O)	(O-O)
Expected Favorable Assertion	5.85	5.99	1.43 ^a
Perceived Favorable Assertion (F-F)			
Expected Assertion to Oppose Perceived Favorable Assertion (O-F)		8.46	6.55
Expected Assertion to Favor Perceived Opposing Assertion (F-O)			5.87

^aThe relative similarity of the two confirmed expectancy categories is readily apparent.

The relatively large D-score values indicate expectancy had considerable differentiating effects on attitude change toward the source. Illustration 2 provides a graphic illustration of the profiles compared

by this analysis.

The rationale developed in Chapter III of this study theorized that only two of the three factors affecting attitude change were operative in changing attitude toward the source. The two factors were expectancy and incongruity. Since incongruity is a function of preattitude toward source and topic, its effect should be constant across the profiles shown in Illustration 2. Moreover, since expectancy does not affect attitude toward the source when it is confirmed, the two confirmed expectancy profiles should be very similar and close together (see Hypothesis II-B). This expected similarity between confirmed expectancy profiles can be observed in Illustration 2 and is reflected by the relatively small D-score value for these two profiles in Table 6.

While the profiles for confirmed expectancies are very similar despite the direction of assertion, inspection of Table 6 and Illustration 2 indicates that the disconfirmed profiles differ from each other as well as from confirmed expectancy profiles.

Tentatively, the results of the D-score analysis support Hypotheses II-A and II-B, i.e., attitude change toward source is different when recipient expectancies are confirmed than when disconfirmed, and attitude change toward the source is the same when expectancies are confirmed, despite the direction of the assertions.

Within the concept of topic, t-tests applied between category pairs yields significance beyond the .05 level in three of the eight comparisons (see Illustration 3). While three of eight significant differences are slightly more than would be expected by chance, the statistical significance is not consistent enough across the four

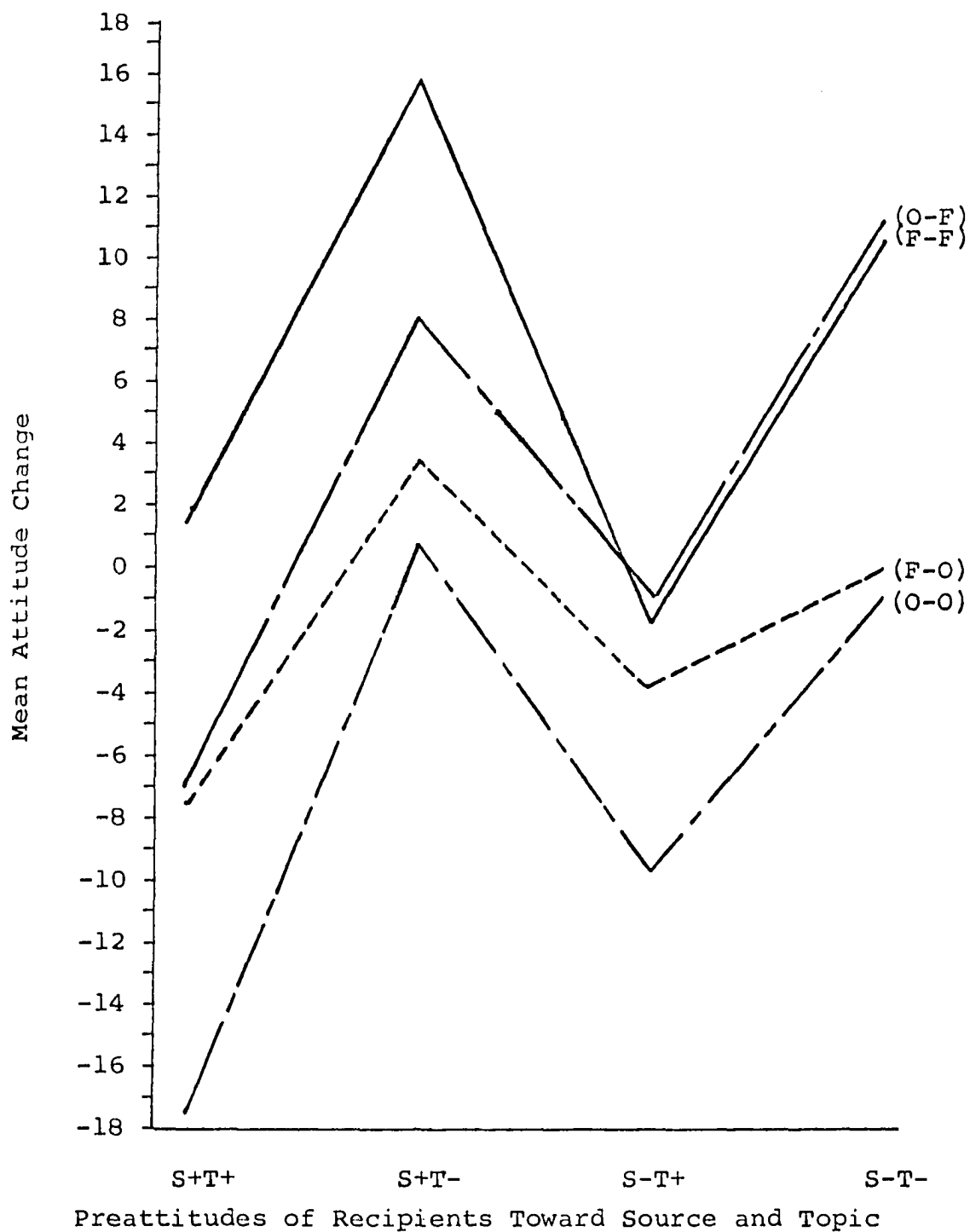


Illustration 3. Profiles of Mean Attitude Change Toward Topics for Four Conditions of Expectancy.

combinations of preattitudes to strongly support Hypothesis II-C.

Hypothesis II-C suggests that disconfirmed expectancies will result in the assertion being less effective in changing attitudes toward the topic. Owing to the lack of statistical significance, this hypothesis is not fully supported; however, Illustration 3 shows the trend to be in the predicted direction in 6 of the 8 comparisons. This trend in the results will be discussed in the next chapter.

The D-score analysis was applied to the mean attitude change toward source. The D-values are summarized in Table 7 and indicate the lessening effect disconfirmed expectancy has on attitude change toward the topic.

TABLE 7
D-SCORE VALUES FOR ATTITUDE CHANGE TOWARD THE TOPIC
ACROSS THE FOUR EXPECTANCY PROFILES

	(O-F)	(F-O)	(O-O)
Recipient expects Favorable Assertion and Perceives Favorable Assertion (F-F)	11.66	18.78	27.42
Recipient expects Opposing Assertion and Perceives Favorable Assertion (O-F)		13.22	20.21
Recipient expects Favorable Assertion and Perceives Opposing Assertion (F-O)			11.72

The final result of this study to be reported is the efficiency of the directional predictive model of attitude change. This model was based on the intuitive assumption that the three major factors in attitude

change (expectancy, incongruity, and preattitude combinations) would have equal effect on attitude change. Apparently this assumption was not valid. Illustration 2 shows that attitude change toward source was mostly positive, i.e., most attitude changes are toward the favorable poles of the semantic differential, while attitude changes toward the topic were about equal in both directions.

The predictive model correctly predicted mean attitude change in 26 of the 32 cases (see Table 8). Also, when the predictions were tested on the basis of individual recipient responses, the model was considerably more successful than Tannenbaum's predictions of Bettinghaus' results; however, because expectancy, incongruity, and assertion seem variable in their respective potentials for affecting attitude change, it seems that a directional predictive model (like that posited in this study) would be accurate only in certain situations, and would not be generalizable. Because of this, the directional model in this study is offered more as a summary of the results obtained than a set of predictions. This model will be discussed in the following chapter.

Conclusions

From the results obtained in this study, the following conclusions can be drawn.

1. Expectancy, as defined by this study, is not predictable from measures of preattitudes toward source and topic. A recipient's expectancy of the position a source will support in an assertion is quite independent of the recipient's attitude toward the source and the topic of the assertion. This conclusion also has good face validity. If a person had favorable attitude toward President Johnson, but did not

TABLE 8

SUMMARY OF EFFICIENCY OF MODEL IN PREDICTING DIRECTION OF
ATTITUDE CHANGE OF THE EXPERIMENTAL POPULATION

Category Number	N	Predicted Attitude Change		Mean Obtained Attitude Change		Per Cent of Correct Predictions at Individual Level	
		Source	Topic	Source	Topic	Source	Topic
1	43	+ (L)	+ (L)	+0.78	+1.46	56.2	60.6
2	13	+ (L)	- (S)	-0.08	-7.00	36.3	66.6
3	9	-	-	-2.67	-7.33	66.6	66.6
4	3	+ (LS)	-	+1.37	-17.00	66.6	100.0
5	17	-	+	-2.41	+15.88	69.0	100.0
6	25	-	+	-1.28	+8.08	59.0	83.3
7	11	+ (L)	+ (S)	+2.00	+3.27	70.0	60.0
8	20	- (S)	- (L)	-1.55	-0.80	55.5	63.1
9	17	+	+ (LS)	+9.06	-1.95	88.2	73.3
10	19	+	- (S)	+12.15	-1.37	89.3	47.0
11	7	+	+ (L)	+7.00	-3.63	80.0	00.0
12	12	+	-	+9.31	-9.47	100.0	84.6
13	19	- (LS)	+	+8.79	+10.31	05.5	82.3
14	8	+	+	+13.45	+11.87	100.0	100.0
15	18	+	+ (S)	+8.12	-0.30	93.7	30.7
16	17	+ (S)	- (L)	+7.77	-0.97	93.7	41.1

L = If more extreme attitudes could be attained, the semantic differential could not measure them due to scale limitations.

S = Change expected to be relatively slight due to the cancelling effect of the affective factors.

approve of his "war on poverty" program, he would still expect the President to favor the program because Johnson is publicly and popularly identified with the program.

2. Different expectancies cause different amount and/or directions of attitude change toward the source and topic of a communication event.

3. When recipient expectancies are confirmed, the direction supported by the assertion has little effect on attitude change toward the source.

CHAPTER VI

DISCUSSION

Discussion of results. This study was designed to test the effects of expectancy and congruity across a broad field of source and topic combinations. To accomplish this goal, the sources and topics and directions of assertions were systematically varied to provide as broad a range of source-topic combinations as possible. The attempt to broaden the nature of the communication stimulus undoubtedly sacrificed some statistical precision by limiting the number of cases and increasing variance within categories; however, the relatively inconsistent results of prior studies suggest that a limited investigation does not provide much generalizability.¹ For a comparison of the predictive models discussed, see Figure 7.

The results of this study indicate several instances relative to recipient expectancies in communication that have not been accounted for in earlier studies. As indicated in Chapter V, expectancy is (1) a factor in accounting for variations in attitude change toward sources and topics, and (2) expectancy cannot be predicted with accuracy from pre-tested recipient attitudes toward the source and topic of a given communication situation.

¹See Chapter II, p. 25.

FIGURE 7

SUMMARY OF PREDICTIONS AND RESULTS OF THE PRESENT STUDY, BETTINGHAUS, AND TANNENBAUM.
A COMPARISON OF THEORIES WHICH DEAL WITH THE COMMUNICATION SITUATION.

Category Number	Categories				This Study's Predictions ^a		This Study's Results ^b		Tannenbaum's Predictions ^c		Bettinghaus' Results ^d	
	Preattitudes Source	Topic	Assertion Expect	Perceive	Source	Topic	Source	Topic	Source	Topic	Source	Topic
1	+	+	F	F	+	+	+	+	+	+	-	-
2	+	+	O	F	+	-	-	-	-	-	-	-
3	+	+	F	O	-	-	-	-	-	-	-	-
4	+	+	O	O	+	-	+	-	-	-	-	-
5	+	-	F	F	-	+	-	+	-	-	-	-
6	+	-	O	F	-	+	-	+	-	+	-	+
7	+	-	F	O	+	+	+	+	-	-	-	-
8	+	-	O	O	-	-	-	-	+	-	-	+
9	-	+	F	F	+	+	+	-	-	-	+	-
10	-	+	O	F	+	-	+	-	+	-	+	-
11	-	+	F	O	+	+	+	-	-	+	+	-
12	-	+	O	O	+	-	+	-	-	+	+	-
13	-	-	F	F	-	+	+	+	-	-	+	+
14	-	-	O	F	+	+	+	+	-	-	+	+
15	-	-	F	O	+	+	+	-	+	+	+	+
16	-	-	O	O	+	-	+	-	-	-	-	-

^aSee Figure 3, p. 26.

^bSee Table 6, p. 85.

^cSee The Measurement of Meaning, op. cit., p. 211 for complete model. (This column represents Tannenbaum's results as well as predictions since both are the same.)

^dBettinghaus based his study on Tannenbaum's predictions.

These findings tend to limit the generalizability of the congruity principle formulated by Tannenbaum. The Bettinghaus study also tends to suggest that Tannenbaum's results are relatively limited. On the other hand, a study by Bowers who analyzed data from a study with different original purpose, shows agreement with Tannenbaum's theory.² Bowers' study replicates only two of 18 categories (S+T+, positive assertion; S+T+, negative assertion) originally proposed by Tannenbaum, but he reports attitude changes resulting from oral communication (taped recording) to be consistent with Tannenbaum's predictions.

Although much more limited, Bower's study is very similar to Tannenbaum's study in that both used similar sources, i.e., Tannenbaum's were "Labor Leaders," "The Chicago Tribune," and "Senator Robert Taft"; Bowers' were "A retired Eastern College President," "A prominent home economist," "A mid-western College President," and "A United States Senator." On the other hand, Bettinghaus and the present study used only specific individuals, i.e., Bettinghaus' sources were college students speaking "in person," and the present study used alleged real sources-- Robert Welch, Robert Baker, Scott Carpenter, and Robert McNamara. This difference in sources is one possible explanation of the different trends in results. The four studies also used three different communication channels, i.e., Tannenbaum used written communication, this study and the Bowers' study used taped recordings, and Bettinghaus studied the live or face-to-face situation. The differences in topics (or "concepts" as Tannenbaum and Bowers call them) are too numerous to enumerate. Any

²J. Bowers, "The Congruity Principle and Oral Communication," Central States Speech Journal, XIV (May, 1963), 88-91.

one or an interaction of all of these differences might explain the differences in results. Also, several other variables, such as delivery techniques, experimental population differences, etc., could be major affective factors which have been relatively uncontrolled and unaccounted for. And, of course, this study has shown how expectancy can effect attitude change resulting from communication.

The general conclusion to be drawn from the discussion above is that directional predictive models are now inadequate for predicting attitude change resulting from communication. This inadequacy is vividly displayed in the summary of results and/or predictive models summarized in Figure 7. It now appears that more factors affecting attitude change in communication such as source credibility, media and recipient expectancy, as well as preattitudes and assertion direction, need to be taken into account before attitude change can be accurately predicted in most situations. In this respect, the trends of this study's results may be useful.

The first and most striking trend in this study's results is found in attitude change toward the source. As indicated in Chapter V of this study, attitude change toward the source seems predominantly reliant upon expectancy and the incongruity caused by opposing preattitudes toward the source and topic. Illustration 2 and Table 6 show the close relation of attitude change toward the source in confirmed expectancy cases, despite the direction of the assertion. Illustration 2 graphically illustrates when preattitudes toward source and topic are both favorable (S+T+) and expectations are confirmed (F-F, 0-0) only slight attitude change toward source is seen (as predicted). In cases of favorable attitudes toward

source, unfavorable attitudes toward topic in which expectancies were confirmed, attitude toward the source is shifted negatively, as predicted--theoretically due to the incongruity produced by the opposing attitudes. Similarly, in cases of unfavorable attitude toward source and favorable attitude toward topic in which expectancy is confirmed, attitude change toward the source shifts positively as predicted. In cases of unfavorable attitude toward both source and topic in which expectancy is confirmed, the direction of assertion still has no differentiating effect between confirmed expectancies, but the amount of attitude change for both is significantly positive. The positive mean attitude change of this final preattitude group (S-T-) is not provided for in the rationale of this study. If the variables affecting attitude toward source were, in fact, pure variables, attitude change toward source in this preattitude group should have been near zero. Despite the positive attitude change in the S-T- preattitude group, the hypothesis that direction of assertion would have no differentiating effect between cases of confirmed expectancy is supported.

Another rather consistent trend in attitude change toward source is the effect of favorable or unfavorable disconfirmed expectancy. The rationale of the study provided that when recipients expected their original attitudes toward the topic to be opposed by the source, but perceived an assertion which agreed with their original attitude, the attitude shift toward the source would be more favorable (or less unfavorable) than for those subjects whose expectancies were confirmed. This trend is present in three of four possible comparisons. Conversely, this study expected unfavorable disconfirmed expectancies, (i.e., recipient's

expecting support of their original attitudes toward the topic, but perceiving opposition) to result in more unfavorable (or less favorable) shifts in attitude toward the source. This trend, also was observed in three of four comparisons.

Generally, in six of eight comparisons, disconfirmed expectancies resulted in more favorable or less favorable attitude shifts toward the source as discussed above; however, only one instance provided statistical significance (see Table 5). The computation of D-scores for dimensions of expectancy across all source-topic preattitude groups indicated that disconfirmed expectancies varied widely from the confirmed expectancy dimensions, but the greatest D-score value was obtained between the two different disconfirmed dimensions (see Table 6).

The effect of recipient expectancies on attitude toward the source has interesting implications for further research. Based on correlated findings in the level of aspiration and other expectancy studies, expectancy in communication might be a function of demonstrated variables such as attitude intensity, ego-involvement, or source credibility. Controlled experimental studies could easily determine such questions.

A second consistent trend in the results of this study concerns attitude change toward the topic. This study hypothesized that disconfirmed expectancies would decrease the amount of attitude change induced by the assertion. In other words, if the assertion did not confirm the recipient's expectancy, it would be less effective. Again, statistical significance was not adequate to support the hypothesis, but the trend was present (see Illustration 3). In six of eight possible comparisons the trend was in the predicted direction--three of the eight comparisons

were statistically significant. While the statistical significance of this trend is not sufficient to support the hypothesis, the results are consistent with the results of the Ewing study (discussed in Chapter II, p. 36).

A third consistency in this study's results complements the findings of the Bettinghaus study. In categories of opposing recipient preattitudes toward source and topic, (S+T- or S-T+), the attitudes each shifted in the direction of the other regardless of assertion direction. This also was the case in Bettinghaus' study even in cases where one attitude was directional (favorable or unfavorable) and the other neutral. Such an occurrence is in direction opposition to some prediction of Tannenbaum's congruity principle (see Figure 7). The moving together of source and topic attitudes supports one of three theoretical premises this study proposed, i.e., that opposing attitude toward source and topic will change in a central fashion when combined and perceived in a communication event. While this premise was not put to a rigorous test, the tendency in six of eight categories supports a similar tendency in Bettinghaus' results.

A fourth notable consistency of the results supports the third major premise of this study, i.e., assertion strength. In all situations where expectancy or incongruity were not expected to interfere with the influence of the assertion, the attitude change toward the topic was in the direction advocated by the assertion.

Summarizing the three factors which this study assumed accounted for most of the attitude change in communication, the following observations should be made: (1) expectancy had the expected effect on attitude

changes toward sources and topics in 12 out of 16 possible comparisons, and (2) incongruity (the central shifting of opposing attitudes) can be seen in six of eight categories in which preattitudes are opposed (categories 5-12) regardless of differences in expectancy and assertion direction (as such, this factor seems to be the most "powerful" of the three); the assertion is successful in changing attitude toward the topic in the direction intended in every category which is not otherwise affected by expectancy or incongruity (categories, 1, 4, 13, 16).

Most of the attitude change occurring in this study can be attributed to the three factors of expectancy, incongruity, and assertion. The one area of attitude change these factors cannot account for is the positive attitude change toward unfavorable sources (see Table 3). In eight categories (9-16) in which preattitude toward the source was unfavorable, attitude shift toward the source was favorable and the shifts were significant in seven of the categories. Some of the categories had been predicted to shift positively; however, the amount of shift seen in these categories is extreme, relative to the other categories. Differences in the sources which were typically favorable (McNamara and Carpenter) or unfavorable (Welch and Baker) may have helped cause such divergent attitude shifts, but this study provides no means for analyzing them. Essentially the same trend is observable in the results of Bettinghaus (see Figure 3).

Notes on testing procedure. The successful administration of the psychological measures utilized by this study depended upon the successful deception of the experimental subjects concerning several aspects of the study. The primary need for successful deception concerned the

recipients' acceptance of the recorded press releases as authentic. If, for any reason, the experimental recipients had suspected the press releases had been simulated, a serious question concerning the validity of their responses would be raised.

The only opportunity the recipients had to indicate their feelings or doubts concerning the press releases was in the identification sheet which was attached to the back of each test booklet in both testing sessions. On the identification sheet a space was provided for the recipients' written response to the statement, "Please comment on your impressions of this questionnaire." Most of the subjects indicated some response--none of the subjects questioned the authenticity of the press releases. Some indication of the success in deceiving the subjects was observed in the remarks of two senior psychology majors who criticized the testing situation at some length, but never questioned the press releases. Also, following the completion of the second testing session, many of the subjects (including radio and journalism majors) expressed their delight in hearing the unedited, recorded press releases.

Following the completion of testing sessions, a brief summary of the purpose of the study was given to the instructors of the classes used for the experimental population. In every case, students were reported surprised to discover that the press releases were not authentic.

As mentioned previously in Chapter III, some effort was made to disassociate the first testing session with the second testing session in the minds of the recipients. This procedure was similar to the procedure Tannenbaum used in his original study. The procedures to disassociate the two testing sessions included telling the subjects that

the two "surveys" had different origins, the nature of the testing procedure was different in the two situations (i.e., dogmatism was measured in the first session, expectancy was measured in the second; no communication was heard in the first session, etc.), the covers on the booklets used in the two sessions were different, etc. The success of disassociating the two testing sessions was not vital to the success of the study; however, apparently the efforts were successful in disassociating the sessions since only one student made any reference to the first session in the written remarks at the end of the second session. The one student who referred to the earlier session arrived late in both testing sessions, thereby missing the instruction delivered orally by the experimenter in both sessions. Her comments were to the effect that she "didn't understand what she was supposed to do in this test any better than she had in the earlier one." Her responses were not included in the analyses.

The design of this study required that each subject's first test booklet be matched with his second test test booklet so that attitude change could be computed by subtracting his posttest attitude score from the pretest attitude score on the same concepts. The subjects were not required to put their names on the identification sheet of the two test booklets, but they were asked to give the other information asked for (age, major, sex, etc.). In cases where the subjects did not indicate their names, their test booklets were matched by matching the information they did provide and by matching the handwriting in the "remarks" space. This matching of booklets was not difficult since never more than seven persons in each class omitted their names. Also, those persons who did omit their names were usually the same persons who made the most

extensive written comments on the testing procedures, thereby making the matching via handwriting quite easy. In the few cases where first session and second session booklets could not be matched with certainty, the booklets were discarded and the responses not used in the analysis.

The semantic differential. For purposes like those of this study, the semantic differential provides a convenient, easily-scored, readily explained, generalized measure of attitude; however, because of polar limitations and an undefined neutral area of attitude some difficulties are encountered. As discussed briefly in several places in this study (see Chapter IV, Appendix A and Chapter III), certain observations were made concerning the use of the semantic differential.

The first observation concerns the polar limits of the scales making up the semantic differential. This limitation is suggested by Tannenbaum in formulating his predictive model and it was most apparent in the present study in the F-ratio analysis (see Chapter IV). The F-ratio analysis (the variance test, see Table 4) indicates the two categories comparisons where variance varied significantly in attitude change toward the topic (categories 1-2, 7-8). The category comparisons are similar in aspects to be discussed here; therefore the categories 1 and 2 will be used to provide an example. Within category 1, the mean pretested attitude toward the topic was 35.21 (highest possible is 42). The preattitude toward the topic in this category is already quite positive or favorable; however, the posttest mean was 36.67 indicating a further shift of attitude in a positive direction. For those subjects who registered a score of 42 on the pretest of attitudes, it was not possible to indicate a positive attitude change; therefore, if, in fact,

their attitudes did shift in a positive direction, the limitations of the scale would result in a posttest score of 42 also even if a more extreme attitude was created. The limiting effect would be similar for all subjects who registered a relatively high or favorable attitude on the pretest and the statistical result would be a relatively smaller variance (S^2) among the posttest scores. This smaller variance on the posttest would result, also, in a smaller variance of I-scores (pretest minus posttest scores for each individual subject). In the case of category 1, the I-score variance was 21.43. On the other hand, in category 2, the mean pretest score was 31.31. This score also is positive or favorable; however, attitude scores in this category shifted negatively (or toward the unfavorable pole) with a mean posttest score of 26.31. By shifting in a negative direction, attitude changes were not limited by scale dimensions and the I-score variance in category 2 would be expected to be greater than in category 1. This expectation is supported by this example, with the I-score variance for category 2 being 132.66. The difference in variance between the categories is obvious and also, is significant beyond the .02 level of confidence.

The example situation above does not constitute conclusive evidence that attitude change is being limited by the semantic differential scales; however, conditions for both category pairs show significant F-ratios in this study and suggest this possibility.

The limitation of scales discussed above with reference to variance might also affect statistical analysis of attitude change. If the pre-attitude scores are quite extreme in a pretesting session, the amount of change might be sufficiently limited by scale dimensions to obscure

a statistical indication of change.

Implications for future research. From observations made during this study the following questions seem to represent areas in which further research might be profitably pursued.

1. Could the effect of expectancy on attitude change be better predicted by an expectancy measure which would allow relative amounts of expectancy to be indicated (e.g., expect extremely favorable assertion, expect slightly favorable assertion, expect slightly opposing assertion, expect extremely opposing assertion)?

2. Is expectancy operative in determining a recipient's perception of an assertion from high and low credibility sources?

3. Is ego-involvement an important correlate of expectancy? In other words, would a faithful Democrat have a more intense expectancy of a Democratic leader's speech than a person who was not greatly interested in politics?

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The first volume in the Yale Studies in Attitude and Communication series. This volume presents an experimental analysis of the effects of the organization of persuasive communications upon the degree of attitude change produced.

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why recipients perceive the same communication differently. The theory is based on the concepts of assimilation and contrast effects.

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A theoretical development of social psychology. It is pertinent to this study for its collection of studies illustrating the usefulness of expectancy in determining group structures. The expectancy each group member has for every other member of the group, is closely related to the observable levels of status, power, and prestige within the group. This is true among groups, also.

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A study of persistence of choice between two tasks--one unpleasant, one pleasant. Results indicate that the more a person expects to be required to perform a given task (either pleasant or unpleasant) the more likely he is to choose that task when given the choice of two tasks.

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A reinterpretation of the results of two studies in terms of Tannenbaum's congruity principle. The study replicated only two of Tannenbaum's predictions and is of slight significance to this study.

Carlsmith, J. and Aronson, E. "Some Hedonic Consequences of the Confirmation or Disconfirmation of Expectancies," Journal of Abnormal and Social Psychology, LXVI (January, 1963), 151-57.

A study of expectancy. Results indicate that expectancy of a situation (judging bitter or sweet liquids) affects a subject's perception of the situation.

Heider, F. "Attitudes and Cognitive Organization," Journal of Psychology, XXI (1946), 107-112.

The earliest expression of ideas dealing with imbalances in human behavior. Heider bases his observations and conclusions on a system of symbolic logic from which he derives "simple configurations" of human behavior.

Newcomb, T. M. "An Approach to the Study of Communicative Acts," Psychological Review, LX, No. 6 (1953), 393-408.

The first published study attempting to apply a general theory of perceptual "imbalance" to communication. Specifically, Newcomb expands Heider's formulation into discussion by small groups. Newcomb relies on small group studies which he reinterprets in terms of psychological conflicts.

Osgood, C. and Tannenbaum, P. "The Principle of Congruity in the Prediction of Attitude Change," Psychological Review, XLII (1955), 42-51.

The authors attempt to increase the precision of the congruity principle for the purpose of predicting the amount of attitude change that occurs as a result of communication. The study is based on the experiment and results of Tannenbaum's Ph.D. dissertation at Illinois University.

Smith, E. E. "The Power of Dissonance Techniques to Change Attitudes," Public Opinion Quarterly, XXV (1961), 626-39.

A study designed to determine the best methods for changing attitudes of U. S. servicemen toward high level policy changes. Results show that dissonance theory was generally less effective than a "no influence" method (a situation in which policy was explained, but no influence to change attitudes was exerted), but more effective than a "leadership" method (a persuasive plea from a "well-liked" superior).

Tannenbaum, P. "Initial Attitude Toward Source and Concept as Factors in Attitude Change Through Communication," Public Opinion Quarterly, XX (1956), 413-242.

An abbreviated form of Tannenbaum's Ph.D. dissertation from Illinois University.

Zajonc, R. "The Concepts of Balance, Congruity, and Dissonance," Public Opinion Quarterly, XXIV (1960), 280-296.

A comparative study of the theories of Festinger, Tannenbaum, Newcomb, Heider, and others. A good summary of the major premises of these theories.

Unpublished Materials

Sattler, William M. "Conceptions of Ethos in Rhetoric." Unpublished Ph.D. dissertation, Northwestern University, 1941.

A comprehensive and chronological study of the concept of ethos--the effect the reputation of the speaker has in influencing an audience--from classical to modern theory.

Tannenbaum, Percy. "Attitude Toward Source and Concept as Factors in Attitude Change Through Communication." Unpublished Ph.D. dissertation, University of Illinois, 1953.

The original formulation of the congruity principle.

APPENDIX A

REPORT ON TWO PILOT STUDIES OF EXPECTANCY AND VALIDATION
OF THE EXPECTANCY MEASURING INSTRUMENT

The studies of incongruity conducted by Tannenbaum and Bettinghaus (see Chapter II) both infer recipient expectancy from measures of the recipient's preattitudes toward source and topic. Such a procedure dictates the following set of assumptions:

1. Favorable sources are expected to assert in favor of favorable topics.

2. Favorable sources are expected to assert in opposition to unfavorable topics.

3. Unfavorable sources are expected to assert in favor of unfavorable topics.

4. Unfavorable sources are expected to assert in opposition to favorable topics.

"Favorable" and "unfavorable" refer to the recipients' attitudes toward each source and each topic before they are combined in a single communication situation. The source and topic attitudes are measured via the semantic differential without being related to each other in any meaningful fashion.

On a logical basis, numerous example situations can be suggested in which expectancy would not necessarily adhere to the four situations dictated by the assumption discussed above. For example, would John F. Kennedy favor federal aid to parochial schools because he is a Catholic

or would he oppose the federal aid in order to hold the Southern Protestant vote? In such cases, expectancy would appear to be contingent with factors other than the recipient's attitudes toward Kennedy and federal aid to parochial schools.

On the basis of such logical observations, two pilot studies were conducted. The first study was designed to determine if recipient expectancy was, in fact, uniform for all recipients whose attitudes toward a source and a topic were similar. The second study was designed to validate an expectancy measuring instrument.

The first pilot study used 23 students in a beginning speech class at the University of Oklahoma. The students were given an attitude test (the semantic differential) on which they indicated their attitudes toward four sources and four topics. The topics used in the study were: (1) prayer in the public schools, (2) women in the business world, (3) segregation of the southern states, and (4) federal aid to education. The four sources were: (1) Jack Parr, (2) Harry Truman, (3) John Blake (a fictitious name), and (4) Bud Wilkinson (the former Oklahoma University football coach). The semantic differential attitude measure consisted of four experimental scales (pleasant-unpleasant, favorable-unfavorable, fair-unfair, and honorable-dishonorable) and three "filler" scales (passive-active, big-little, excited-calm). Only the experimental scales were used in the analysis. The four experimental scales provided a possible range of scores from 4-28. This range of possible scores was arbitrarily divided into unfavorable attitudes (4-11), "neutral" attitudes (12-17), and favorable attitudes (18-24). The "neutral" position on the semantic differential is defined as "equally associated with both

sides of the scale," or "completely irrelevant, unrelated to the concept." Because of this multi-purpose definition, the neutral attitudes were not included in the analysis (this exclusion of neutral attitudes will be discussed in more detail below in relation to the source "John Blake"). Following the administration of the attitude test, the four sources and four topics were matched in all possible combinations. This procedure produced 16 source-topic pairs, each of which was a possible communication situation.

Two days after the administration of the attitude test, the 16 source-topic combinations were inserted into the following format and given to the same group of experimental subjects:

The position on the scale I would expect (source) to support when speaking on the topic of (topic) is:

Favor ____:____:____:____:____:____:____ Oppose

On the basis of their preattitudes toward the sources and topics, the experimental subjects were assigned to four attitude classifications, i.e., favorable toward source-favorable toward topic (S+T+), favorable toward source unfavorable toward topic (S+T-), unfavorable toward source-favorable toward topic (S-T+), and unfavorable toward source-unfavorable toward topic (S-T-). The sixteen source-topic combinations for each of 23 subjects resulted in only 126 cases of source-topic attitude combinations which fit one of the attitude classifications of favorable toward source-favorable toward the topic, favorable toward the source-unfavorable the topic, etc.

Analysis of the data consisted in determining what percentage of the subjects in each attitude classification (S+T+, S+T-, S-T+, S-T-) adhered to the assumption that recipients expect favored sources to

favor favored topics, etc. This analysis revealed that over 30 percent of the subjects did not adhere to this set of assumptions thereby providing some evidence that this set of assumptions was not valid.

In several cases, the number of responses which violated the basic assumption exceeded the number that coincided with the assumption (i.e., recipients who liked Parr and liked federal aid to education resulted in 11 students violating Tannenbaum's assumptions and only three subjects adhering to them).

Because of the ambiguity inherent in the neutral position on the semantic differential scales, the fictitious source, John Blake, was included in this pilot study. The primary purpose of this procedure was to determine a "typical" response for a source the recipients were not familiar with. The fictitious name was to determine if the recipients (who were in a class-room situation) would fake an attitude toward an unknown source rather than admit their ignorance. The results indicated that 20 of the 23 subjects indicated a straight median response (i.e., marked the middle position on all scales) which, according to the instructions given them (see Appendix C) indicated they either did not know who John Blake was or that the scales were irrelevant.

As a precaution, after the students had completed the attitude test booklet, they were asked to indicate on the back of the booklet what position each of the sources occupied or what he was best known for. The three subjects who had indicated an attitude toward John Blake gave the following responses:

1. "An eighteenth century poet." (Probably confused with William Blake, 1757-1827.)

2. "The head of an anti-communist society." (John Birch?)
3. "A newscaster." (?)

The other subjects admitted their ignorance of John Blake's identity and all subjects were correct in identifying the other three sources.

Two interesting observations were made during this pilot study which should be mentioned here. The first observation was that despite the fact that 20 of the subjects had indicated a straight neutral response toward John Blake, all but one of the subjects indicated an expectancy of John Blake two days later on the expectancy scale discussed above. All of the estimates of the "position on the scale I would expect John Blake to support . . ." were in the "3" or "5" positions (i.e., one position either side of the middle position "4") and the judgments were almost equal in their frequency in each of the positions (40 responses in position 3, 36 responses in position 5). The pressure of the classroom situation to make a choice, or an inability to conceive a source making an assertion that was neutral, or the measuring device was not valid are but three of several possible explanations for this observed behavior. However, this observation led to omitting neutral attitudes in the analysis reported in the main text of this work.

The second observation was that the neutral position provided on the expectancy measure used in this first pilot study was apparently not meaningful or useful to the subjects; therefore, the neutral position was not included in the second version of the expectancy measure which will be discussed in the second pilot study reported below.

Because of the high number of subjects who did not conform to the expectancy assumptions of Tannenbaum's congruity principle and because

of the expectancy indicated for the unknown source (John Blake), some suspicion arose concerning the validity of the expectancy measure used in the first pilot study. Was the instrument measuring expectancy or was it being randomly marked by the subjects?

To determine the validity of the expectancy measure, a second pilot study was conducted. This study used 27 members of a beginning speech class at the University of Oklahoma. Again, four sources and four topics were submitted to the subjects via the semantic differential. The four sources used were: (1) Robert "Bobby" Kennedy, (2) Harry Truman, (3) Jack Parr, and (4) Richard "Dick" Nixon. The four topics used were: (1) sale of wheat to Russia, (2) the integration of the southern states, (3) the Peace Corps, and (4) prayer in the public schools.

The scales used by the semantic differential to measure the attitudes were a combination of the scales used by Tannenbaum and Bettinhaus and were the same scales used in the study reported in the main text of this work.

As in the first pilot study, all possible combinations of sources and topics were inserted in the following format:

If (source) was to issue a press release concerning (topic), I would expect him to (check one below) the topic.

_____ Favor

_____ Oppose

In this study over 35 percent of the expectancy judgments did not adhere to the expectancy principles of Tannenbaum's congruity principle.

From the 16 source-topic combinations used in the expectancy measure above, four source-topic pairs were chosen. They were: (1) Kennedy on the sale of wheat, (2) Truman on segregation, (3) Parr on the

Peace Corps, and (4) Nixon on prayer in schools. Twelve statements representing arguments for and against each of the topics (six for, six against) were composed and validated (discussed below). The statements were randomly ordered for each topic and submitted to the students with the following preface of instruction printed at the top of the page:

In (source's) statement about the (topic), I would expect that some of the following arguments or statements are likely to appear: (circle the ones you think he will most likely use.)

The results of this procedure showed that with 100 percent reliability, the subjects who indicated they expected a source to favor a topic in the expectancy measure, chose only from among the arguments which favored the topic. Conversely, the subjects who had expected the source to oppose the topic chose only from the statements which opposed the topic.

The procedures and results of the two pilot studies seem to provide adequate evidence to support the assumption that the scale was, in fact, measuring "real" recipient expectancy of an assertion.

The validity test of the statements used in the final stage of the second pilot study was accomplished by submitting the 48 statements (twelve for each of four topics) to a group of eight graduate students at the University of Oklahoma. The students were asked to indicate which statements favored their topic and which statements opposed their topic. Forty-six of the statements received 100 percent reliable ratings in terms of favoring or opposing the topic. Two statements were deemed ambiguous (two of the students each picked one statement which they thought ambiguous) and were not included in the analysis for validating the expectancy measure.

The two pilot studies described above provide the rationale for

assuming that:

1. The expectancy measuring device used in the second study is, in fact, measuring the expectancy a recipient has of an assertion prior to actually hearing the assertion, and;

2. The assumptions of expectancy subscribed to by Tannenbaum's congruity principle are sufficiently in doubt to merit further and more extensive testing.

APPENDIX B

A COMPARISON OF SUBJECTS' SCORES ON ROKEACH'S DOGMATISM TEST
WITH EXPECTANCY OF AN ASSERTION

Following the pilot studies discussed on page 28 and in Appendix A, which indicate that recipients do not always expect sources they favor to speak favorably on topics the recipient favors, etc., several questions were raised. What are the factors involved in a recipient's expectancy of a favored source opposing a favored topic? Is the expectancy contingent with the attitude toward the source or the attitude toward the topic or both? Does it take a special type of person to always expect a favored source to speak favorably toward a favorable topic?

To provide conclusive evidence for answering these questions, thorough and well controlled studies would have to be designed; however, because of the opportunity provided by the present study, it was suggested that a preliminary test might be made. Specifically, the suggestion posed the possibility that persons who always expected a favored source to favor a favorable topic might be "authority oriented" persons. The authority oriented person has been discussed by Rokeach as one factor which identifies dogmatic or closed minded personality traits. Rokeach states:

The more closed the system, the more is the acceptance of a particular belief assumed to depend on irrelevant internal drives and/or arbitrary reinforcements from external authority. The relation among beliefs should depend on such irrelevant considerations rather than on considerations of logical consistency. Isolation between parts reflects a tendency not to relate beliefs to the

inner requirements of logical consistency, but to assimilate them wholesale, as fed by one's authority figure.¹

Reducing this authoritarian personality concept to the context of this study, an hypothesis predicting that attitudes toward the source and toward the topic are dictated by the expectation of the recipient would not be untenable in cases of authority dependent recipients. In other words, if a recipient views the source as an authority figure (which in this study is a reasonable assumption), that source would be expected to "feed" the recipient an assertion which favored the favorable topic. Specifically the hypothesis would state: those recipients who expect favored sources to favor favorable topics, unfavorable sources to favor unfavorable topics, favored sources to oppose unfavorable topics, and unfavorable sources to oppose favorable topics are likely to be relatively more dogmatic than recipients who are prone to deviate from such source and topic dictated expectancies.

The hypothesis requires some elaboration of Rokeach's theory and is based upon largely a priori reasoning. It necessitates the assumption that persons whose expectancies were not dictated by their attitudes toward the source and the topic are capable of tolerating an incongruous (or dissonant) situation. This paper is not the first instance of this particular hypothesis being suggested; however, the other authors were guarded in their discussion and to some extent, at least discouraged it. Festinger is perhaps most explicit in his discussion. He states:

A person with a low tolerance for dissonance would, perhaps, be unable to maintain such dissonances and would struggle to eliminate them. Thus, one would expect that if a person with low tolerance

¹Milton Rokeach, The Open and Closed Mind (New York: McGraw-Hill Book Co., 1951), p. 61.

for dissonance were a Democrat, he would show tendencies to accept everything the Democrats stood for. For such a person, then, cluster of relevant cognitive elements would be mainly consonant. His opinions on issues might be characterized as extreme or as cast in terms of black and white. It would seem that a measure of 'tolerance for dissonance' based upon these considerations would be possible.

At this point many readers will feel like suggesting that perhaps such a test already exists, having recognized a certain similarity between our discussion immediately above and some descriptions of 'authoritarian personalities' and some descriptions of people with high 'intolerance for ambiguity.' My own suspicion would be that existing tests such as the F scale do measure, to some extent, the degree to which people hold extreme opinion, that is, opinions where dissonance has been effectively eliminated. Such tests also measure so many other things, however, that they would not be very satisfactory for this purpose.²

Here Festinger carefully points out the difference between his "tolerance for dissonance" and the trait commonly termed "openmindedness." While he recognizes that tests might be devised to measure his "openmindedness," none have yet been provided. Festinger, on the other hand, did not provide any concrete evidence to support his supposition that the F-scale (or one of its derivatives) would be totally inefficient in detecting some difference.

Withstanding the "warning" of Festinger, this study wished to determine if recipients who violated Tannenbaum's set of assumptions (i.e., recipients expect favored sources to assert favorably on favored topics, etc.) were more openminded than recipients who adhered to the assumptions. The author realized that Form E of Rokeach's Dogmatism scale (a derivative of the F-scale) measured things other than the capacity for tolerating incongruity; however, it was assumed that this Dogmatism test had a sufficiently high loading in a "capacity for tolerating incongruity" dimension to differentiate such subjects. Therefore, the Rokeach Form E

²Festinger, A Theory of Cognitive Dissonance, p. 268.

Dogmatism test was used as a measure of this "tolerance" in this study.

Several assumptions must be made before justifying such a procedure. They are:

1. If a recipient does not expect a favored source to favor a favored topic (and the other combinations of congruity theory's basic assumption) the situation produces perceived incongruity.

2. Form E of Rokeach's Dogmatism Scale includes a sufficient loading on a "capacity for dissonance" dimension to show a difference between the recipients who expect favored sources to favor favored topics and those who do not.

3. The experimental sources in this study to whom the assertions are attributed are perceived as authority sources by the experimental recipients.

With these assumptions, the Dogmatism test was administered to the experimental recipients following the attitude tests. During the second testing period of this study (see Chapter III, page 55) each recipient registered his expectancy of four communication situations. On the basis of each recipient's preattitudes toward the source and topic and the expectancy each recipient had of each communication situation, the experimental population was divided into those who complied with the "favored sources favor favored topics" prediction and those who did not comply.

The experimental population also was divided according to "high" or "low" scores on the dogmatism test. The extreme scores in the upper and lower quartiles of the dogmatism test were chosen for analysis. If chance factors only were active, one would expect an equal number of

recipients who violated the "favorable sources favor favorable topics" hypothesis to appear in both the "high" and "low" dogmatism quartiles. Any apparent deviation from the fifty-fifty distribution could be tested by simple chi-square analysis.

Analysis of the data indicated that recipients who complied with the hypothesis of "favored sources favor favored topics" divided 38 and 42 in parameters of "high" and "low" dogmatism, respectively. Recipients who violated the hypothesis divided 25 and 25 in the two parameters.

The obvious adherence to the expected fifty-fifty distribution results in the conclusion the dogmatism and expectation have no noticeable or significant relationship under the experimental circumstances.

Reasons for this analysis' failure to differentiate between "high" and "low" dogmatics among the subjects subscribing to or violating the expectancy assumptions of Tannenbaum are numerous. If any one of the assumptions necessary for this analysis was invalid, the results obtained would be expected. If the assumptions are, in fact, valid, a conclusion that "capacity for incongruity" has no affect on expectation of an assertion is tenable.

APPENDIX C

INSTRUCTIONS FOR USING THE SEMANTIC DIFFERENTIAL PREATTITUDE TEST

READ TO THE EXPERIMENTAL SUBJECTS PRIOR TO TESTING SESSION ONE

The purpose of this study is to measure the meaning of certain things and various people by having you judge these concepts using a series of descriptive scales. Please make your judgments on the basis of what these concepts mean to you. On the following pages of this booklet you will find several concepts and beneath each concept a set of scales. You are to judge the concept on each of these scales in order. Here is how you use the scales:

If you feel the concept (MOTHER) above each set of scales is extremely related to one end of the scale, you should place your mark as follows:

MOTHER

Strong X : ____ : ____ : ____ : ____ : ____ : ____ Weak

or

Strong ____ : ____ : ____ : ____ : ____ : ____ : X Weak

If you feel that the concept is quite closely related to one or the other end of the scale you should place your mark as follows:

Smart ____ : ____ : ____ : ____ : ____ : X : ____ Dumb

or

Smart ____ : X : ____ : ____ : ____ : ____ : ____ Dumb

If the concept seems only slightly related to one side then you should mark:

Valid ____ : ____ : X : ____ : ____ : ____ : ____ Invalid

or

Valid ____ : ____ : ____ : ____ : X : ____ : ____ Invalid

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the thing you are judging.

If you consider the concept of judgment to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your mark in the middle space:

Blue ____:____:____: X :____:____:____ Red

IMPORTANT: (1) Place your mark in the middle of the space, not on the boundaries:

 THIS NOT THIS
____:____: X :____:____ X ____:____

(2) Check every scale for every concept--do not omit any scale.

(3) Do not put more than one mark on each scale.

As you make the judgments, work as rapidly as possible. Do not try to remember how you marked particular items or scales in prior judgments. Make each concept a separate and independent judgment. Do not worry or puzzle over individual scales. It is your first impression in which we are interested; however, do not be careless, we want true impressions.

FOUR DIFFERENT SCALE ARRANGEMENTS OF THE SEMANTIC DIFFERENTIAL
ATTITUDE MEASURE USED IN THIS STUDY¹

Sample No. 1

Unfair____:____:____:____:____:____:____Fair
 Active____:____:____:____:____:____:____Passive
 Dirty____:____:____:____:____:____:____Clean
 Emotional____:____:____:____:____:____:____Unemotional
 Tasty____:____:____:____:____:____:____Distasteful
 Calm____:____:____:____:____:____:____Excited
 Pleasant____:____:____:____:____:____:____Unpleasant
 Little____:____:____:____:____:____:____Big
 Worthless____:____:____:____:____:____:____Valuable
 Reputable____:____:____:____:____:____:____Disreputable

Sample No. 2

Pleasant____:____:____:____:____:____:____Unpleasant
 Big____:____:____:____:____:____:____Little
 Worthless____:____:____:____:____:____:____Valuable
 Unemotional____:____:____:____:____:____:____Emotional
 Tasty____:____:____:____:____:____:____Distasteful
 Passive____:____:____:____:____:____:____Active
 Fair____:____:____:____:____:____:____Unfair
 Disreputable____:____:____:____:____:____:____Reputable
 Clean____:____:____:____:____:____:____Dirty
 Excited____:____:____:____:____:____:____Calm

¹Each set of scales and the concept to which they referred were on separate pages of both testing session booklets.

Sample No. 3

Distasteful____:____:____:____:____:____:____Tasty
 Worthless____:____:____:____:____:____:____Valuable
 Excited____:____:____:____:____:____:____Calm
 Dirty____:____:____:____:____:____:____Clean
 Unemotional____:____:____:____:____:____:____Emotional
 Pleasant____:____:____:____:____:____:____Unpleasant
 Active____:____:____:____:____:____:____Passive
 Unfair____:____:____:____:____:____:____Fair
 Reputable____:____:____:____:____:____:____Disreputable
 Big____:____:____:____:____:____:____Little

Sample No. 4

Clean____:____:____:____:____:____:____Dirty
 Unemotional____:____:____:____:____:____:____Emotional
 Unfair____:____:____:____:____:____:____Fair
 Big____:____:____:____:____:____:____Little
 Distasteful____:____:____:____:____:____:____Tasty
 Excited____:____:____:____:____:____:____Calm
 Reputable____:____:____:____:____:____:____Disreputable
 Passive____:____:____:____:____:____:____Active
 Worthless____:____:____:____:____:____:____Valuable
 Unpleasant____:____:____:____:____:____:____Pleasant

ROKEACH DOGMATISM "TEST E" (FIRST TESTING SESSION)

Instructions

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others and perhaps uncertain about others; whether you agree or disagree with any statement you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, -3, depending upon how you feel in each case.

+1: I AGREE A LITTLE
+2: I AGREE ON THE WHOLE
+3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
-2: I DISAGREE ON THE WHOLE
-3: I DISAGREE VERY MUCH

-
- ___ 1. The United States and Russia have just about nothing in common.
 - ___ 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
 - ___ 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
 - ___ 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
 - ___ 5. Man on his own is a helpless and miserable creature.
 - ___ 6. Fundamentally, the world we live in is a pretty lonesome place.
 - ___ 7. Most people just don't give a "damn" for others.
 - ___ 8. I'd like it if I could find someone who would tell me how to solve my personal problems.
 - ___ 9. It is only natural for a person to be rather fearful for the future.
 - ___ 10. There is so much to be done and so little time to do it in.
 - ___ 11. Once I get wound up in a heated discussion I just can't stop.
 - ___ 12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
 - ___ 13. In a heated discussion I generally become so absorbed in what I am saying that I forget to listen to what the others are saying.
 - ___ 14. It is better to be a dead hero than to be a live coward.
 - ___ 15. While I don't like to admit this even to myself, my secret ambition is to become a great man like Einstein, or Beethoven, or Shakespeare.
 - ___ 16. The main thing in life is for a person to want to do something important.
 - ___ 17. If given the chance, I would do something of great benefit to the world.
 - ___ 18. In the history of mankind there have probably been just a handful of really great thinkers.

- ___19. There are a number of people I have come to hate because of the things they stand for.
- ___20. A man who does not believe in some great cause has not really lived.
- ___21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
- ___22. Of all the different philosophies which exist in this world there is probably only one which is correct.
- ___23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- ___24. To compromise with our political opponents is dangerous because it usually leads to a betrayal of our own side.
- ___25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
- ___26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
- ___27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
- ___28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in opposing camps.
- ___29. A group which tolerates too much differences of opinion among its own members cannot exist for long.
- ___30. There are two kinds of people in this world: those who are for truth and those who are against the truth.
- ___31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- ___32. A person who thinks primarily of his own happiness is beneath contempt.
- ___33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- ___34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- ___35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
- ___36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
- ___37. The present is all too often full of unhappiness. It is only the future that counts.
- ___38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."
- ___39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
- ___40. Most people just don't know what's good for them.

INSTRUCTIONS FOR THE SECOND TESTING SESSION

Today we would like to ask your cooperation in helping us to determine current trends in opinions and comprehensive abilities among college students. In the booklet you have been given are several different types of scales and/or judgment tasks. Each portion of this booklet provides a simple method for you to indicate your opinions or judgments. It should also be called to your attention that this booklet is designed to determine general impressions of college students; therefore, if some of the tasks do not seem precise enough, it is because they are not supposed to be.

In a few minutes you will hear four tape recordings. Each recording is a radio press release of a man who is prominent in his field and who is speaking about a recent or current controversy. (HERE THE EXPERIMENTER "AD-LIBBED" Statement A, SEE NEXT PAGE). In the booklet you have received, we would like for you to give your personal ideas and judgments at four different times:

1. Before you hear each tape you will be told who the person is and the topic he is commenting about on the press release. From what you know about the person and the topic of his press release, please indicate what position you expect him to support. The first page provides a convenient method for you to indicate your expectation. An example is given below:

The position I expect (source) to support in his press release on (topic) is:

_____ Oppose

_____ Favor

You will notice the method above allows you to indicate the position you expect the source to support by simply checking either "favor" or "oppose."

2. After indicating what position you expect the source to support, you will hear the tape recorded press release.

3. Following the press release, a standard and simple opinion scale is provided. The purpose of this step is to determine your opinion of the person and the topic by having you judge each of them using a series of descriptive scales. Please use the scales according to what they mean to you. On the next two pages of the booklet you will find a convenient means for judging the speaker and his topic. Here is how you use the scales:

If you feel the concept (VIRTUE) above each set of scales is extremely related to one end of the scale, you should place your mark as follows:

VIRTUE

Small X : ____ : ____ : ____ : ____ : ____ : ____ Big

or

Small____:____:____:____:____:____: X Big

If you feel the concept is quite closely related to one or the other end of the scale you should place your mark as follows:

Right____:____:____:____:____: X :____Wrong

or

Right____:____:____:____:____:____:____Wrong

If the concept seems only slightly related to one side then you should mark:

Silly____:____:____:____: X :____:____Reserved

or

Silly____:____: X :____:____:____:____Reserved

If you consider the concept of the judgment to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, then place your mark in the middle space:

Flat____:____:____: X :____:____:____Round

4. It will be necessary for you to listen to the recorded press release closely for this portion of the booklet. You will be asked to indicate simply the position that you feel the person's press release actually supported. A simple method for indicating your judgment is given below:

- _____ Extremely in favor of the topic
- _____ Quite strongly in favor of the topic
- _____ Slightly in favor of the topic
- _____ Slightly opposed to the topic
- _____ Quite strongly opposed to the topic
- _____ Extremely opposed to the topic

During this exercise we are interested in obtaining your personal views and opinions. There is no such thing as a good or bad grade on this test--it is merely a survey. Also, how you perform on this test will not in any way affect your grade in the class. We are merely asking your cooperation in this survey.

Please remain silent until everyone is finished with the last page of the booklet so that you will not bother or influence the response of others.

DO NOT TURN THIS PAGE UNTIL SO INSTRUCTED!!

ORAL INSTRUCTIONS AND COMMENTS BY EXPERIMENTER
WHICH WERE NOT PRINTED ON BOOKLETS

Exposition Prior to Second Testing Session

This booklet represents a nation-wide survey of college students. A professor at another University's Public Surveys department asked Oklahoma University to take a sampling of its students because the research being done here at O. U. is similar to that being conducted on his campus. His sampling of students on various campuses allows him to speak of college students in general, rather than being restricted to speaking of students in a limited geographical area or on a specific campus.

Statement A

In our age of modern mass communications, I am sure that you are aware of the press releases that are used on radio and television newscasts and public information programs. The recordings you will hear are some of these.

CHRONOLOGY OF TESTING INSTRUMENTS USED FOR EACH PRESS RELEASE
USED DURING THE SECOND TESTING SESSION¹

I: Expectancy Measure

The position I expect (source) to support in his press release
on (topic) is:

_____ Favor

_____ Oppose

II: "Stop" Page

III: Attitude Toward Source

Pleasant _____:_____:_____:_____:_____:_____ Unpleasant

Big _____:_____:_____:_____:_____ Little

Worthless _____:_____:_____:_____:_____ Valuable

Unemotional _____:_____:_____:_____:_____ Emotional

Tasty _____:_____:_____:_____:_____ Distasteful

Passive _____:_____:_____:_____:_____ Active

Fair _____:_____:_____:_____:_____ Unfair

Disreputable _____:_____:_____:_____:_____ Reputable

Clean _____:_____:_____:_____:_____ Dirty

Excited _____:_____:_____:_____:_____ Calm

¹Each step indicates a separate page of the test booklet.

CHRONOLOGY OF TESTING INSTRUMENTS . . . (Continued)

IV: Attitude Toward Topic

Unfair____:____:____:____:____:____:____Fair
 Active____:____:____:____:____:____:____Passive
 Dirty____:____:____:____:____:____:____Clean
 Emotional____:____:____:____:____:____:____Unemotional
 Tasty____:____:____:____:____:____:____Distasteful
 Calm____:____:____:____:____:____:____Excited
 Pleasant____:____:____:____:____:____:____Unpleasant
 Little____:____:____:____:____:____:____Big
 Worthless____:____:____:____:____:____:____Valuable
 Reputable____:____:____:____:____:____:____Disreputable

V: Perception Test

The position supported by the speaker in the press release
 I just heard was:

____ Extremely in favor of the topic
 ____ Quite strongly in favor of the topic
 ____ Slightly in favor of the topic
 ____ Slightly opposed to the topic
 ____ Quite strongly opposed to the topic
 ____ Extremely opposed to the topic

IDENTIFICATION SHEET USED FOR BOTH TESTING SESSION BOOKLETS

Name _____ Name of Course _____

Section No. _____

Classification: (circle one) Fresh Soph Junior Senior Unclass.

Age _____ Sex: M F

Major area of study: _____

Please comment on what you thought about this survey:

APPENDIX D

ASSERTION NO. 1:

Favoring "The Supreme Court Ruling Banning Prayer in the Public Schools"

The recent ruling of the United States' Supreme Court which banned prayer and bible reading in the public schools, has received much unearned criticism as a result of uninformed citizenry and slanted journalism. Most of the individuals and groups who opposed the ruling had no specific knowledge of its cause or purpose. What has not been publicized are the decisions of reputable groups and organizations who spent some time studying the advantages and disadvantages of the ruling and who now support the ruling wholeheartedly. After a longer consideration, most people find that it is not as ill-conceived and as radical as they first thought. In fact, many people have come to actually defend the ruling as a protection of our religious freedom rather than an infringement. By banning prayers and bible readings from the public schools, the government is protecting the student from having prayers "forced" upon him by an institution of the State. The families who first lodged the complaint leading to the Supreme Court ruling, did so because the prayers their children were required to recite were neither complimentary to nor in agreement with their chosen religion. While such cases are presently in the minority, it is not inconceivable that a government controlled institution, such as the public school, could soon dictate religion and other equally moral areas in the same manner that it now handles text-books, school zoning, and teaching methods. State control of religion in the public schools is not yet a serious threat, but the fact that it might become so without restrictions such as the recent ban, cannot be ignored. If the best interests of our country are to be served in the future, adequate safeguards must be provided today. This Supreme Court ruling provides such a safeguard. The strength of our country is in our ability to anticipate the future. History has shown the advantage of church and state separation--the Supreme Court ruling guarantees that such separation will continue to exist.

ASSERTION NO. 2:

Opposing "The Supreme Court Ruling Banning Prayer in the Public Schools"

The criticism and notoriety caused by the recent Supreme Court ruling banning prayers and bible readings in public schools is well deserved and tends to prove the citizenry of the United States is not as dormant as sometimes suspected. When the Federal courts took a hand in banning prayer in the schools, the very act was an extension of the government into an area of human belief that is not answerable to the federal law. The Constitution

separates church and state and it guarantees only the right to practice religion with freedom. It does not and should not dictate when and where religion should or should not be practiced. Of the groups who supported the ruling soon after it was made, many did so with insufficient information. They originally viewed the ruling as a religious protection; this, of course, is not so. When the government can legislate via the court-rooms how and where religion is allowed, it is sufficiently evident that the separation of church and state no longer exists. The Supreme Court ruling can then be seen as a direct violation of the laws designed to protect us from suppression of religious beliefs. The families who were responsible for causing the Supreme Court ruling, raised their complaints because their children were being required to recite prayers contrary to their chosen religion; however, by freeing their own children from a form of religious oppression, they inflicted religious oppressions upon countless other children by depriving them of the opportunity to pray and study the bible together in their schools. This, of course, was not the intention of the original complaints. It is apparent now that the question of prayer in public schools should have been handled on a local basis, such as, in a parent-teacher meeting, and not in our federal courts; however, the decision was called for and the decision was made. It remains for us to now find some means to counteract this unfortunate precedent that the Supreme Court has handed down. We must not let any form of government legislate our religious beliefs and practices.

ASSERTION NO. 3:

Favoring "A Treaty Between the U. S and Russia Banning Underground Nuclear Testing"

I believe that Russian proposals for banning underground nuclear testing should be seriously considered by the United States. This is the next logical step following the treaty already in existence between the United States and Russia which agreed to discontinue testing in the atmosphere, in space and underwater. The earlier treaty indicates a willingness of both countries to reduce the probability of a nuclear war. Both countries know that they have sufficient weapons already in existence to annihilate each other and make the world non-inhabitable; therefore, why should we continue to test more powerful weapons? As the United States and Russia continue to build their nuclear arsenals, they do not increase their military effectiveness, they merely increase the possibility of an "accidental" nuclear war--caused by a misguided missile or an irresponsible human act. Secondly, and of equal importance, is the fact that the present research facility used in nuclear testing could be put to better use producing peaceful atomic knowledge. The uses we now have for atomic power represent only a fraction of what we could accomplish. A peaceful competitive situation between the United States and Russia to produce peaceful uses for the atom could result in less friction between the countries. A similar situation created by the "space race" provides an excellent example of peaceful competition. Moreover, the situations provide peaceful precedents for

other countries to follow. Finally, the stock-piling of unneeded atomic weaponry is costing the tax-payer money. Each year we pump millions of dollars into a program which could better be spent elsewhere. I feel that the evidence I have mentioned is both obvious and conclusive reason for accepting additional proposals from Russia for discontinuing underground atomic nuclear testing.

ASSERTION NO. 4:

Opposing "A Treaty Between the United States and Russia Banning Underground Nuclear Testing"

I believe that Russian proposals for banning underground nuclear testing should not be considered by the United States. The agreement now in effect which bans nuclear testing in the atmosphere, in space, and underwater is enforceable by existing reconnaissance methods, whereas we have no methods for detecting small underground tests. If Russia had a history as a government of integrity, the situation would be different. However, we have seen in Cuba, in Berlin, in Viet Nam, and Czechoslovakia how the communists are restricted to the terms of a treaty only by overwhelming political and military forces. Time after time the communists have violated treaties when it was advantageous for them to do so. An earlier proposal made by the United States which provided for neutral inspection teams was rejected by Russia. Such action obviously indicates their lack of good faith in attempts to establish valid and binding agreements with the free world; therefore, if the U. S. agrees to ban underground testing without the use of inspection teams, we would be providing the communist powers another strategic areas in which they could "cheat" with little fear of being detected. Proposals for banning underground testing also will affect the domestic advances since the end of World War II. The knowledge and understanding of the atom that we now possess is a direct result of our developing atomic weapons. Only because of our fear of war and our need for stock-piled atomic weapons did we place emphasis upon atomic research and development. Therefore, as long as some nuclear testing is allowed to proceed the U. S. will be increasing her technological growth and at the same time she will increase her military strength. My final comment may not be so important, but I feel it should be mentioned . . . Our testing sites in Nevada and other places employ thousands of persons. If we suddenly quit using these test sites, this large number of persons would be dumped upon the unemployment lists almost overnight. It would be the responsibility of the government to either re-locate or retrain--or both--these persons. Such a task is not easily done without considerable hardship to the employees and to the taxpayer who must finance this transition. I feel the reasons I have mentioned are both obvious and conclusive reasons for the United States to reject Russian proposals for discontinuing the underground atomic nuclear testing.

ASSERTION NO. 5:

Favoring "A Proposal to Finance Medical Care for the Aged by Increasing Social Security Assessments"

It is becoming increasingly evident that some plan must be devised to ease one of our country's most pressing and honorable problems--that of providing for our senior citizens. Geriatrics--the care of the aged--has become a significant problem since the machine age and its average retirement age of 65. The average working person can now be expected to live to the age of 75 years which makes millions of persons face the problems of living at least 10 years of their lives on a minimum income. Unfortunately it is during the last 10 years of a person's life that he is most vulnerable to the tragedy of extensive and expensive medical care and treatment. Thus, the retired person is often expected to pay major medical expenses with an income that is minimal. A few of our senior citizens are fortunate to have families who will provide the necessary care, but even this is often not a solution. The financial and psychological burden of caring for elderly parents and "in-laws" is often "solved" by committing them to ill-equipped "old-folks homes" or to mental institutions. I feel the only realistic solution to this situation is some form of medical care plan which provides and guarantees care for the aged. Many private insurance and medical firms have plans through which a person can provide such care for his last years; however, the plans are voluntary and therefore cover only a small portion of our older generation. Also, the amount of care possible is dependent upon how much money has been paid into the plan prior to the retirement years and upon the number of people that subscribe to each company's plan. Generally speaking, such private attempts to alleviate the problem of old age have been minimally successful. The most obvious solution to this situation is an extension of our present social security system. Such a plan would insure a maximum number of subscribers, thus, keeping the individual payments minimal. The payments will represent both employee and employer's contributions during the individual's active years. Another important consideration is that the cost of handling the paperwork of such a plan will not require extensive overhead expenses. By merely extending the present facility of our social security department, the medical care plan can be efficiently and economically handled. This plan, as I have summarized it, is convenient and efficient. If put into effect, it will almost erase one of the most pressing social problems of our age. It will provide maximum potential returns for minimal investment and it can be adequately handled by a system already in existence. We must provide for our aged, and an extension of the social security system is the only realistic method of accomplishing the task.

ASSERTION NO. 6:

Opposing "A Proposal to Finance Medical Care for the Aged by Increasing Social Security Assessments"

Recently a proposal to begin a medical care plan for persons over 65 years of age which would be financed by increased social security was proposed to the Senate Ways and Means Committee. Proponents of this proposal argue that the currently large number of senior citizens now requires that such a plan be adopted. I disagree. It is true that we have a larger elder generation than we have had before, but it is also true that we have many more state-supported hospitals, sanitoriums, and rest homes than ever before. Competent care for the aged can be obtained free of charge, if necessary, in any state of our Union. Why then, do we need a federal agency for such medical care for the aged when our state's all have adequate systems? Each senior citizen has several possibilities available to him should he require medical care; the first and most obvious place for him to go would be to his savings and insurance plans which he accumulated during his active life. There are hundreds of medical insurance companies who offer plans both on an individual basis and through group insurance plans of corporations and small businesses. Often such plans are required by employers who, incidentally, help pay a portion of the monthly premium for the employee. Such plans now provide for a great number of our retired senior citizens. Secondly, the elderly person usually has a family who can provide medical care and housing, if necessary. Most persons consider the care of their parents a personal obligation and would not want the government to interfere in their personal lives. Thirdly, as I mentioned earlier, every State of the Union has provisions for state hospitals, etc., and have facilities and budgets set aside by their state legislature for such purposes. My strongest argument with the proposal is due to the expressed desire to finance the venture by increasing social security assessments. Such a system would surely be foolhardy. If we allowed the federal government to take over medical care proposals, we would be taking a step drastically close to turning our democracy into a socialistic state. If we are going to let the federal government control our medical history for the last ten years of our lives, why not let them dictate food rations, clothing rations, and other human needs? It seems to me such proposals just a few steps farther than the already existing government subsidies of farm products, unemployment, dairy products, railroads, and so on? Because of our trends toward socialism we should strongly oppose any legislation which attempts to place our senior citizens on federal controlled "give-away" programs. Our private insurance firms, our families, and our state governments are doing an adequate job now and will continue to do still a better job of providing medical care for the aged as time goes along. I urge you not to let your federal representatives support this proposal. Let them know that we do not need the system of social security and/or the federal government to care for our senior citizens. Let them know that we are not going to become a socialized nation.

ASSERTION NO. 7:

Favoring "A Voluntary Boycott in America of British-made Products to Discourage Britain from Selling Goods to Cuba"

I feel sure that the American public has not forgotten that less than six months prior to Cuba's "sell-out" to Russia, Fidel Castro was in the United States, playing the role of a hero. It is now obvious that Castro was merely looking for the "highest bidder" with which to align his country. The reluctance of the United States to buy Cuba, has resulted in the long string of events which continue to lower the prestige of the United States in the eyes of the world. The distastefulness of Cuba's alliance with Russia, was illustrated by the people of Cuba in their attempt to effect a coup during the ill-fated Bay of Pigs invasion. This unfortunate incident was followed by a missile buildup in Cuba, which, in its turn, forced the United States to throw a naval blockade around the island nation. While the Bay of Pigs invasion was a total failure, the blockade was at least partly effective. However, by using a blockade to defeat Russia's attempt to establish Cuba as a missile base, the United States "flirted" with all-out nuclear war. Such tactics should not be used except in extreme emergencies. Recently, trade relations have been established between Cuba and some of our allies, notably Britain. In the past month, English-made busses and heavy construction equipment have been sold to Cuba. If such trade continues to increase, Cuba will be able to buy the necessary ingredients from our allies that we risked war to prevent their getting from Russia. Obviously, we must prevent this. There are three general areas of pressure the United States can use to prevent Britain from trading with Cuba. They are: (1) military force, (2) political force, and (3) economic pressures. The United States cannot risk war which might begin if military force is used. The United States has already brought political pressures to bear on England, and while it has helped, it has not prevented Britain's trade with Cuba. We must now use the economic pressures at our disposal. The United States government cannot use official economic pressure without harming our own economy; therefore, it is up to the U. S. public to unofficially cause economic pressure. A boycott of British-made goods in America would result in such pressure. The boycott would strike at the heart of Britain's economy by placing that pressure on individual British exporters and corporations. For these reasons, I strongly urge all Americans to refuse to buy products which help keep the British economy strong. A boycott will help our country cope with a problem which it cannot safely handle otherwise.

ASSERTION NO. 8:

Opposing "A Voluntary Boycott in America of British-Made Products to Discourage Britain from Selling Goods to Cuba"

Recently it has been revealed that American allies such as England and France have been trading with Cuba. Because of earlier crises between

Cuba and the United States, unofficial sources have taken it upon themselves to suggest that the American public boycott, or refuse to buy British-made products. Such a suggestion is not only impractical, but improbable as well. Such behavior by the United States public raises the question of inconsistency in the minds of the other nations of the world. How can American merchants sell wheat to Russia and complain when Britain sells busses to Cuba. Realizing this, the federal government has discouraged such a boycott in America. Déan Rusk, Secretary of State, has stated that such a boycott would not only be inefficient, but also foolish. The U. S is dependent upon England for many natural resources. To refuse to buy some resources would harm the United States more than it would harm Britain. Secretary Rusk has also asked the public to ignore any person who advocates such a boycott. I am inclined to agree with Secretary Rusk. Not only because such a boycott would be inefficient, but because it would also tend to encourage friction between the United States and Britain. I think that history has made clear that a country with a sound economy is reluctant to go to war. And we cannot take a chance on a nuclear war. Rather we should encourage free trade among all countries of the world. The old saying that a person with a "full belly" doesn't feel like being ornery is especially true in this case. Even in the past ten years, one can observe that the countries with economic advantages, such as the United States, Russia, and Britain, use all the forces in their power to avoid war, while economically unsound nations such as the Congo, Korea and Red China, continue to stir up friction and cause trouble. If the United States encouraged or participated in a boycott of British goods, it would do nothing but cause ill-feelings between the countries. I cannot, and I hope that you cannot subscribe to the theory that trouble can be solved by creating more trouble. For these reasons, I would strongly urge that we discourage talk or action in favor of a boycott of British products. Such a boycott could not conceivably help our country's cause and would be more likely to cause other and more serious problems.

APPENDIX E

RAW-SCORE DATA

Favorable Attitude Toward Source, Favorable Toward Topic (S+T+)

Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
1-2	5	22	M	42	40	39	38	-3	-2	-20
	9	19	F	42	42	42	42	0	0	-28
	11	20	F	36	36	38	42	2	6	-19
	12	24	M	31	32	29	32	-2	0	-19
	13	25	F	38	29	37	38	-1	9	-48
	15	20	F	32	32	30	30	-2	-2	-26
	6	21	F	37	36	42	33	5	-3	16
2-2	26	19	M	39	42	42	42	3	0	-31
	27	19	M	35	29	28	21	-7	-8	- 8
	29	19	M	38	36	39	33	1	-3	-24
	30	18	M	36	31	28	32	-8	1	-12
	31	18	F	34	31	32	21	-2	-10	-43
	35	18	F	37	35	38	37	1	2	- 8
	37	29	M	35	34	36	34	1	0	- 9
	23	18	F	30	35	42	42	12	7	12
3-1	41	19	F	39	39	39	31	0	-8	-11
	53	18	M	35	32	38	40	3	8	14
	54	19	M	42	42	39	42	-3	0	16
3-4	71	19	M	33	42	41	42	8	0	-34
	80	--	-	39	35	42	38	3	3	-21
	73	20	F	36	38	35	36	-1	-2	14
4-3	61	19	M	35	30	36	30	1	0	- 3
	62	26	M	35	36	34	36	-1	0	-48
	77	18	M	34	30	30	23	-4	-7	-15
5-2	83	18	M	32	32	36	37	4	5	- 4
	86	20	M	35	36	34	37	-1	1	-54
	90	19	M	36	37	32	33	-4	-4	26

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (Ipscores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
5-2	93	18	M	36	34	41	37	5	13	-12
	95	20	M	36	32	42	38	6	6	5
5-4	98	19	M	41	36	36	35	-5	-1	4
6-2	100	19	F	33	37	35	30	2	-7	-49
	102	20	M	32	40	35	42	3	2	-7
	107	20	F	35	31	36	37	1	6	-53
	122	18	M	36	39	36	42	0	3	-35
	112	18	F	36	35	36	41	0	6	1
	124	20	F	32	34	32	33	0	-1	2
7-3	128	18	M	38	38	42	42	4	4	-8
	134	19	M	33	39	42	42	1	3	-38
	139	23	M	42	36	42	41	0	5	17
	143	19	M	33	33	33	34	0	1	-4
	144	20	M	39	35	33	35	-6	0	-48
	158	19	M	29	30	36	40	7	10	-46
	159	20	M	31	36	33	36	2	0	11

Favorable Attitude Toward Source, Favorable Toward Topic (S+T+)

Expected Unfavorable Assertion, Perceived Favorable Assertion (0-F)

3-1	40	19	F	42	39	39	14	-3	-25	-22
	44	18	F	30	42	41	40	11	-2	-40
	57	18	F	29	29	32	33	3	4	-20
4-3	70	18	F	31	33	29	26	-2	-7	-62
	78	18	M	31	33	27	14	-4	-19	-25
	72	20	M	31	37	24	9	-8	-28	2
5-4	95	20	M	42	30	42	35	0	5	5
6-2	104	18	F	31	29	34	30	3	1	-35
	115	19	M	31	30	31	31	0	1	-23
	117	19	M	33	33	30	32	-3	-1	41
	120	18	M	30	30	29	11	-1	-19	3
	121	18	M	32	35	31	35	-1	0	42
7-3	141	22	M	39	33	42	32	3	-1	-13

Favorable Attitude Toward Source, Favorable Toward Topic (S+T+)Expected Favorable Assertion, Perceived Unfavorable Assertion (E-O)

Experimental Group and Topic	Subj. No.	Age Sex		Pretest		Posttest		Difference (I scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
3-3	40	19	F	36	33	36	10	0	-23	-22
	53	18	M	33	30	42	34	9	4	14
6-1	109	18	F	33	32	31	35	-2	3	-12
	124	20	F	34	35	30	35	-4	0	2
7-1	129	20	F	36	42	27	42	-9	0	0
	135	21	M	30	32	34	32	4	0	-42
	139	23	M	36	38	30	29	-6	-9	17
8-3	144	20	M	42	36	28	20	-14	-16	-48
	158	19	M	42	21	40	6	-2	-25	-46

Favorable Attitude Toward Source, Favorable Toward Topic (S+T+)Expected Unfavorable Assertion, Perceived Unfavorable Assertion (O-O)

3-3	42	19	F	30	29	33	7	3	-22	-25
	57	18	F	31	30	34	17	3	-12	-20
4-4	70	18	F	31	35	29	19	-2	-16	-62

Favorable Attitude Toward Source, Unfavorable Toward Topic (S+T-)Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

1-2	7	19	F	40	9	34	26	-6	17	23
	10	19	F	33	13	32	31	-1	18	-45
2-2	19	19	M	38	9	28	28	-10	19	15
3-1	45	27	F	36	15	40	34	4	19	-24

Favorable Attitude Toward Source, Unfavorable Toward Topic (S+T-)Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
4-1	65	18	F	31	7	36	13	5	6	19
	69	18	M	42	11	42	36	0	25	-51
	76	18	M	33	18	32	30	-1	12	0
4-3	79	18	M	36	17	17	33	-19	16	- 2
5-4	83	18	M	36	15	39	20	3	5	- 4
	84	18	M	42	12	36	39	-6	27	-23
	87	21	M	35	14	31	31	-4	17	41
	89	19	M	34	15	30	26	-4	11	-17
	90	19	M	39	10	31	19	-8	9	26
	92	18	M	36	18	35	38	-1	20	-38
	93	18	M	39	16	35	21	-4	5	-12
8-1	156	19	M	31	12	36	34	5	22	- 2
	157	18	M	31	14	37	36	6	22	-10

Favorable Attitude Toward Source, Unfavorable Toward Topic (S+T-)Expected Unfavorable Assertion, Perceived Favorable Assertion (O-F)

1-4	11	19	M	36	6	42	25	6	19	30
	4	18	F	35	11	39	9	4	-2	2
	9	19	F	33	12	42	18	9	6	-28
2-2	17	18	M	31	14	33	20	2	6	-14
	21	19	F	39	10	38	19	-1	9	-43
	28	21	M	37	11	19	10	-18	-1	-14
2-3	26	19	M	39	10	30	15	-9	5	-31
3-1	43	18	F	35	16	30	23	-5	7	-37
	49	18	F	33	17	32	21	-1	4	-17
4-1	61	19	M	42	6	32	6	-10	0	- 3
	62	26	M	33	6	33	27	0	21	-48

Favorable Attitude Toward Source, Unfavorable Toward Topic (S+T-)Expected Unfavorable Assertion, Perceived Favorable Assertion (O-F)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
4-3	59	20	F	36	19	30	27	-6	8	-34
	63	26	M	29	18	26	24	-3	6	-61
	68	20	F	35	14	30	21	-5	7	-12
5-2	84	20	M	36	6	39	39	3	33	-23
	91	19	M	35	9	35	7	0	-2	-28
	98	19	M	36	19	38	30	2	11	4
5-4	86	20	M	32	13	38	23	6	10	-54
	99	18	M	33	11	33	22	0	11	-9
6-2	108	18	F	33	9	31	13	-2	4	-41
	110	18	F	29	15	34	34	5	19	-15
	113	19	M	33	12	30	9	-3	-3	5
7-3	131	21	M	35	16	42	23	7	7	29
8-1	146	18	M	30	14	22	17	-8	3	-31
	148	21	F	31	19	26	29	-5	10	-10

Favorable Attitude Toward Source, Unfavorable Toward Topic (S+T-)Expected Favorable Assertion, Perceived Unfavorable Assertion (F-O)

2-1	26	19	M	29	8	37	8	8	0	-31
3-3	44	18	F	36	11	42	9	6	-2	-40
	56	18	M	31	19	32	10	1	-9	18
5-3	91	19	M	38	7	37	12	-1	5	-28
6-4	112	18	F	42	19	42	23	0	4	1
7-1	130	22	M	32	18	28	16	-4	-2	-20
	134	19	M	36	14	42	15	6	1	-38
	137	19	M	29	6	34	11	5	5	6
	138	21	M	33	6	34	18	1	12	-20
	141	22	M	36	6	42	33	6	27	-13
8-3	154	19	F	36	14	30	9	-6	-5	-45

Favorable Attitude Toward Source, Unfavorable Toward Topic (S+T-)Expected Unfavorable Assertion, Perceived Unfavorable Assertion (O-O)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
1-3	3	19	F	29	20	50	14	1	-6	14
2-4	16	20	F	36	14	32	23	-4	9	-34
	19	19	M	36	10	28	11	-8	1	15
	23	18	F	36	17	35	16	-1	-1	12
	26	19	M	36	12	30	12	-6	0	-31
	29	19	M	31	18	21	24	-10	6	-24
	35	18	F	36	18	36	16	0	-2	-8
	37	29	M	34	14	31	19	-3	5	-9
3-3	48	18	F	34	20	35	13	1	-7	-25
	49	18	F	34	11	35	9	1	-2	-17
	50	18	F	32	20	35	14	3	-6	-14
	54	19	M	36	14	42	18	6	4	-16
4-2	59	20	F	33	18	33	17	0	-1	-34
5-3	99	18	M	31	19	20	17	-11	-2	-9
8-3	143	19	M	34	13	35	15	1	2	-4
	148	21	F	29	16	30	14	1	-2	-10
	151	20	M	41	13	37	6	-4	-7	-18
	156	19	M	41	10	39	13	-2	3	-2
	157	18	M	41	20	39	15	-2	-5	-10
8-4	158	19	M	33	12	38	7	5	-5	-46

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

1-1	11	20	F	17	31	35	38	18	7	-19
2-3	21	19	F	19	31	15	21	-4	-10	-43
	29	19	M	20	30	33	27	13	-3	-24

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
3-2	41	33	F	9	35	6	33	-3	-2	-11
	42	19	F	14	36	27	33	19	-3	-25
	48	18	F	10	41	13	34	3	-7	-25
	54	19	M	6	39	30	35	24	-4	16
	56	18	M	8	38	17	35	9	-3	18
	57	18	F	11	32	14	32	3	0	-20
5-1	83	18	M	15	29	30	35	15	6	-4
	90	19	M	10	35	28	39	18	4	26
	92	18	M	16	34	29	24	13	-10	-38
6-3	123	18	F	19	30	27	27	8	-3	-7
7-2	130	22	M	20	30	24	33	4	3	-20
	131	21	M	20	33	21	25	1	-8	29
7-3	138	21	M	6	34	16	27	10	-7	-20
7-4	129	20	F	15	35	24	42	9	7	0

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Unfavorable Assertion, Perceived Favorable Assertion (O-F)

1-1	7	19	F	9	41	31	33	22	-8	23
	8	20	F	20	38	26	34	6	-4	14
	13	25	F	16	42	35	30	19	-8	-48
3-2	40	19	F	9	32	28	39	19	7	-22
	43	18	F	15	31	29	35	14	4	-37
	44	18	F	6	42	26	42	20	0	-40
	49	18	F	6	33	13	37	7	4	-17
3-4	48	18	F	14	31	17	32	3	2	-25
	53	18	M	9	34	8	42	-1	8	14
4-1	64	19	M	19	32	29	30	10	-2	-1

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Unfavorable Assertion, Perceived Favorable Assertion (O-F)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
5-1	86	20	M	13	29	20	35	7	6	-54
	88	18	M	13	34	29	37	16	3	23
6-3	110	18	F	11	29	10	11	-1	-18	-15
7-2	126	21	M	20	34	25	24	5	-10	-32
	129	20	F	9	42	13	42	4	0	0
	135	21	M	13	39	19	38	6	-1	-42
	137	19	M	6	30	19	21	13	-9	6
	139	23	M	7	33	33	35	26	2	17
	141	22	M	6	39	42	42	36	3	-13

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Favorable Assertion, Perceived Unfavorable Assertion (F-O)

4-2	61	19	M	6	34	6	24	0	-10	-3
	72	20	M	14	35	12	30	-2	-5	2
6-1	100	19	F	16	33	29	27	13	-5	-49
	121	18	M	15	31	33	30	18	-1	42
	122	18	M	9	42	17	42	8	0	-35
8-2	159	20	M	6	33	6	29	0	-4	11
8-4	143	19	M	12	32	24	32	12	0	-4

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Unfavorable Assertion, Perceived Unfavorable Assertion (O-O)

2-1	19	19	M	6	42	11	31	5	-11	15
	22	19	M	6	34	28	36	22	2	26
	31	18	F	20	32	24	30	4	-2	-43
	32	19	M	14	29	20	21	6	-8	17

Unfavorable Attitude Toward Source, Favorable Toward Topic (S-T+)Expected Unfavorable Assertion, Perceived Unfavorable Assertion (O-O)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
4-2	68	20	F	6	32	22	17	16	-15	-12
4-4	74	21	M	6	36	9	37	3	1	-14
	79	18	M	18	30	25	25	7	-5	-25
5-3	92	18	M	13	32	22	23	9	-9	-38
8-2	143	19	M	9	35	23	20	14	-15	-4
	148	21	F	17	34	21	21	3	-13	-10
	151	20	M	6	42	7	29	1	-13	-18
	157	18	M	14	38	31	22	17	-16	-10
	158	19	M	15	42	28	23	13	-21	-46

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

2-3	23	18	F	14	11	19	8	5	-3	12
	24	20	M	15	15	15	30	0	15	24
	27	19	M	9	15	12	24	3	9	-8
	28	18	M	8	6	19	24	11	18	-14
	32	19	M	10	15	19	27	9	12	17
3-1	52	18	M	13	13	17	30	4	17	13
3-2	46	18	F	10	16	13	21	3	5	-18
3-4	42	19	F	16	9	15	15	-1	6	-25
	43	18	F	11	16	23	21	12	5	-37
	47	18	M	14	19	26	26	12	7	-5
4-1	74	21	M	17	6	22	6	5	0	-14
5-1	84	18	M	20	6	35	36	15	30	-23
	91	19	M	7	9	19	9	12	0	-28
	95	20	M	8	6	33	26	25	20	5
	99	18	M	16	15	35	28	19	13	-9

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Favorable Assertion, Perceived Favorable Assertion (F-F)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
6-3	115	19	M	17	19	24	16	7	-3	-23
	117	19	M	16	14	30	29	14	15	41
7-4	133	19	M	19	17	23	15	4	-2	-28
	134	19	M	8	15	16	28	8	8	-38

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Unfavorable Assertion, Perceived Favorable Assertion (O-F)

1-4	6	21	F	19	10	40	13	21	3	16
3-4	44	18	F	6	19	18	40	12	21	-40
	46	18	F	20	9	26	27	6	18	-18
5-1	96	20	M	12	15	28	28	16	13	10
6-4	120	18	M	20	14	29	16	9	2	3
7-1	128	18	M	6	18	42	34	36	16	-8
7-4	131	21	M	14	11	20	25	6	14	29
	139	23	M	6	12	7	20	1	8	17

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Favorable Assertion, Perceived Unfavorable Assertion (F-O)

1-3	1	19	M	9	6	15	6	6	0	30
	4	18	F	10	13	16	12	6	-1	2
	6	21	F	6	8	7	6	1	-2	16
4-2	66	18	F	17	6	32	9	15	3	-21
	82	19	M	14	14	16	12	2	-2	7

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Favorable Assertion, Perceived Unfavorable Assertion (F-O)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
4-4	59	20	F	10	17	22	18	12	1	-34
	61	19	M	6	6	30	6	24	0	-3
	68	20	F	9	12	31	6	23	-6	-12
	73	20	F	9	9	26	6	17	-3	14
	80	19	F	6	12	6	6	0	-6	-21
5-3	88	18	M	9	8	9	8	0	0	23
	96	20	M	14	7	20	10	6	3	10
	98	19	M	18	18	22	15	4	-3	4
6-1	111	19	M	20	19	22	16	2	-3	-7
	116	18	F	16	20	27	18	11	-2	6
	120	18	M	12	12	22	12	10	0	3
8-4	146	18	M	10	18	7	27	-3	9	-31
	155	21	M	12	12	24	19	12	7	-20

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Unfavorable Assertion, Perceived Unfavorable Assertion (O-O)

1-3	11	20	F	16	8	17	15	1	7	-19
2-1	23	18	F	13	17	33	6	20	-11	12
	28	21	M	15	7	15	8	0	1	-14
4-2	65	18	F	19	13	36	9	17	-4	19
	75	20	M	19	20	23	7	4	-13	31
	76	18	M	11	16	25	9	14	-7	0
4-4	62	26	M	19	12	30	6	11	-6	-48
	64	19	M	19	16	24	18	5	2	-1
	69	18	M	8	12	13	14	5	2	-51
	72	20	M	14	13	18	15	4	2	2
	81	18	M	20	19	22	22	2	3	-32
5-3	87	21	M	9	12	19	19	10	7	41

Unfavorable Attitude Toward Source, Unfavorable Toward Topic (S-T-)Expected Unfavorable Assertion, Perceived Unfavorable Assertion (O-O)

Experimental Group and Topic	Subj. No.	Age	Sex	Pretest		Posttest		Difference (I-scores)		Dogmatic Score
				Source	Topic	Source	Topic	Source	Topic	
6-1	107	20	F	13	16	28	17	15	1	-53
	108	18	F	20	12	30	14	10	2	-41
	113	19	M	9	20	26	16	17	-4	5
8-3	146	18	M	17	6	21	11	4	5	-31
8-4	148	21	F	19	17	12	14	-7	-3	-10