

PURPOSEFUL AMBIGUITY AS
A PERSUASIVE MESSAGE STRATEGY

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ABSTRACT

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By

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This study investigated the relationship between the level of purposeful ambiguity and: (1) assimilation of perceived source position; (2) source credibility; (3) attitude change.

In this study purposeful ambiguity was defined as the use of high levels of abstraction with connotatively positive words.

Prior research indicated that receivers interpret ambiguous messages to support prior expectations or desires. It was hypothesized that with relatively high levels of purposeful ambiguity the message would be assimilated toward the receiver's own position. It was also predicted that high purposeful ambiguity would lead to higher ratings of source credibility. Finally, it was predicted that receivers would show more favorable attitude change with a message high in purposeful ambiguity.

Message elements were manipulated to achieve three levels of abstraction. The subjects first indicated their attitude toward open housing. They then read one message and completed the posttest questionnaire. Subjects indicated the perceived position of the source toward open housing, rated the credibility of the source, rated the ambiguity of the message, and indicated their own posttest attitude toward open housing.

The results did not support the hypotheses. In the analysis of the data it was found that the moderate level of purposeful ambiguity had a greater tendency to support the predicted differences than did the high purposeful ambiguity message.

Two problems were evident. First, it was felt that the abstraction index was an inadequate instrument for this type of manipulation. While it indicated great differences in the abstraction levels of the messages, the respondents in a pretest found only small but consistent differences. Ratings obtained in the main study indicated no differences. A second problem was that to adequately test the hypotheses a heterogeneous sample was necessary. The final sample was quite uniformly positive toward open housing.

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CHAPTER I

THE PROBLEM

We communicate to influence--to affect with intent. In analyzing communication, in trying to improve our own communication ability, the first question we need ask is, what did the communicator intend to have happen as a result of his message? What was he trying to accomplish, in terms of influencing his environment? As a result of his communication, what did he want people to believe, to be able to do, to say? In psychological terms, what response was he trying to obtain? (Berlo, 1960, p. 12)

Considerable research has indicated that highly credible sources are more effective in influencing receivers than are sources with lower credibility. McGuire (1969) has provided an adequate review of findings concerning source credibility. The results of previous studies indicate that any source who hopes to be an effective communicator should seek to establish high credibility with his receivers. Even so, little research has examined the effects of message variables on subsequent perceptions of source credibility. One common technique of studying the effects of source credibility has been to use a standard message and to vary the attributes of the source to whom the message is attributed. A second common technique has been to use the names of

persons known to differ in initial credibility as sources of a common message. These techniques have been useful in establishing the importance of source credibility in communication.

In many communication situations the introduction of the source does not afford the opportunity for immediate establishment of very high credibility. Few communicators are nuclear physicists, Presidents, famous political figures, or national experts in particular fields of concern. If these attributes are lacking, communicators must establish high credibility by means of the message itself.

Using the terminology of Miller (1966) few speakers are perceived to possess such high exogenous sources of credibility that they need not concern themselves with the endogenous sources of credibility. Miller defines the endogenous sources of credibility as variables associated with the communication act itself. Exogenous sources of credibility are attributes that the source brings with him to the communication situation (Miller, 1966, p. 36). Examples of exogenous variables cited by Miller are education, occupation, physical attraction, and moral characteristics. Endogenous variables are such things as use of grammar, word selection, and fluency of the speaker. The review of source credibility research by McGuire (1969) indicates that studies

have focused upon the exogenous sources of credibility.

Establishing credibility endogenously can most easily be done by presenting material that supports the prior beliefs of the receiver (see, e.g., Byrne, 1961). That technique should work well given either a single receiver or a homogeneous group of receivers whose beliefs and attitudes are known by the source. If the source does not have sufficient prior knowledge about his receivers, it is difficult to use this message strategy effectively. If the source is faced with receivers who do not have homogeneous beliefs or attitudes, the strategy is not available to him in the first place.

The present research examined a potentially useful message strategy for situations in which either the source has little information about the attributes of the audience or he is aware that the receivers have heterogeneous attitudes toward the message issue. The message strategy studied is labeled purposeful ambiguity.

Definition of Purposeful Ambiguity

For a symbol or group of symbols to be labeled purposefully ambiguous, they must meet two general criteria: First, there must be disagreement on the denotative meanings of the symbols used. Coupled with this is the requirement that individual receivers must have

denotative meanings for the symbols used. The first requirement is the criterion for ambiguity. The second requirement provides the means of separating ambiguity from a more general vagueness of symbols. Given vagueness, the receiver is not certain he knows the referents of the symbols; given ambiguity, the receiver feels certain he knows the referent intended by the source. Ambiguity can only be discovered by comparing referents across a group of receivers.

In order to be used purposefully in obtaining a desired response, symbols must meet a second general criterion. If symbols are to be purposefully ambiguous, they must have high connotative uniformity among receivers. To employ purposeful ambiguity, the source must not only be aware that there will be denotative disagreement among receivers, he must also be certain that the symbols used have a high degree of connotative uniformity among receivers.

If denotative and connotative meaning are viewed as dichotomies--either agreement or disagreement between individuals--the requirements for a statement to be purposefully ambiguous are clearer. This paradigm is adapted from Osgood (1961, p. 102). The four possible situations are:

- A. Denotative agreement----Connotative agreement
- B. Denotative agreement----Connotative disagreement

C. Denotative disagreement--Connotative agreement

D. Denotative disagreement--Connotative disagreement

When source and receiver agree on both denotative and connotative level (A above), the source has his best chance of achieving his communicative goals. There is minimum ambiguity in the situation. Both source and receiver agree on the referents of the symbols used, and both have similar feelings toward those symbols. An example of situation A occurs when two people are discussing where to meet for dinner. Person S suggests a local steakhouse where he has enjoyed eating in the past. Person R recognizes the name of the steakhouse and has also been favorably impressed by the meals he has had there. In this situation, with agreement on both the denotative and connotative levels, it is quite likely that the suggestion of person S will result in acceptance on the part of person R.

Situation B (above) suggests that two communication participants agree on the denotative level but have differing connotative reactions to the referents of the symbols used, or to those symbols. If, in the example cited above, person R recognized the name of the suggested steakhouse but had received poor service in the past his connotative reaction to the name of the steakhouse would vary from that of person S. There is agreement on the referent (the steakhouse) but the two

individuals have differing connotative reactions. In this situation there is less likelihood of person S achieving his goal, i.e., eating at his favorite steak-house.

Situation D probably represents a total loss so far as meaningful communication is concerned. Here the communication participants disagree on both the referents of the symbols used and on their connotative reactions to the symbols or their referents.

In situation C, there are two possible reasons for denotative disagreement. The first involves the use of different labels for the same object. A second possibility involves the use of the same label (e.g., democracy), with differing referents for the label and with similar feelings for the "object" (both agree that democracy is "good"). It is this last situation that allows for the use of what has here been termed purposeful ambiguity.

Literature and Hypotheses

The general notions of balance theory suggest that purposeful ambiguity could be a useful message strategy for gaining message acceptance or improving source credibility. Cognitive consistency models assume that the individual desires to maintain consistency among relevant cognitions, that imbalance or inconsistency leads to psychological discomfort, and that

psychological discomfort in turn motivates the individual to regain or restore consistency. Kelman and Baron (1968) suggest that inconsistency reduction can take one of two general forms: First, "the individual may avoid the implication of the inconsistency by perceiving or interpreting the discrepant element in such a way that it no longer appears to be inconsistent with the potentially challenged element" (pp. 670-671). Second, the individual may confront the inconsistency and change either the attitude or the behavior involved (p. 671).

In terms of the use of purposeful ambiguity, it is likely that the first of the two techniques of inconsistency reduction would be used. If an individual encounters a message concerning a topic of interest, he will tend to read the message and form a cognitive element from it. If the message offers many connotative anchors, the connotative anchors will influence the placement of the message in the cognitive structure of the individual. A message using positively valued abstract words should allow that process to occur with relative consistency. The process could be pictured thus:

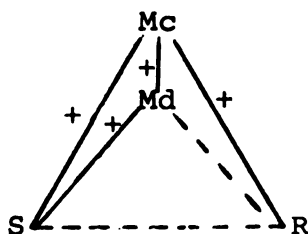


Figure 1

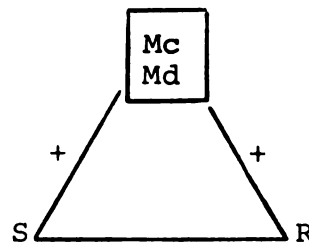


Figure 2

Figures 1 and 2 are adapted from Abelson's (1967) discussion of transcendence (pp. 353). Figure 1 represents the inferred state of the system immediately upon the receiver's receipt of the message. The link between the source (S) and the connotation of the message (Mc) is positive because the source produced the message. The link between the source and the denotative meaning of the message (Md) is positive for the same reason. The link between the denotative meaning of the message and the connotative meaning of the message is positive because of the identity of the symbols used to convey the two forms of meaning. The link between the receiver (R) and the connotative meaning of the message is inferred to be positive because of the positively valued abstractions used in the message. The receiver needs to adjust the structure to supply the links between himself and the denotative meaning of the message and between himself and the source of the message.

The relationship between the receiver's denotative and connotative meanings of the message should lead to a solution that is similar to transcendence as discussed by Abelson (1967). The receiver should be unable to psychologically tolerate the inconsistency between valuing something positively and recognizing that it has little meaning. He should tend to assume a meaning that he views as positive and thereby balance the structure.

By viewing the message as a whole, encompassing both the denotative and the connotative meaning, he forms a positively valued single unit from what was previously a positively valued portion and an ambivalent portion. This solution implies that if the receiver were then asked to supply the denotative meanings for the message, he would not define the terms in evaluatively neutral referents but rather would seek to define them with referents that were positively valued by him. Finally, with the message now positively valued, the link between the source and the receiver should also be established as positive to achieve balance.

Skinner (1957) has also emphasized the idea that ambiguity could be useful. He states that ambiguity " . . . should increase the chances for a successful match between the reader and the literary work." He further asserts that while ambiguity should make the work more universally acceptable, it should also make the work less likely to be any particular reader's favorite book (p. 275).

In 1962, James Roever authored a paper entitled, "Understanding Misunderstanding: Toward a Theory of Purposeful Ambiguity." In that paper Roever forecast great utility for the strategy of purposeful ambiguity. He states that "through the use of purposeful ambiguity, we can satisfy various needs of various individuals

when they are in the same audience" (Roever, 1962, p. 4). Roever asserts that purposeful ambiguity may be established through the use of "high levels of abstraction and situations where we have not differentiated between similarities and differences" (Roever, 1962, p. 5). He suggests that the choices of meaning of the communication be left entirely up to the audience.

At a recent communication symposium, S. N. Eisenstadt cited a problem that was solved through the use of ambiguity. He described the solution reached when a symbol selection problem threatened to prevent the completion of the Israeli declaration of independence. The orthodox religious group insisted that the term "God" should be used in the document while the nonorthodox group insisted that it should not be written into the declaration. The solution reached was the use of the purposefully ambiguous Biblical expression "the Rock of Israel." For the orthodox group, it meant God, for the nonorthodox, it meant the destiny of Israel or the identity of the country (Thayer, 1967, p. 475). Thus, a conflict was clearly defined, and for a time it appeared that neither side would allow the other to prevail. But through the use of compromise wording the two groups found language symbols they could both agree were "good." They disagreed on what the symbols denoted, but both felt they had accomplished their goals concerning the inclusion

or exclusion of the word "God" from the declaration of independence. The intentional use of an ambiguous expression solved a communication problem that seemingly could not be solved through more concise use of symbols. As George Gerbner has stated: "It is a political necessity to engage in calculated ambiguity in the use of symbols so that different constituent groups may derive different types of gratification from the symbols . . . " (Thayer 1967, p. 477).

Fearing (1953) discusses the effects of ambiguous content upon receivers. He defines ambiguity in terms of the variety of possible structurizations possible by the interpreters and states that ambiguity "is concerned with the properties of communications content which make it susceptible to variant structurizations by interpreters" (Fearing, 1953, p. 82). Fearing further asserts that the "important variables are in the content (including context). These include structural simplicity or complexity, amount of detail, etc. . . . The familiarity with the symbols used in particular content, and the degree to which they have common significations for communicators and interpreters are, of course, fundamentally important variables" (p. 83). The preceding statement fits well in the paradigm adapted from Osgood and presented previously.

Fearing also discusses involvement with the topic in terms of receiver set, which is defined in terms of the receiver's having "specific and persisting goal integrations, strong value orientations and stereotypes, specific prior experience in or involvement with particular content . . . " (Fearing, 1953, p. 83). Fearing foresees interaction between receiver set and ambiguity of the content. (Specifically, he predicts that with highly ambiguous content and strong receiver set, the receiver will give structure to the content--structure that will be in the direction of the receiver's set.) With high ambiguity and low receiver set, the receiver should seek greater structure or simply be indifferent to the message. With low ambiguity and high receiver set, Fearing predicts two possible outcomes: If the material supports the beliefs of the receiver, it will be accepted; if the material conflicts with the beliefs of the receiver, inconsistency or imbalance will result. Such conflict will be resolved by evasion, rejection of the materials, or by leaving the field entirely. With low ambiguity and low receiver set, the receiver may accept the content but no conflict will result. Conflict will be precluded by the receiver's low involvement (Fearing, 1953, p. 85).

Fearing's paper stresses the differential effects that the receiver's involvement with the topic may have

on his reception of the message. However, he makes little attempt to operationalize the concept of ambiguity. The definition cited above (p. 12) suggests that the researcher might pretest the material by using some open-ended technique or some predetermined category system to which the receiver of the content reacts. If, however, the subject has a strong set, Fearing suggests, it would prevent variations in the interpretation of the content. Comparisons across subjects might rectify this problem, if subjects have various orientations previous to being exposed to the content. These problems are not adequately discussed by Fearing.

Based on the earlier work of Flesch, Paul J. Gillie (1957) developed a simplified index of the abstraction level of a message. The index was used in a study by Haskins (1960), who found that the proportion of readers who rated a magazine article as excellent was correlated .80 with the Abstraction Index score of that article. He invokes amount of effort involved in reading the article to explain his findings. "Presumably, more satisfaction is derived from the completion of a tough task than an easy one. Equating abstractness with toughness, we expect more satisfaction in the reading of an abstract item than in a concrete item" (Haskins, 1960, p. 104).

The same results would be predicted from the theoretic framework presented earlier in this chapter. According to the rationale presented by Roever, abstract messages should allow readers to infer their own meanings for the abstract words. According to balance theories, these meanings should support the receiver's own beliefs. The entire process leads to the prediction that abstract messages should be rated more highly than less abstract messages--the results obtained by Haskins.

Bousfield (1961) reported in a study in which Turkish words were paired with their purported English meanings. The subjects learned the words as pairs. After allowing one week for forgetting, subjects were given the Turkish word and asked to recall the purported translation. They also rated the Turkish word on the good-bad semantic differential scale. Bousfield reports that:

. . . it was found that the subjects tended to retain the connotative meaningful responses assumed to have been acquired by the Turkish words when they were unable to recall the supposed translations. The present explanation of this type of recall is that, even though the subjects were unable to recall the supposed translations, a sufficient number of acquired implicitly produced meaningful responses remained to enable them to give appropriate ratings (Bousfield, 1961, pp. 85-86).

While the analogy is presently tenuous, it seems possible that the preceding outcome may also occur even when there is no language change. A precise definition

of the word democracy in the English language is not simple. When the existing institutions in this country must also be included in the definition, it becomes even more complex and has few referents for the average schoolboy who is forced to learn the book definition. However, in this culture the connotative "definition" of the word democracy is "very good." Perhaps for abstract words, the results found by Bousfield are directly comparable; that is, the person may forget the exact denotative meaning of the word but retain the connotative meaningfulness.

Sherif, Sherif, and Nebergall (1965) report a study completed during the 1960 election campaign. Their study is of special interest here because it demonstrated the displacement of a communication that was reported to be completely neutral or unidentifiable in terms of the political party it supported. Moreover, it was similar to the purposefully ambiguous communication of concern in this study.

Sherif, Sherif, and Nebergall found that the unidentifiable communication was assimilated toward the receiver's position, i.e., each receiver predicted that the author would vote for the candidate favored by the receiver (Sherif, Sherif, and Nebergall, 1965, p. 161). The other communications were all tied to support for one of the major political parties and were

therefore less susceptible to assimilation by those of opposing views. Finally, there was a tendency for those rated as less highly involved to assimilate the statement that mildly favored the opposing political party (Sherif, Sherif, and Nebergall, 1965, pp. 158-159).

In contrast, statements that were strongly in favor of one party or the other showed no tendency for assimilation. Both supporters of the Republicans and the Democrats rated the extreme statements in a similar manner. The extremely Democratic statement was rated accurately by both the Republicans and the Democrats. Thus, the very clear or unambiguous statements were not susceptible to varying interpretations by various receivers, instead, these statements were acceptable only to those holding similar views.

An early study in psychological distortion of judgments was conducted by Campbell, Hunt, and Lewis (1957). Psychology students judged the degree of imbalance of bogus psychotics on the basis of various messages supposedly composed by those individuals. In general, the messages designed to portray very unbalanced individuals were correctly interpreted. However, when the message was near the center of the stimulus range (very unbalanced to very stable), there were distortions. Specifically, the researchers found a tendency for assimilation in the direction of the expectations of the person

doing the judging. Those who expected the author of the message to be highly disturbed tended to judge the author more disturbed than those who expected the author of the message to be only mildly disturbed. Campbell, Hunt, and Lewis conclude that when the judgment task results in ambiguity or confusion, there will be a tendency for the judge to assimilate the judgments in the direction of his own expectations (Campbell, Hunt, and Lewis, 1957, p. 355).

Dillehay (1965) used a single message that was moderately in favor of adding flouride to water. The experimental groups were composed of nurses and other women from the community. Subject attitudes ran from highly favorable to mildly negative toward the use of flouride. Dillehay found that all groups showed a tendency to assimilate the message; i.e., all groups tended to perceive the message as being closer to their own view than its placement had previously indicated. Since the message was not included in the report, it is not possible, at this time, to judge its ambiguity. However, if the message was only moderately in favor of fluoridation, it could conceivably be considered a slightly ambiguous message.

A study by Kelman and Eagley (1965) investigated the effects of source credibility upon perception of the message and the source's position on the issue. Given

a positive source, there was a tendency toward assimilation--subjects perceived the message as favoring their own views and placed the source's attitude in a position similar to their own. Given a negative source, there was no apparent tendency toward assimilation, nor was there a tendency toward contrast. Kelman and Eagley concluded:

Displacement (assimilation) and attitude change can be viewed as alternative ways of achieving the congruity between source and message that is so important when source orientation prevails. One can assume that displacement is the most likely mechanism to be used when the message is highly ambiguous and thus easily lends itself to different interpretations (p. 76).

The preceding discussion would lead to the following hypothesis:

H1a. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will rate the source's position significantly more similar to their own position than they will with a message low in purposeful ambiguity.

Given that the subjects will rate the source's position more similar to their own if the message is high in purposeful ambiguity than if it is low in purposeful ambiguity, it would follow that the variability of the subjects' ratings of the source's position would also be effected. With high variability in the subjects' initial ratings of their own position, the act of rating the source's position as similar to their own would lead to high variability in the rating of the source's position. With low purposeful ambiguity the subjects'

initial ratings of their own position should have relatively less effect. Therefore, the following effect is hypothesized:

H1b. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will show significantly greater variability in their ratings of the source's position than they will with a message low in purposeful ambiguity.

Manis (1961a) studied the effects of ambiguity and receiver position on message interpretation. The topic used was fraternities, and the receivers' views toward fraternities varied from positive to negative. Ambiguity was introduced into the messages by deleting every other word. Three messages were used: One favoring fraternities, one neutral, and one opposing fraternities. These three messages were counter-balanced to form eighteen treatment groups.

Ambiguity, as manipulated by Manis, served to increase the uncertainty of the message position and resulted in the ambiguous messages regressing toward the neutral point on the rating scales. The important dependent measure, as far as the present research is concerned, was the subjects' impression of the position of the source of the message on fraternities. The author's conclusions were:

1. When responding to messages that they essentially agreed with, subjects tended to displace the communicators toward their own position.

2. When responding to messages that deviated moderately from their own stands, there was a consistent tendency for subjects to displace messages toward the point on the scale that they themselves favored; this trend was shown by the pro and the anti groups in response to the neutral messages, and by the neutral group in response to both the pro and the anti-fraternity messages.
3. When the subjects responded to statements that were definitely opposed to their own stands, no consistent displacement trends were obtained . . . (Manis, 1961a, pp. 80-81).

The second of these three conclusions is of greatest interest here. A neutral message, rated by itself, showed a trend toward assimilation by both those favoring and those opposed to fraternities. In each case, the readers of the message felt that the author of the statement was basically in their camp. Those neutral toward fraternities felt that each author was more neutral than did the other two groups. It is the measurement of the author's perceived stand that allows the type of ambiguity of concern in this study to best be detected. A neutral message best typifies the strategy of purposeful ambiguity for it offers the reader few clues as to the "true" position of the author of the statement.

In a replication with variation, Manis (1961b) eliminated the variable of ambiguity and used instead high and low credible source manipulations. Again, the dependent variable of concern was the receiver's estimation of the source's attitude toward fraternities.

Manis found that with a low credible source, there was no consistent trend toward either assimilation or contrast by any of the treatment groups. With a high credible source, the results were quite different: The subjects tended to show a general assimilation effect. All treatment groups demonstrated a trend to displace the estimation of the source's attitude in the direction of the receiver's attitude toward fraternities (Manis, 1961b, p. 84). Thus, there seemed to be a tendency on the part of the receivers to wish that the high credible source would display attitudes similar to their own.

Finally, Byrne (1961) reported a study which demonstrated that similarity of attitudes leads to greater acceptability of the other person. This suggests that if the source of a message is perceived as supporting views similar to one's own, then the source will be rated higher in perceived credibility than would an unknown source. Using this study in combination with those previously reported, it would seem that proper use of ambiguity, built around the use of connotatively positive words, would be a viable means of enhancing the source's credibility. Thus the following hypotheses are proposed:

H2a. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will show significantly less variability in their ratings of the source's qualification than they will with a message low in purposeful ambiguity.

H2b. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will rate the source significantly higher in qualification than they will with a message low in purposeful ambiguity.

H3a. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will show significantly less variability in their ratings of the source's safety than they will with a message low in purposeful ambiguity.

H3b. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will rate the source significantly higher in safety than they will with a message low in purposeful ambiguity.

None of the research reviewed deals directly with the receiver's perception of the source's dynamism and how it might be affected by the use of purposeful ambiguity. Berlo, Lemert, and Mertz (1966) suggest that the rating of the dynamism of the source, though statistically independent "may not be psychologically independent of the other two factors" (p. 21). Intuitively, it would seem that if the receiver perceives a purposeful ambiguous message to emanate from a safe and qualified source, he would also attribute some amount of vigor to that source. Though evidence is lacking at the present time, the following hypotheses would seem in order:

H4a. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will show significantly less variability in their ratings of the source's dynamism than they will with a message low in purposeful ambiguity.

H4b. Given a message high in purposeful ambiguity and a receiver group with heterogeneous attitudes toward the topic, the receivers will rate the source significantly higher in dynamism than they will with a message low in purposeful ambiguity.

As indicated in the opening paragraph of this chapter, there is ample evidence that a message from a high credibility source leads to greater attitude change than the same message from a low credible source. Because it is felt that a message high in purposeful ambiguity will lead to the receiver attributing greater credibility to the source of the message than will a message of low purposeful ambiguity, the message high in purposeful ambiguity should lead to greater attitude change in the direction advocated in the message. Formally stated:

H5. Given a receiver group with heterogeneous attitudes toward the topic, a message high in purposeful ambiguity will lead to significantly greater attitude change in the direction advocated in that message than will a message low in purposeful ambiguity.

CHAPTER II

METHOD

Topic

Four topics were used in a pilot study with adults and students in the Lansing, Michigan area. The four topics were: Open Housing, Rioting in the Cities, Withdrawal from Vietnam, and Negotiations in Vietnam. On the basis of the results of that pretest of the topics, Open Housing was selected as the topic for the main study. It was felt that it offered both a split in attitudes and high interest value for adults.

Message Development

The original message was written by the experimenter to represent a position favorable to stronger Open Housing laws. From the first message two additional messages were developed by manipulating the abstraction level according to the indices developed by Gillie (1957) and tested by Haskins (1960).*

* A copy of the index can be seen in Appendix A.

manipulations involved the use or nonuse of the article the, the verb form to be or its derivatives, and nouns with specified endings (e.g., -tion, -ship, -y).

The final sentence in the messages offers an example of the manipulation of the article. The use of the finite article the lowers the abstraction index score. The final sentence in the least abstract message was: "All of the citizens must have equal access to all of the products of our society." The most abstract version reads: "We must offer our citizens access to the products of our society."

The use of finite verb forms lowers the abstraction index score while the use of nouns which end in -tion raises the score. An example of that manipulation can be found in the following sentences: "Prejudice toward blacks is being handed down like some birthright"; "Prejudices are handed down like some birthright"; "Prejudices can be passed down from generation to generation unaltered." The sentences are in order of increasing abstraction.*

In each case an attempt was made to keep as much commonality as possible while manipulating the sentence elements required to change the abstraction index score.

The completed messages were ranked according to perceived level of ambiguity by five adult judges. The

*The complete messages will be found in Appendix B.

criterion of acceptability was that all five judges must rank the messages in the same order and the order must be identical with the abstraction index ranking.

The final test of the acceptability of the messages consisted of submitting them to ten undergraduate and ten graduate students at the University of Connecticut. Before reading the three messages, the students read the following instructions from the front of the experimental booklet:

Please read all three messages carefully. You will find that they all deal with open housing. However, there are differences in the manner in which they express the author's position on the issue. You are being asked to judge the clarity with which they express the author's view.

Please indicate which message most explicitly states the author's position and which message is most ambiguous on that position. You are not to judge which message you like best or least. Please judge the messages only on their relative ambiguity concerning the author's position.

At the bottom of each message you will find the labels "most precise" and "most ambiguous." When you decide which message most precisely expresses the author's position on open housing circle the label "most precise." When you decide which message is most ambiguous concerning the author's position on open housing circle the label "most ambiguous."

The subjects were then given time to read and rate the messages. When all the subjects were finished, time was allowed for questions. They were thanked for their cooperation and dismissed. The criterion for acceptability was 80% ranking the message as predicted.

Messages meeting the criterion were considered adequate for use in the main study.

Main Study

Subjects

S's were 77 adults recruited from a large work group in a Hartford, Connecticut, insurance company and 50 students recruited from basic courses at the University of Connecticut. Of these, 66 adults and 46 students returned usable data. The remaining S's failed to complete the questionnaire.

The adult S's completed the materials during free time in their work day. In all cases the materials were returned before lunch on the day they were distributed. The distribution of the materials was handled by a friend of the experimenter who worked at that company.

The 50 students participated during a regularly scheduled class period. The classes were told that the last 20 minutes of the period would be devoted to participation in a communication study and volunteers were requested.

Study Design

Three conditions were employed in this study. They were: High, Moderate, and Low Purposeful Ambiguity. The experimental materials were arranged so that

every third subject in an existing group would be assigned to the Low Ambiguity condition, every third S to the Moderate Ambiguity condition, and the same for the High Ambiguity condition. This was done to insure that any extraneous variables operating in the intact groups would be distributed among the three experimental conditions. The S's were asked to fill out some preliminary personal data on the second page of the experimental package. After they had completed that portion of the experiment they were asked to read the experimental message and complete the evaluation sheets following the message. Included in the evaluation was a scale which asked the S's to indicate how closely the views in the message coincided with their own views on open housing and a scale assessing their post-communication attitude toward open housing.

General Procedures

When the instructor of a class was contacted he was told the general nature of the study; i.e., a study of political communication, and was asked if it would be possible to use some time during a class period for voluntary participation in this study. The three instructors contacted all agreed to cooperate.

When the adult experimental aide was contacted he was told only that it was a study concerned with learning more about how people react to and evaluate

political messages such as those they might encounter in their newspapers. He was then asked if he would attempt to collect the data from those in the area where he worked. Upon agreeing, he was given instructions on the administration of the materials.

The experimental package was designed to be self-administering to help insure uniformity.*

At the experimental session S's were given the following information:

I am interested in learning more about how people react to and evaluate messages. What I am asking you to do is to read a communication and evaluate it as you normally would if it appeared in your own newspaper.

The aide was instructed to alter the instructions as little as possible. He was instructed to state:

An instructor in the Speech Department at the University of Connecticut is interested in learning more about how people react to and evaluate messages. He has asked me to see if some of you would help him with his study.

If they agreed, as all did, he then continued:

Please read the instructions, and complete all the scales. Read the message as you would if you saw such a message in your own newspaper. Return it to me when you finish.

At this point the experimental materials were distributed and the S's were asked to read the cover sheet. At this point they were reminded that participation was voluntary and that if they wished they would be excused

*The complete final instrument will be found in Appendix C.

now. No S's refused at this point. The S's were then asked to turn to the second page of the booklet which contained instructions concerning the completion of the scales. They were given time to read the instructions and any questions were answered.

When it appeared that all were satisfied that they understood the instructions they were asked to turn to page three and proceed until they had completed the entire questionnaire. When all S's had completed the questionnaire, the materials were collected, any questions were answered and the class dismissed.

The same procedure was used with the adult S's with the exception that the instructions were given to small groups of S's who worked in close proximity to each other.

Measuring Instruments

For measuring both attitudes toward open housing and perceptions of the source's attitude toward open housing, six seven-step bipolar scales were used. The scales were: Positive-Negative, Fair-Unfair, Good-Bad, Valuable-Worthless, Honest-Dishonest, and Wise-Foolish. The direction was alternated to reduce the effects of response sets. The six scales were scored by assigning a value of seven to the response indicating the most favorable attitude toward open housing and a value of one to the response indicating the least favorable attitude.

Each S's score was based on a summation of his responses over the six scales. A total score of 42 thus represents a maximally favorable attitude toward open housing and a score of six a minimally favorable attitude.

To assess the perceived credibility of the source, scales representing the three dimensions of source credibility found by Berlo, Lemert, and Mertz (1966) were used. To assess the safety dimension of credibility five bipolar scales were used. The scales were: Safe-Unsafe, Just-Unjust, Kind-Cruel, Friendly-Unfriendly, and Honest-Dishonest. To assess the qualification dimension the scales used were: Trained-Untrained, Experienced-Inexperienced, Skilled-Unskilled, Qualified-Unqualified, and Informed-Uninformed. To assess the dynamism dimension the scales used were: Aggressive-Meek, Emphatic-Hesitant, Bold-Timid, Active-Passive, and Energetic-Tired. All scales were seven steps and the direction of polarity was rotated to minimize the effects of response sets. A score of seven was assigned to the response indicating greatest safety, qualification, or dynamism and a score of one to the response indicating the least safety, qualification, or dynamism. For each dimension the subject's ratings were summed over the five scales for that dimension. Thus, a score of 35 was maximum for each dimension and a score of five was minimum.

Perceived similarity between the views of the S and the views of the source of the message was measured in two ways. The S was asked to give his own views on open housing as a pretest measure and asked to indicate his perceptions of the source's attitude on the post-test measures. The correlation between those two measures serves as one indication of perceived similarity of views. In addition, the following single measure was used: Please indicate how similar the source's views on open housing are to your own: Exactly Like Mine, Very Much Like Mine, Quite a Bit like Mine, Somewhat Like Mine, Not at All Like Mine. A value of five was assigned to the response indicating least similarity of views.

The final instrument used was a measure of the S's perceived ambiguity of the message. The scales used were: Clear-Unclear, Precise-Vague, and Unambiguous-Ambiguous. These were seven step scales and the polarity was rotated to minimize the effects of response sets. A value of seven was assigned to the response indicating greatest clarity and a value of one to the response indicating the least clarity. The S's score was obtained by summing across the three scales.

A complete copy of the measuring instruments used will be found in Appendix C.

CHAPTER III

RESULTS

Pretest of Message Manipulation

The messages were first submitted to five members of the Speech Department faculty. These judges were asked to rank the messages in order of the preciseness with which they felt the message expressed the author's position on the issue of open housing. All five judges ranked the messages in the order predicted by the abstraction index. The messages were then submitted to 20 students in the Speech Department at the University of Connecticut. Of those students, 10 were undergraduate and 10 were graduate students. They also were asked to rank the messages according to the preciseness with which they felt the messages expressed the authors' positions on open housing. Sixteen of the 20 S's ranked the messages in the exact order predicted by the abstraction index and the faculty rankings ($p < .001$).

Pretest Equivalency of
Experimental Groups

To check on the effectiveness of the method of assigning S's to treatment groups an analysis of variance was run on pretest attitude toward open housing. It was felt desirable to check the comparability of the college students with those S's who were no longer associated with the college campus. This was partially because the work group was located very near an area of the city that has experienced riots for four consecutive summers. The results of that analysis are found in Table 1 and indicate that the groups do not differ significantly on pretest attitudes toward open housing.

Perceived Similarity of Source's
and Subject's Position

The first hypothesis predicted that a message high in purposeful ambiguity would lead to subjects rating the source's position on open housing as more similar to the subject's own position than with a message low in purposeful ambiguity. The instruments in this study provide three methods of measuring the perceived degree of similarity. First, one can look at the difference scores between the S's pretest attitude toward open housing and the perceived position of the source toward open housing. Second, one can correlate the two measures just mentioned. Finally, one can use

Table 1. Anova of Subjects' Initial Position on Open Housing.

Score	Message I		Message II		Message III	
	C*	NC**	C	NC	C	NC
37-42	4	5	7	6	5	5
31-36	7	7	3	6	3	5
25-30	5	4	3	9	6	7
19-24	0	4	3	3	1	3
13-18	0	1	0	0	0	1
6-12	0	0	0	0	0	0
$\bar{X}$	33.38	30.90	33.69	31.54	33.54	31.14
sd	4.38	7.41	6.60	5.65	5.78	7.17

*C = College Subjects.
 **NC = Noncollege Subjects.

Source of Variance	SS	df	MS	F	p
Between Groups	132.92	1	132.92	3.16	n.s.
Between Messages	5.51	2	2.76	0.06	n.s.
Group X Messages	1.09	2	0.54	0.01	n.s.
Error	503.26	107	42.09		
	642.78	112			

the S's rating of the degree of agreement with the source's position.

Table 2 shows the results of a test of the difference between the S's pretest position and the perceived position of the source of the message. As the table indicates, the predicted difference between the high and the low purposeful ambiguity conditions is small and non-significant ($t = 0.92$, $p > .05$). The larger difference between the low and the moderate purposeful ambiguity also was nonsignificant ($t = 1.46$, $p > .05$).

Table 2. Perceived Similarity Between Source and Subject Attitude Toward Open Housing.

	Message I	Message II	Message III
N	37	40	36
$\bar{D}$	5.86	3.75	4.36
	6.17	6.51	7.69
	t -I vs. III = 0.92 n.s.		
	$\bar{D}$ -I vs. II = 1.46 n.s.		

Using correlational methods to investigate the effects of increasing purposeful ambiguity lead to the results in Table 3. As can be seen, the correlation for the low ambiguity condition was greater than the correlation for the high ambiguity, though not significantly. If the hypothesized assimilation had occurred to a greater degree there should be a significantly higher correlation

in the Message III condition than in the Message I condition. The opposite trend was found. Message II showed the greatest tendency for assimilation. Even this was not significantly different than the correlation found with Message I. The largest difference (Message II vs. Message III) also falls short of significance ($Z = -1.75$ $p \leq .08$ 2 tailed).

Table 3. Correlation Between S's Pretest Score and Perceived Position of the Source.

	Message I	Message II	Message III
N	37	40	36
$\bar{X}_S$ Score	31.97	32.40	31.97
$\bar{Y}$ Source Score	37.84	36.15	36.33
$r_{S \times}$ Source	0.40 [*]	0.56 ^{**}	0.21

* $p < .05$.

** $p < .01$.

A third measure of perceived similarity was the degree of agreement with the source's position. As the data in Table 4 indicate, there was very little difference in the obtained results.

Table 4. Perceived Similarity Between Source's and Subject's Position on Open Housing.

	Message I	Message II	Message III
N	37	40	36
$\bar{X}$	2.73	2.88	2.78
s.d.	0.96	0.96	1.02
$t_{-I \text{ vs. III}} = 0.21 \text{ n.s.}$			

As should be expected, the three methods of assessing the perceived similarity of views toward open housing between source and receiver agree. The data obtained do not support hypothesis 1a. There is no evidence that increased purposeful ambiguity leads to increased perception of similarity of views toward open housing between the source and the receiver of the communication.

The second part of Hypothesis 1 stated that there would be greater variance in the ratings of the sources' positions with the more ambiguous message. The variance ratio between the most and the least ambiguous message resulted in a nonsignificant difference (Table 5).

As Table 5 indicates, the greatest variance was found in the ratings of the middle message. The difference between Message I and Message II was significant while the difference between Message II and Message III

is opposite to the direction predicted. It must be concluded that the data do not support Hypothesis 1b.

Table 5. Perceived Position of the Source on Open Housing.

	Message I	Message II	Message III
N	37	40	36
$\bar{X}$	37.84	36.15	36.33
s.d.	4.59	7.46	5.34
Variance Ratio			
I vs. III--1.35 df-36/37 n.s.			
I vs. II--2.64 df-40/36 $p < .05$.			

Ambiguity and Source Credibility

The second hypothesis stated that the variability of the ratings of qualification would be greater for the least ambiguous message than for the most ambiguous message. A test of the variance ratio indicates that the difference was nonsignificant (Table 6).

The second hypothesis also stated that with a message high in purposeful ambiguity the source would be rated significantly higher on the qualification dimension of credibility than with a message low in purposeful ambiguity. The data shown in Table 7 indicate that the hypothesis was not supported. Virtually no difference was found in the ratings of qualification ($F = 0.57$, $p > .05$).

Table 6. Perceived Qualification of the Message Source.

	Message I	Message II	Message III
N	37	40	36
X	24.08	25.15	24.00
s.d.	5.88	4.53	5.44
Variance Ratio			
I vs. III--1.16 df-37/36 n.s.			
I vs. II--1.68 df-37/40 n.s.			

Table 7. Analysis of Variance of Perceived Qualification of the Source.

Source of Variance	SS	df	MS	F	p
Messages	31.90	2	15.95	0.57	n.s.
Error	3083.86	110	38.04		
Total	3115.75	112			

The first portion of Hypothesis 3 predicted that the variance for the ratings of the safety dimension would be greater for the least ambiguous message and smallest for the most ambiguous message. As Table 8 shows, the variance ratio was very small and nonsignificant.

The third hypothesis also predicted that the message high in purposeful ambiguity would lead to a

Table 8. Perceived Safety of the Message Source.

	Message I	Message II	Message III
N	37	40	36
$\bar{X}$	25.40	26.18	24.92
s.d.	4.83	6.71	5.40
Variance Ratio			
I vs. III--1.25 df-36/37 n.s.			
I vs. II--1.93 df-40/37 p < .10 (2 tailed)			

higher rating of source credibility on the safety dimension. Table 9 contains the results concerning the safety dimension of credibility. As with Hypothesis 2 the results were nonsignificant. As with Hypothesis 2 the subjects rated the safety dimension of credibility higher for the middle message than for the most ambiguous or the least ambiguous message (Table 9). The difference in ratings was, however, too small to be statistically reliable.

Table 9. Anova of Perceived Safety of Message Source.

Source of Variance	SS	df	MS	F	p
Messages	30.75	2	15.38	0.47	n.s.
Error	3616.44	110	32.88		
Total	3647.19	112			

The fourth hypothesis stated that the variance in ratings of dynamism for the most ambiguous message would be less than the variance found in the ratings associated with the least ambiguous message. The test of those variances indicate no significant differences (Table 10). The only significant difference was between the variance on message II and message III. That difference is the direction opposite to the prediction.

Table 10. Perceived Dynamism of the Message Source.

	Message I	Message II	Message III
N	37	40	36
$\bar{X}$	27.08	27.35	26.06
s.d.	5.45	4.17	6.10
Variance Ratio			
I vs. III--1.25 df-36/37 n.s.			
II vs. III--2.14 df-36/40 $p < .10 > .02$ (2 tailed)			

Hypothesis 4 also predicted that the subjects receiving the most ambiguous message would attribute the highest ratings of dynamism to the source. As Table 11 indicates, this was not supported. No significant differences were found in the subjects' ratings of dynamism when compared across the three messages. The very low F (0.62) would seem to indicate lack of any stable differences in perceived dynamism across the three treatment groups.

Table 11. Anova of Perceived Dynamism of the Message Source.

Source of Variance	SS	df	MS	F	p
Messages	34.70	2	17.35	0.62	n.s.
Error	3049.74	110	27.72		
Total	3084.44	112			

Ambiguity and Attitude Change

The fifth hypothesis predicted that the group reading the most ambiguous message would show greater attitude change than the group reading the message lowest in ambiguity. Table 12 shows the attitude change scores for all three experimental groups. As the table indicates, the group receiving the most ambiguous message did not show significantly more attitude change ($F = 0.44$, Table 12). It must be concluded that the data fail to support Hypothesis 5. In all treatment groups the changes are too small to conclude that the message did indeed lead to attitude change as measured in this study.

Rated Ambiguity of the Messages

As stated in Chapter I in order for a message to be purposefully ambiguous the receiver must attribute denotative meaning to the statements. As a check on the receiver perception of the ambiguity of the messages they were asked to rate the ambiguity of the message they

Table 12. Attitude Change Scores.

	Message I	Message II	Message III		
N	37	48	36		
$\bar{D}$	0.65	0.48	1.17		
s.d.	2.07	3.28	4.89		
Source of Variance	SS	df	MS	F	p
Messages	11.39	2	5.69	0.44	n.s.
Error	1412.63	110	12.84		
Total	1424.02	112			

received. The results of that rating indicate that the subjects perceived the messages as approximately equally precise (Table 13).

Table 13. Anova of Rated Ambiguity of the Message.

Source of Variance	SS	df	MS	F	p
Messages	18.69	2	9.34	0.58	n.s.
Error	1760.18	110	16.00		
Total	1778.87	112			

CHAPTER IV

DISCUSSION

Range of Initial Scores on Attitude Toward Open Housing

The experimenter attempted to gain access to a number of groups in the local area which were perceived to represent a range of views toward open housing. Being a largely rural area, there were only a few organizations with memberships large enough to permit adequate distribution of subjects to treatment groups. The primary group selected was the volunteer fire departments. After contacting eight such groups it was possible to gain access to only two groups during a regular meeting time. The other groups flatly refused admittance to the experimenter when they learned the topic of the message. Attempts to explain that the topic was of secondary importance and the primary task was to study how people read and evaluate messages had no effect. The two groups that gave permission to use regular meeting time were located in the immediate university area. At the first meeting the experimenter was stalled

until very late after the group learned about the task. In the end it was asked that instructions be given and the experimenter leave the meeting. The experimental materials were left with the group along with the request that the materials be left at the fire station (the usual place of meeting for the group) at the close of the meeting and they would be picked up in the morning. One questionnaire was completed. Comments received by the experimenter indicated that the group felt that the message was too political and probably was, in fact, related to the current political canvassing in the area. The local groups are in frequent contact with each other and it became evident that the second group learned of the happenings at the first meeting and shared many of the same views therefore that contact was cancelled.

The other noncollege group worked at a large insurance company. Though they were no longer on campus they were college educated and most were recent college graduates--within the last five years. They were not as different from the college sample as had been hoped. Table 1 (Chapter III) shows the distribution of scores by group and message condition.

An additional factor possibly causing refusals could have been the frequency of black rioting in the nearest large city. In each of the last four summers major riots have occurred.

Whatever the cause for refusals, it seems that the remaining cooperative population may have been too much in favor of open housing to provide an adequate test of the theory proposed.

Hypothesis 1

The first hypothesis stated that the message highest in purposeful ambiguity would cause subjects to rate the perceived position of the source as more similar to their own than would the message lowest in purposeful ambiguity. The data do not support the hypothesis. There are no significant differences in perceived position of the source across the three treatment groups.

Hypothesis 1 was based on the rationale that greater abstraction in the message would offer subjects fewer anchors for placement of the message and therefore allow them to provide their own interpretations for the symbols used. The data reported in Chapter III indicates that the subjects found sufficient anchors to allow them to place the position of the source at a relatively firm pro-open housing position. Furthermore, ratings of message clarity showed no significant differences across the three messages, despite the fact that the pretest with a different group of subjects clearly indicated perceived differences.

In retrospect, it appears that pretest data should have been obtained to index not only the ranking but also to assess the perceived magnitude of differences as well. It is possible that the differences between messages were of the order of just noticeable differences and not sufficient to be reliably indexed when the messages were seen in isolation. If this conjecture is correct, this problem plagues all the hypotheses investigated.

Another possible source of difficulty could have been the Abstraction index score itself. As can be seen in Appendix A, the index score is quite easily manipulable if one so desires. It would seem quite possible that the method employed in the construction of the three messages rendered the Abstraction scores invalid. The robustness of the instrument to intentional manipulation has not been carefully investigated. However, on the basis of the data obtained in this study relative to the variations in the messages, it appears that the scores bore little relation to receiver perceptions of the abstraction level. It would seem that even when viewing written material in isolation, receivers should perceive and report some differences when receiving material as divergent in abstractness as Reader's Digest and a college level philosophy text

(the approximate variation between the least and the most abstract message).

Hypotheses 2, 3, and 4

The second, third, and fourth hypotheses dealt with the effects of purposeful ambiguity on the three dimensions of source credibility isolated by Berlo, Lemert, and Mertz (1966). It was predicted that the perceived qualification, safety, and dynamism dimensions of source credibility would be higher when the receiver was exposed to the highest level of purposeful ambiguity. Because support was not found for the three related hypotheses, they will be discussed together.

These hypotheses were based on the assumption that ambiguity would allow assimilation of the source's position to one similar to the subject's own. It was reasoned that this should be a very likely occurrence if the terms used held positive connotations for the receivers. As Table 5 in Chapter III indicates, there were no significant differences in the perceived position of the source across the messages. This coupled with the similarity of the means of the experimental groups before exposure would almost preclude support for the hypotheses. Most subjects were in favor of open housing and they also perceived the source to be in favor of open housing, therefore, little assimilation could occur.

Table 14. Subjects' Pretest Attitudes and Perceived Position of the Source.

	Message I	Message II	Message III
Subject Attitude	31.97*	32.40	31.97
Source Attitude	37.84	36.15	36.33

* Possible Range = 6-42, neutral = 24.

Hypothesis 5

The fifth hypothesis predicted that subjects receiving the most abstract message would show the greatest attitude change in the direction advocated. As Table 12 in Chapter III indicates, the hypothesis was not supported. The initial differences between the subjects' attitudes and the perceived position of the source allowed little room for attitude change. The overall mean for subject attitude toward open housing was about 32 on a 42 point scale. The overall perceived attitude of the source was about 36.6. These scores allowed little room for measured attitude change within the range that would normally be expected (between pre-message score and perceived position advocated in the message). However, even with the narrow range allowed, the attitude change was only about one scale unit or 22% or that which could be considered to have been

advocated. The data seem to indicate that abstraction is probably not the strategy best suited to generating attitude change toward the topic. However, assuming that a totally unknown source has neutral credibility the data in Tables 6, 8, and 10 indicate that the middle message generated slightly more credibility than did the other two messages. Again, in this case, the order is not as predicted in the rationale. It would seem that careful investigation of the differences in the three messages on factors not included in the indices used here is needed. The next section will incorporate some suggested alternatives.

Implications for Further Research

In several cases the middle message of the three used showed more tendency toward the acceptance pattern predicted than did the most abstract message. This would seem to indicate that perhaps there were variables operating in the messages of which the experimenter was unaware. Another possible explanation is the existence of a curvilinear relationship which was beyond the sensitivity of the present measuring instruments. Either possibility suggests that more development in the area of measurement is needed before more definitive results should be expected.

Any further research must first investigate the problem of indexing the abstraction level of the message

and the relationship of that to denotative variations in meanings across populations. While it appears consistent that more abstract words should elicit more variations in meanings across subjects the present methodology allows that to remain in assumption. One possible solution to that problem would be to request the subject to summarize the message in a limited number of words and compare the subjects' statements across messages. Greater variation in subject encoded messages would indicate greater ambiguity in the stimulus message. This basic technique was attempted in the pilot study previously mentioned and the results were not satisfactory. The results indicated two problems: A portion of the subjects merely restated the message using the words already provided in the message; a second group of subjects evaluated the message in terms of their own preferences. These two groups constituted a substantial proportion of the subjects responding and rendered the resulting material of little value. If the subjects were limited to a fraction of the number of words in the original message the problem might be less severe, e.g., one-tenth the length of the stimulus message or in the present case 20 words.

A second possible approach to indexing the ambiguity of the messages is suggested by information theory. Information theory states that information

reduces the number of alternatives available. It would be possible to have the subjects react to a list of alternative behaviors related to the message topic. The changing probabilities of selection of alternatives could be used as an index of the information in the message. The message generating the most consistent election of alternative behaviors across subjects would be classified as the most precise or least ambiguous.

A related approach would use a list of bipolar adjectives related to the concepts discussed in the message. Assuming a normal distribution of choices given no information, the deviation from a normal distribution would serve as an index of the amount of information in the message. Of the two methodologies suggested as the second alternative, the latter would be the more generally applicable. The scales could remain relatively constant and only the concepts to be rated would have to change. This would provide at least some generalizability to the measure of information in the message.

Another possible method of indexing the ambiguity of the messages would be the use of physiological measures. According to Berlyne (1960) a more complex stimulus leads to longer orienting responses (pp. 99-102). He further reports that the presentation of stimuli cause adaptive responses translatable to GSR and Alpha wave measurement (pp. 88-92). Alpha waves are suppressed

during periods of arousal. It would seem that a message lacking in firm referents for the subject would lead to mental activity designed to clarify the message. That is, the subject should attempt to reconstruct the stimulus to fit his past experiences. In the end this would involve finding or supplying referents for the message. During the process of resolving the problem caused by the lack of referents the subject should be in a state of arousal. By monitoring the period of suppression of the alpha waves or GSR increase an index of the relative ambiguity of the stimulus message could be developed. By exposing the subject to a number of brief messages (one or two sentences) and comparing the arousal periods recorded one should be able to develop an index of the relative ambiguity of the messages.

To summarize, it is felt that the present method of indexing the ambiguity of the messages is unsatisfactory. First, the robustness of the index to intentional manipulation is unknown. Also, the index was designed to be used with samples of material from longer total messages. The fact that only about 200 words were available for the entire message may have affected the reliability of the instrument. For those reasons alternative methods are suggested. Two are based on an information theory type of measure of ambiguity. The first involves having the respondent encode a message a fraction

the length of the original attempting to express the central content of the original message. The second consists of having the subjects respond to bipolar scales or a series of positions that are appropriate to the topic of the message. The third involves physiological measures. It is felt that any of these techniques are at least equal in validity to the measure actually used in terms of assessing the ambiguity of the message. An advantage of these alternative techniques would be that they allow manipulation of message elements in a new attempt to locate the portions of the message that lead to increased ratings of ambiguity.

A second change in the methodology would be tighter control of the subjects' initial attitudes. In the pretest of topics for this study a split was found in expressed attitude toward open housing. However, when the final study was run it was found that the distribution of attitudes was strongly skewed in favor of open housing. Time may have been a factor but also the self selection of participating subjects probably was a greater factor. The refusal of some groups of subjects to complete the experimental task appeared to be at least partially based upon attitudes toward open housing. Future investigations should be designed to insure that attitude is more tightly controlled. It would be helpful to separate the pretest on attitude and the message evaluation sessions. In that

manner the experimenter can adjust the topic to control the attitude distribution. If all attitudes are located at one end of the continuum the researcher cannot be certain that the resulting ratings of communicator position is not the result of his own perception of the message before the experiment was run. That is, ambiguity should allow assimilation of the message toward the attitude position of the receiver. To be certain that this has occurred it is necessary to show that the message was actually assimilated in the direction of the receiver based on pretest positions that occupy very different positions of the issue in question.

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APPENDICES

APPENDIX A

ABSTRACTION INDEX

APPENDIX A

ABSTRACTION INDEX

1. Count the number of finite verbs per 200 words. Count all verbs of any tense which are in the first, second, or third person and which have subjects, either expressed or understood. Do not count nonfinite verb forms or verbals. In verb forms with auxiliary words, count the auxiliary rather than the main verb. Do not count any form of the verb "to be" (is, was, are, were, will be, have been, etc.) when used only as a copula to link the subject with a predicate complement.

2. Count the number of definite articles and their nouns per 200 words. Count both the article the and the noun it modifies, but only if that noun is a single word not otherwise modified, either by an intervening adjective or by a clause or phrase following the noun. Do not count the when modifying adjectives or noun-adjectives, as in the best, the Irish.

3. Count the number of nouns of abstraction per 200 words. Count all nouns ending in the suffixes -ness,

-ship, -dom, -nce, -ion, and -y, including the plurals of such nouns. Count nouns ending in -y even when it is the end of a longer suffix like -ity or -ology but not when it is used as a diminutive.

4. Add the numbers found in Steps 1 and 2 and add 36 to this sum.

5. Multiply the number found in Step 3 by 2.

6. From the total found in Step 4, subtract the result of Step 5. The result of this subtraction is the abstraction score. Scores should be interpreted as follows: 0-18, very abstract; 19-30, abstract; 31-42, fairly abstract; 43-54, standard; 55-66, fairly concrete; 67-78, concrete; 79-90, very concrete.

APPENDIX B

EXPERIMENTAL MESSAGES

APPENDIX B

EXPERIMENTAL MESSAGES

Message I

I would like to take this opportunity to discuss one of the difficult issues facing us today. That issue is: how vigorously shall we enforce open housing laws as they currently exist.

Laws today exist which make it illegal to refuse to sell or rent a house or an apartment to a person because of his race or religion. Yet there are few places where blacks and whites live side by side. The neighborhoods are segregated, therefore, the schools also are segregated. Separation of the races in the neighborhoods and in the schools leaves few chances for blacks and whites to get to know each other socially. Lack of social contact between the races causes a major problem today.

Prejudice toward blacks is being handed down like some birthright. We cannot prevent this unless the present leaders take positive action to get the races together. Only in that way will blacks and whites get to

know one another better. This can happen only if the white leaders see that open housing is vigorously enforced.

We can no longer afford to wall blacks and other minorities into the centers of our cities. All of the citizens must have equal access to all of the products of our society.

Message II

I would like to take this opportunity to discuss one of the difficult issues facing us today. That issue is: how vigorously shall we enforce open housing laws as they currently exist.

We currently have laws which make discrimination in the sale or rental of housing illegal. Yet when we look at the housing patterns in America we see that segregation is clearly evident. Segregation in housing leads to segregation in schools and community life. This in turn leads to the perpetuation of prejudice toward minority groups. The majority population has little opportunity to gain first hand knowledge of other groups.

Prejudices are handed down like some birthright. This creates a cycle which can be broken only if community leaders take steps to break down the wall of ignorance between the various groups in the community. Knowledge must replace the myths and the legends. This can come about only if everyone lives by the rules of our society. This will occur only if reasonable housing is made available to all our citizens.

This nation can no longer afford to build ghettos in our central cities. We must give all of our citizens access to all the products of our society.

Message III

I would like to take this opportunity to discuss one of the difficult issues facing us today. That issue is: how vigorously shall we enforce open housing laws as they currently exist.

We currently have laws making discrimination in the sale or rental of housing illegal. Yet when we look at housing patterns in almost any community in America we see segregation. Segregation in the community leads to segregation in our schools and social institutions. This in turn leads to perpetuation of prejudice toward the segregated groups because the majority is afforded no opportunity to gain first hand knowledge of minorities through informal social contact.

Prejudices are passed down from generation to generation unaltered. It is time that responsible leaders in the community should seek action to break down the wall of ignorance that separates the various racial and ethnic groups in our midst. This can occur only if everyone abides by the rules of our society. It can occur only if everyone has access to adequate housing.

We can no longer afford to house huge minority populations in our central cities. We must give our citizens access to the products of our society.

APPENDIX C

MEASURING INSTRUMENTS

APPENDIX C

MEASURING INSTRUMENTS

Inside this booklet you will find a number of scales and one message. We are interested in learning more about how people react to and evaluate political messages such as those that might appear in their local newspaper. This is not a test of any type. It is a request for your personal reaction to a message.

You will notice that the first information requested is about you. This information is necessary so that we can know more about the people who are evaluating the messages. Please notice that at no time are you requested to put your name or any other identifying marks on the booklet. There will be no way the information collected here today can be associated with you or this organization. So please fill in all the requested information as honestly and as candidly as you can.

Please read the message as you might any such political message appearing in your local paper. Then

complete the rest of the booklet based upon your reaction to the message.

Your cooperation in this study is sincerely appreciated and will aid us in better understanding communication among people.

Gary B. Wilson
Speech Department
University of Connecticut

INSTRUCTIONS FOR THE COMPLETION OF THE RATING SCALES

Inside this booklet you will find rating scales which look like this:

Good ____ : ____ : ____ : ____ : ____ : ____ : ____ Bad

Consider the spaces to represent the following degrees of opinion:

X	____	:	____	:	____	:	____	:	____	:	____	:	____	Y
	E		Q		S		N		S		Q		E	
	x		u		l		e		l		u		x	
	t		i		i		u		i		i		t	
	r		t		g		t		g		t		r	
	e		e		h		r		h		e		e	
	m				y		a		t				m	
	e				l		l		l				e	
	l				y				y				l	
	y												y	

You will be asked to rate someone or something on that scale. For example, suppose you were asked to rate Senator Dodd on the scale. A check (✓) in the center space would indicate that you felt neutral about Senator Dodd.

Good ____ : ____ : ____ : ✓ : ____ : ____ : ____ Bad

As you place your check closer to the ends of the scale it indicates stronger feelings. If you felt Senator Dodd were extremely good you would place your check in the space closest to "Good."

Good ✓ : ____ : ____ : ____ : ____ : ____ : ____ Bad

If you felt he were only slightly good you would place your check in the space nearest the center or neutral space toward "Good."

Good ____ : ____ : ✓ : ____ : ____ : ____ : ____ Bad

Do not place any checks between the spaces:

This

Not This

Good ____ : ☒ : ____ : ____ ☒ : ____ : ____ Bad

Please make one check mark on each and every scale--do not skip any. Work fairly quickly, but not carelessly, it is your first impression that is important.

Age _____

Sex _____

MARITAL STATUS: _____

PLACE OF RESIDENCE:

_____ Own or are buying present home

_____ Rent present home

_____ Rent apartment

_____ Live with parents or relative

_____ Live in college housing

_____ Other (Please specify) _____

POLITICAL PARTY PREFERENCE:

_____ Democrat

_____ Republican

_____ Other (Please specify) _____

PLEASE INDICATE THE STRENGTH OF PREFERENCE FOR YOUR
POLITICAL PARTY:

_____ Very strong

_____ Strong

_____ Moderate

_____ Indifferent

PLEASE RATE YOUR POLITICAL BELIEFS:

Liberal ____ : ____ : ____ : ____ : ____ : ____ : ____ Conservative

PLEASE INDICATE YOUR VIEWS TOWARD OPEN HOUSING

Good ____ : ____ : ____ : ____ : ____ : ____ : ____ Bad

Unfair ____ : ____ : ____ : ____ : ____ : ____ : ____ Fair

Valuable ____ : ____ : ____ : ____ : ____ : ____ : ____ Worthless

Honest ____ : ____ : ____ : ____ : ____ : ____ : ____ Dishonest

Foolish ____ : ____ : ____ : ____ : ____ : ____ : ____ Wise

Positive ____ : ____ : ____ : ____ : ____ : ____ : ____ Negative

PLEASE INDICATE HOW YOU BELIEVE THE SOURCE FEELS
TOWARD OPEN HOUSING:

Wise	—	:	—	:	—	:	—	:	—	Foolish
Negative	—	:	—	:	—	:	—	:	—	Positive
Bad	—	:	—	:	—	:	—	:	—	Good
Fair	—	:	—	:	—	:	—	:	—	Unfair
Worthless	—	:	—	:	—	:	—	:	—	Valuable
Dishonest		:		:		:		:		Honest

PLEASE RATE THE SOURCE OF THE MESSAGE:

Safe	___	:	___	:	___	:	___	:	___	Unsafe
Unjust	___	:	___	:	___	:	___	:	___	Just
Cruel	___	:	___	:	___	:	___	:	___	Kind
Friendly	___	:	___	:	___	:	___	:	___	Unfriendly
Dishonest	___	:	___	:	___	:	___	:	___	Honest
Trained	___	:	___	:	___	:	___	:	___	Untrained
Inexperienced	___	:	___	:	___	:	___	:	___	Experienced
Skilled	___	:	___	:	___	:	___	:	___	Unskilled
Unqualified	___	:	___	:	___	:	___	:	___	Qualified
Informed	___	:	___	:	___	:	___	:	___	Uninformed
Aggressive	___	:	___	:	___	:	___	:	___	Meek
Emphatic	___	:	___	:	___	:	___	:	___	Hesitant
Timid	___	:	___	:	___	:	___	:	___	Bold
Active	___	:	___	:	___	:	___	:	___	Passive
Tired		:		:		:		:		Energetic

PLEASE INDICATE HOW SIMILAR THE SOURCE'S VIEWS ON OPEN HOUSING ARE TO YOUR OWN:

- _____ Exactly like mine
 _____ Very much like mine
 _____ Quite a bit like mine
 _____ Somewhat like mine
 _____ Not at all like mine

PLEASE INDICATE HOW CLEAR YOU FELT THE MESSAGE WAS:

- Clear __ : __ : __ : __ : __ : __ : __ Unclear
 Ambiguous __ : __ : __ : __ : __ : __ : __ Unambiguous
 Precise __ : __ : __ : __ : __ : __ : __ Vague

PLEASE INDICATE YOUR VIEWS TOWARD OPEN HOUSING:

- Good __ : __ : __ : __ : __ : __ : __ Bad
 Unfair __ : __ : __ : __ : __ : __ : __ Fair
 Valuable __ : __ : __ : __ : __ : __ : __ Worthless
 Dishonest __ : __ : __ : __ : __ : __ : __ Honest
 Foolish __ : __ : __ : __ : __ : __ : __ Wise
 Positive __ : __ : __ : __ : __ : __ : __ Negative

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