

# DOCUMENT RESUME

ED 078 455

CS 500 297

AUTHOR Wheelless, Lawrence R.  
 TITLE The Relationship of Attitude and Credibility to Comprehension.  
 PUB DATE Dec 72  
 NOTE 21p.; Paper presented at the Annual Meeting of the Speech Communication Assn. (58th, Chicago, December 1972)  
 EDRS PRICE MF-\$0.65 HC-\$3.29  
 DESCRIPTORS \*Attitudes; \*Attitude Tests; Beliefs; \*Cognitive Processes; Comprehension; \*Comprehension Development; Listening Comprehension; Memory; Recall (Psychological); Recognition; Research Methodology; \*Retention

## ABSTRACT

Prior attitude intensity involvement and salience, along with prior source competence, sociability, composure, extroversion, and character can be used as predictors of recall, of perception of the source's attitude, and of perception of the attitude revealed in the message. The relationship of prior attitudes and credibility to comprehension and selective exposure are the products of the kind of research methodology practiced. There is a relationship between sociability and recall and between composure and perception of attitudes. In addition, the conditions under which test individuals are exposed to messages affect the amount of variance that may be predicted in differing types of comprehension. (CH)

THE RELATIONSHIP OF ATTITUDE AND CREDIBILITY  
TO COMPREHENSION

Lawrence R. Wheeless  
West Virginia University

PERMISSION TO REPRODUCE THIS COPY  
RIGHTED MATERIAL HAS BEEN GRANTED BY  
Lawrence R.  
Wheeless  
ERIC AND ORGANIZATIONS OPERATING  
UNDER AGREEMENTS WITH THE NATIONAL IN-  
STITUTE OF EDUCATION. FURTHER REPRO-  
DUCTION OUTSIDE THE ERIC SYSTEM RE-  
QUIRES PERMISSION OF THE COPYRIGHT  
OWNER.

ABSTRACT

This study investigated the relationship of prior attitudes and credibility to comprehension and selective exposure. Prior attitude intensity involvement and salience along with prior source competence, sociability, composure, extroversion, and character were used as predictors of recall, perception of the source's attitude, and perception of the attitude revealed in the message. A relationship between sociability and recall, and between composure and perception of the attitude revealed in the message was discovered. The eight predictors together accounted for a meaningful amount of variance on the three types of comprehension. Individually significant predictors varied according to type of comprehension tested. No relationship was discovered between the eight variables and selective exposure. The results indicate that the conditions under which individuals are exposed to messages affect the amount of variance that may be predicted on the differing types of comprehension.

Paper presented at Speech Communication Association Convention  
Chicago, Illinois  
December, 1972

05 500 297

## THE RELATIONSHIP OF ATTITUDES AND SOURCE CREDIBILITY TO COMPREHENSION

Considerable research has investigated the relationship of attitudes to "accurate" perception and retention. In general research has found that receivers misperceive and/or forget information that is discrepant from their own attitudes and beliefs. More specifically, some studies have concluded that subjects perceived or retained information in a way that reduced its discrepancy with their own beliefs and attitudes (Levine and Murphy, 1943; Edwards, 1941; Kendall & Wolfe, 1949; Hasdorf & Cantrill, 1954). For example, receivers may remember strong, non-discrepant arguments in a message but remember only weak, discrepant ones (Jones & Kohler, 1958). Also receivers may selectively attend and perceive statements they agree with (Postman, Bruner, & McGinnes, 1948; Key 1968). In addition, research has found that receivers judge arguments that are not discrepant with their own attitudes and beliefs as more valid and cogent than those that are discrepant (Lefford, 1946; Thistlethwaite, 1950; Feather, 1964; Waly & Cook, 1965; McGuire, 1960; Miller, 1969). Other research has found that subjects with extremely discrepant attitudes misperceive messages and information so as to support their own attitudes (Levine & Murphy, 1943; Edwards, 1941; Cooper & Jahoda, 1947; Hasdorf & Cantrill, 1954).

Some research has also found that receivers avoid or reject messages and information which they perceive as discrepant with their beliefs and attitudes; however, the results are not conclusive. While some have found that individuals will avoid discrepant information (Brodbeck, 1956; Mills, Aronson, & Robinson, 1959; Festinger, 1964a; Mills, 1965a), others failed to find support for this effect (Festinger & Thibaut, 1951; Gerald, 1953; Ehrlich, 1957; Adams, 1961; Rosen, 1961; Feather, 1962; 1963; Freedman & Sears, 1965), and still others found that individuals may resolve discrepancy by seeking discrepant information (Canon, 1964; Mills & Ross, 1964; Festinger, 1964b; Mills, 1965b). This inconsistency in results may be due to the fact that the induced discrepancy was often determined a priori without validation and without measurement of the amount of discrepancy involved. In some instances, the amount of discrepancy induced may not have been extreme enough to produce exposure or avoidance effects. Research on involvement and discrepancy supports this interpretation. According to involvement (or social judgment) theory, we use our attitudes as "anchors" by which we contrast extremely discrepant attitudes and assimilate similar attitudes. This research has found that receivers reject and contrast messages which they perceive as seeking attitude change that is too discrepant from salient attitudes. (Hovland, Harvey, & Sherif, 1957; Hovland & Sherif, 1961; Sherif, Sherif, & Nebergall, 1965; Whittaker, 1967). In addition, some of the same research (Hovland, 1957; Hovland, 1961; Sherif, 1965) has found

that the amount of discrepancy that the receiver will tolerate before he rejects a message is much less when his attitude is extremely salient.

In summarizing research on attitudes, misperception, and forgetting, Cronkhite noted that "it has been difficult to determine how much of the observed effect is due to selective perception and how much is due to selective recall, since both are generally measured by retention tests" (1969, p. 156). However, from this research it is readily apparent that comprehension involves more than recall of information in a message (recall-comprehension). Comprehension also involves perception of the source's attitude and perception of the attitude revealed in a message (perceptual-comprehension).

The above research and rationale regarding the effects of attitudes on recall and perception directly relates to credibility effects. Research has fairly conclusively demonstrated that initial source credibility has a significant effect on immediate attitude change, and that credibility interacts with message variables to affect attitude change (Andersen & Clevenger, 1963; Velma Wenzlaff, 1971). Recent factor analytic studies have also demonstrated that source credibility is multidimensional (Berlo & Lemert, 1961; Berlo, Lemert, & Mertz, 1969; McCroskey, 1966; McCroskey, Scott, & Young, 1971; McCroskey, Jensen, & Todd, 1972; Fulton, 1970). Since credibility affects receivers' attitudes toward concepts, some effect of credibility on perceptual-comprehension would also be expected. For example, the discrepancy between the receiver's attitude and his perception of the source's attitude may be greater for a low credible source than a high credible one. Recent research by Guthrie (1972) has provided support for this prediction. On the basis of social judgment (involvement) theory, we might expect the receiver to contrast his perception of the attitude of a low-credible source and to assimilate the perceived attitude of a high-credible source. This same effect would apply to perceived attitudes revealed in messages. Also, if the source is perceived as extremely high- or low-credible the receiver may selectively attend or selectively perceive the source. These types of effects would result in distortion of perceptual-comprehension attributable to initial source credibility.

However, most studies that have directly tested the effects of credibility upon recall-comprehension have typically produced results that are inconclusive or nonsignificant (Haiman, 1948; Hovland & Weiss, 1951; Tompkins & Samovar, 1964; King, 1966; Kelman & Hovland, 1953). Studies that have examined the relationship indirectly through secondary hypotheses or post hoc analyses have produced similar results. Some (Hovland & Mandell, 1952; Highlander, 1953; Rea, 1961; Wheelless, 1971) found no significant

relationship between credibility and comprehension. However, Nichols (1948) found evidence to suggest that listening comprehension is related to admiration for the speaker.

Apparently, these studies have not provided an adequate test of the relationship of credibility and comprehension for several reasons. One problem with previous research involves initial credibility inductions. Early studies, of course, assumed a priori that the sources were either high- or low-credible and did not validate the inductions. Later studies such as that of King (1966) indicated the sources were perceived as significantly different in credibility but did not report the extent of the difference. One study (Tompkins & Samovar, 1964) appears to have used high- and low-credible sources that were not only perceived as significantly different statistically, but were also perceived as meaningfully different. However, that study, as was typical of most, operationalized credibility as a unidimensional attitude toward the source. This, of course, precluded discovery of the effects of other credibility dimensions upon comprehension.

A second problem common to the previous research is that the procedures employed probably increased attentive set and created expectancy among subjects that they would be tested over the content of the messages. Hovland and Weiss (1951) noted this problem in regard to the experimentally controlled, captive audience. Researchers such as Tompkins and Samovar (1964) enhanced testing expectancy by administering a pretest immediately before experimental induction. Another (King, 1966) probably heightened attentive set through the use of a tape recorder. Of course, most of the studies were conducted in settings where students had the general expectancy that they would be tested on content that was presented. Recent research by Andersen (1972) removed this expectancy and found initial source competence and extroversion to affect recall. However, his operationalization of source inductions did not provide a test of the effect of other dimensions of source credibility.

Another problem with previous research involves the operationalization of the concept of comprehension. Studies such as King's (1966) carefully specified the dependent variable as recall and delayed recall. Others such as Tompkins and Samovar (1964) and Wheelless (1971) used the generic term, comprehension. Examination of the previous research reveals that studies measured only recall or recognition of information contained in a message.

Although studies investigating credibility and comprehension have for the most part failed to find statistical significance (which may be attributable to methodological problems noted), some basis for continuing investigation exists. For example, Andersen's (1972) study demonstrated a relationship of competence and extro-

version to comprehension. Haiman (1942) employing a priori credibility inductions found a relationship between credibility and recall at the .06 level of significance. Other tentative support for establishing the relationship is provided by Nichols (1943) who found admiration for the speaker to increase recall, Hovland and Weiss (1951) who found only directional evidence to suggest that low or neutral credibility increases recall, and Kelman and Hovland (1953) who found neutral credibility most effective. Although there appears that there may be a relationship between credibility and recall, directional prediction is tentative. Also, previous research does not allow for certainty in inferring whether the relationship is a linear or curvilinear one. However, since attitudes affect recall and perception, we would theoretically expect attitudes toward a source (credibility) which affect attitudes toward concepts, to affect recall-comprehension at least indirectly. Refinement in induction, operationalization, procedure, and statistical design might well provide an adequate test of this relationship.

Based upon the above research and rationale, a number of predictions were tested. First, it was theoretically expected that there is a significant relationship between source credibility and comprehension:

1. Recall-comprehension is significantly greater for high-than for moderate than for low-credible sources.
2. Discrepancy in Perceptual-comprehension of the source's attitude is significantly less for high-than for moderate than for low-credible sources.
3. Discrepancy in Perception of the attitude revealed in the message is significantly less for high-than for moderate than for low-credible sources.

Research on attitude effects has already established that prior attitudes of receivers affect perception and recall. However, the effects of both credibility and prior attitudes has not been examined together. The research question of how much variance on comprehension is produced by credibility and prior attitudes together remains unanswered. Therefore, the following regression hypotheses were tested:

4. Source credibility, prior attitude intensity, prior attitude involvement, and prior attitude salience significantly account for variance on recall-comprehension.
5. Source credibility, prior attitude intensity, prior attitude involvement, and prior attitude salience significantly account for variance on perceptual-comprehension of the source's attitude.

6. Source credibility, prior attitude intensity, prior attitude involvement, and prior attitude salience significantly account for variance on perceptual-comprehension of the message.

In order to examine the effects of credibility and attitudes on selective exposure, the following hypothesis was tested:

7. Source credibility, prior attitude intensity, prior attitude involvement, and prior attitude salience significantly discriminate between Ss who voluntarily read the message and those who do not.

Source credibility was operationalized on each of the five dimensions (competence, sociability, composure, extroversion, and character) in the above hypotheses.

#### METHOD

Sample. A sample of 98 Ss was selected from basic speech communication courses at Illinois State University during the summer term of 1972. Seventy-three Ss were assigned to experimental conditions and a group of 25 Ss was assigned to a control condition.

Procedure. On the first day of class, pretests of attitude intensity, involvement, salience, source competence, source sociability, source extroversion, source composure, and source character were administered. Pretests were camouflaged as a questionnaire on potential discussion topics and sources of materials for the course. Fifteen topics were pretested including 5 potential experimental topics, pretested on attitude intensity, involvement, and salience. Eighteen sources were tested with each subject being pretested on 6 sources. Pretests were randomly ordered and booklets were randomly distributed. On the same day subjects were asked to sign-up for individual interviews and course counselling sessions scheduled two weeks later. On the basis of the pretesting each subject was assigned a source whom he perceived as low-moderate-; or high-credible on one of the five dimensions. In order to assure maximum variability for regression analyses, a fifth of the sample was assigned to each dimension of source credibility and further assigned to high, moderate, or low conditions in each dimension. For the analysis of variance which tested the effects of each credibility dimension independently, all 73 experimental subjects were resorted into high, moderate, or low conditions for each credibility dimension. A score of 3 - 8 was considered low; 9-15, moderate; 16-21, high. On each dimension, 21 was the maximum score; 3, the minimum. A single experimental message topic which best maximized variability in attitude intensity, involvement, and salience was selected (The Space Program) from the five potential topics. Identical

messages on the space program were prepared with the appropriate credibility induction for each subject at the top of the message. The experimental inductions were camouflaged as news releases for the campus radio station. Two weeks after the pretesting, subjects reported for their interviews. At that time individual subjects were ushered into a room and asked to wait for their interviews. They were not allowed to bring materials (books, papers, purses, etc.) into the room. Subjects were seated at the side of a conference table. On the table to the left of the subject was a typewriter with the experimental inductions (source and message) lying beside it in clear view. In order to avoid an attentive set or the expectancy of testing, subjects were allowed to read or not read the message as they chose. Observation and recording of reading behavior was made through one-way glass. After 5 minutes, subjects were ushered into another room. Subjects who had voluntarily read the message were administered posttests. Subjects who had not read were then asked to read the message and subsequently administered posttests. Booklets contained posttests tapping perceived attitude of the source, perceived attitude revealed in the message, the subject's attitude toward the topic, source credibility dimensions, and recall-comprehension.

In order to establish a basis for producing discrepancy scores for subjects' perceptual comprehension, a control panel of experts ( $n=25$ ) were asked to rate the attitude revealed in the message containing no credibility induction. The panel consisted of graduate faculty and final semester master's candidates in Communication. The 25 subjects in the control condition were asked to fill out the recall test without having read the message in order to facilitate analysis of the recall measurement.

Materials. A modified close procedure instrument on which words of the message were selectively omitted and subjects were asked to fill them in was used to measure recall-comprehension (Taylor, 1954). There were eighty possible completions. Exact word replacement or stems were accepted as correct. Correct responses were loaded inversely according to the probability of making a correct response on the basis of message redundancy. Frequency of accurate replacements by the control group served as the basis for the loadings. Attitude intensity of the receiver and his perception of the source's attitude and of the attitude revealed in the message were measured on six, evaluative, semantic differential-type scales (Osgood, Suci, & Tannenbaum, 1957). The scales<sup>1</sup> were right-wrong, good-bad, beneficial-harmful, positive-negative, wise-foolish, fair-unfair (these scales were scored with

<sup>1</sup> In separate factor analyses for 156 concepts, McCroskey found these six scales to load consistently among the top twelve of the forty evaluative scales employed, with internal reliability equaling or exceeding .90.

the negative end of the scales high to facilitate subsequent analyses). Perception of source credibility was measured on the five separate dimensions for public figures (McCroskey, Jensen, & Todd, 1972). For each dimension the semantic differential-type scales were as follows: (1) Competence--informed-uninformed, trained-untrained, intelligent-unintelligent; (2) Sociability--social-unsocial, cheerful-gloomy, friendly-unfriendly; (3) Composure--tense-relaxed, nervous-poised, calm-anxious; (4) Extroversion--quiet-verbal, talkative-silent, aggressive-meek; (5) Character--good-bad, reliable-unreliable, admirable-contemptable.<sup>2</sup> Attitude salience and involvement were measured on six semantic differential-type scales developed by Weidman (1972). The scales<sup>3</sup> were (1) Salience--significant-insignificant, major-minor, important-unimportant, light-weighty, recognized-unrecognized, relevant-irrelevant; (2) Involvement--not engaging-engaging, obligated to-not obligated to, close-far, connected-unconnected, identified with-not identified with, reflection of myself-not a reflection of myself.

Design. Independent variables were (1) high, moderate, and low-source credibility on competence, sociability, composure, extroversion, and character dimensions; (2) prior attitude intensity; (3) prior attitude salience; (4) prior attitude involvement. Dependent variables were (1) recall-comprehension; (2) perceptual-comprehension of the message--the subject's perception of the attitude intensity revealed in the message. (3) perceptual-comprehension of the source's attitude--the subject's perception of the source's attitude intensity. (In order to provide a meaningful test of the ANOVA hypotheses, perceptual comprehension of the source's attitude was operationalized as the discrepancy between the subject's perception of the source's attitude and a panel of experts' mean perception of the attitude revealed in the message. Perceptual comprehension of the message was operationalized as the discrepancy between the subject's perception of the attitude revealed in the message and a panel of experts' mean perception of the attitude revealed in the message.)

---

<sup>2</sup>A linear transformation achieved by doubling scores on each dimension was used to equate scale-units of credibility scores and attitude scores for the regression analyses.

<sup>3</sup>These scales loaded separately on each factor (salience, involvement) respectively across 20 topics of varying salience and intensity. Criteria for inclusion of a scale on a factor was a loading of .60 with no secondary loading above .40.

Hypotheses predicting significant differences resulting from high-, moderate-, and low-credibility were tested with one-way analyses of variance. Hypotheses exploring the amount of variance on each of the dependent variables that was attributable to independent variables were tested with the Maximum R-Square Improvement method of multiple regression analyses. The hypothesis exploring the effects of attitudes and credibility on selective exposure was tested with stepwise multiple discriminate analysis. The .05 level of statistical significance was required for all statistical tests. Subjects reading the message under differing conditions (read voluntarily, forced to read) were analyzed as separate experimental conditions in the regression procedures.

## RESULTS

Manipulation and Measurement Checks. Of the 73 subjects in the experimental conditions 40 read the message voluntarily and 33 did not. The expert panel's (n=25) perception of the attitude revealed in the message produced a mean of 33, range of 8, and standard deviation of 2.37. Subjects' preattitude intensity on the topic produced a mean of 21, range of 36 and standard deviation of 9.51. Subjects preattitude involvement on the topic produced a mean of 21, a range of 30, and standard deviation of 7.99. Preattitude salience produced a mean of 27, range of 36 and standard deviation of 9.14.

The split-half reliability of the recall test was .93. The mean was 13.16, the range 40, and the standard deviation 2.54. Recall in experimental conditions ( $\bar{X}=13.16$ ) was significantly higher ( $t=5.39$ ; 95 d. f.) than recall in the control condition ( $\bar{X}=3.76$ ). Credibility inductions on each dimension were validated as significantly (and meaningfully) different (See Table I).

Credibility and Comprehension: ANCOVA Model. No significant comprehension effects were observed on credibility dimensions, except for sociability and composure. Significant comprehension effects were observed on the credibility dimensions of sociability ( $F=4.29$ ; 2, 70 d.f.) and composure ( $F=3.13$ ; 2, 70 d.f.). Recall was significantly higher ( $t=3.25$ , 70 d.f.) on the highly sociable source ( $\bar{X}=15.36$ ) than for the low sociable source ( $\bar{X}=3.50$ ); and significantly higher ( $t=2.43$ , 70 d.f.) for the moderately sociable source ( $\bar{X}=14.44$ ) than for the low-sociable source ( $\bar{X}=3.50$ ). In a test of linearity<sup>4</sup> no significant result was observed ( $F=1.54$ ; 2, 70 d.f.). The null hypothesis of linearity could not be rejected ( $\eta^2 = .34$ ,  $r = .31$ ). Since the F-ratio for the analysis of variance on the treatment conditions was significant, a linear relationship between sociability and recall may be assumed. No other signifi-

<sup>4</sup>To test the hypothesis of linearity the following statistic was employed:  $F = \frac{n^2 \cdot r^2}{1 - r^2} \cdot \frac{n' - K}{K - 2}$  where K = number of treatments and n' = number of subjects across all treatments. (John G. Peatman, Introduction to Applied Statistics. New York: Harper & Row, 1963)

cant effects on recall attributable to sociability were observed. Discrepancy in the perception of the attitude revealed in the message was significantly less ( $t=2.35, 70$  d.f.) for the highly composed source ( $\bar{X}=3.58$ ) than for the low composure source condition ( $\bar{X}=5.82$ ); and significantly lower ( $t=2.06, 70$  d.f.) for the moderately composed source ( $\bar{X}=3.97$ ) than for the low composure source condition ( $\bar{X}=5.82$ ). In a test of linearity, no significant result was observed ( $F=0.70; 2, 70$  d.f.). The null hypothesis of linearity could not be rejected ( $\eta^2=.29, r = -.26$ ). Since the F-ratio for the analysis of variance on the treatment conditions was significant, a linear relationship between composure and discrepancy in the perception of the attitude revealed in the message may be assumed. No other significant effects attributable to composure conditions were observed.

#### Attitude, Credibility, and Comprehension: Regression Model.

Data from Ss who read the message voluntarily were submitted to multiple regression analyses with maximum R-square improvement procedure (See Table II). On the dependent variable of perceptual-comprehension of the source's attitude, a significant effect ( $F=2.47; 3, 31$  d.f.) was observed for the eight-variable maximum R-square model. A maximum of 39 per cent of the variance was accounted for by sociability, competence, attitude salience, attitude intensity, composure, attitude involvement, extroversion, and character. However, only salience, competence, and sociability (These variables accounted for 26 per cent of the variance in the three-variable model.) were individually significant predictors. (The regression equation for the criterion variable regarding discrepancy of the Ss perception of the source's attitude is also included on Table II.)

On the dependent variable of perceptual-comprehension of the attitude revealed in the message, a significant effect ( $F=3.28; 3, 31$  d.f.) was observed for the eight-variable maximum R-square model. A maximum of 46 per cent of the variance was accounted for by the eight predictors. However, only attitude intensity, salience, competence, and composure (These variables accounted for 40 per cent of the variance in the four-variable model.) were individually significant predictors. (The regression equation for the criterion variable regarding discrepancy of the Ss perception of the attitude revealed in the message is also included on Table II.)

On the dependent variable of recall-comprehension, no significant effect ( $F=1.68; 1, 30$  d.f.) was observed in the first step of the maximum R-square analysis. None of the eight predictors significantly accounted for variance in recall-comprehension.

Data from Ss who had not read the message voluntarily and were subsequently forced to read it were also submitted to multiple

regression analyses with maximum R-square improvement procedure (See Table III). On the dependent variable of perceptual comprehension of the source's attitude, no significant effect ( $F=0.69$ ; 1, 31 d.f.) was observed in the first step of the maximum R-square analysis. None of the eight predictors significantly accounted for variance in perceptual comprehension of the source's attitude.

On the dependent variable of perceptual-comprehension of the attitude revealed in the message, a significant effect ( $F=2.72$ ; 3, 24 d.f.) was observed for the eight-variable maximum R-square model. A maximum of 43 per cent of the variance was accounted for by the eight predictors. However, only composure (accounting for 32 per cent of the variance in the one-variable model) was individually significant as a predictor. (The regression equation regarding the discrepancy of the Ss perception of the attitude revealed in the message is also included in Table III.)

On the dependent variable of recall-comprehension, a significant effect ( $F=2.47$ , 3, 24 d.f.) was observed for the eight-variable Maximum R-square model. A maximum of 45 per cent of the variance in recall-comprehension was accounted for by the eight predictors. However, only character (accounting for 29 per cent of the variance in the one-variable model) was individually significant as a predictor.

Selective Exposure: Discriminant Analysis Model. In the stepwise discriminant analysis no significant effect was observed. The eight independent variables (intensity, involvement, salience, competence, sociability, composure, extroversion, character) failed to discriminate between Ss who voluntarily read the message and those who did not.

## DISCUSSION

Although high, moderate, and low credibility inductions were established on all five dimensions, hypotheses 1 and 3 received only limited support. A positive, linear relationship between source sociability and recall was discovered. A negative linear relationship was observed between source composure and discrepancy in perception of the message attitude. Hypothesis 2 was not supported. These results are only partially consistent with the findings of previous research. The lack of expected effect attributable to competence and other dimensions (Anderson, 1972) cannot be attributed to experimental error on credibility induction. If the hypothesized relationships between credibility and comprehension are plausible, the confounding element in this study may have been attentive set. The sample size did not allow for separate analysis of subjects who read voluntarily, without expectancy of testing and attentive set. The  $n$  requirements for stable F-ratios in three-celled analysis of variance were not met. The sample size was a substantial limitation in this segment

of the study.

Hypotheses 4, 5, and 6 predicting that prior attitudes and source credibility would significantly account for variance on comprehension, were partially supported. Regression analyses tested the effect of 8 predictors (intensity, involvement, salience, competence, sociability, extroversion, composure, character) on comprehension (recall, perception of source's attitude, perception of attitude revealed in the message). Among voluntary readers of the message, the 8 predictors together accounted for 39 per cent of the variance on perceptual-comprehension of the source's attitude and 46 per cent of the variance on perceptual-comprehension of the attitude revealed in the message. None of the variables predicted variance in recall; however, among those who were forced to read the message the 8 predictors together accounted for 45 per cent of the variance on recall and 48 per cent of the variance on perceptual-comprehension of the attitude revealed in the message. None of the variables predicted variance on perceptual-comprehension of the source's attitude. In both of the above experimental conditions, considerably fewer predictor variables were individually significant; however, these predictors also accounted for a substantial amount of variance on the dependent variables. Lack of significance on some individual variables may have been attributable to sample size.

Prediction of a meaningful amount of variance on comprehension (of the type in this study) is possible on the basis of prior attitude and credibility. However, it appears that the conditions under which individuals are exposed to messages (voluntarily or not voluntarily) affects prediction in terms of how much variance can be accounted for and in terms of what type of comprehension the prediction applies to. Prediction of variance on recall was not possible among those who read the message without being told to do so. If experimental error was not responsible for lack of significance, prior attitudes and credibility may have little impact on recall in some situations where selective exposure operates. This interpretation, of course, is not consistent with the rationale presented previously in regard to the effects of attentive set on recall. Further, prediction of variance on perceptual-comprehension of the source's attitude was not possible among those who were told to read the message. Since prediction of perceptual-comprehension of the attitude revealed in the message was possible with both groups of Subjects, and since it was possible among those who read voluntarily to account for variance on perceptual-comprehension of the source's attitude, experimental error was probably not responsible for this result. No explanation is readily apparent for this inconsistency between the two experimental treatments except the effect of the treatments themselves.

Hypothesis 7, predicting that the 8 variables would discriminate between those who chose to read and those who did not, was not supported. Although the regression analysis indicates that the two groups differ in terms of what types of comprehension can be predicted, the discriminant analysis failed to distinguish between the groups on reading behavior. No meaningful conclusions regarding the effects of attitudes and credibility upon selective exposure are possible on the basis of this study.

Limitations of this study include sample size and lack of variability in message inductions. (1) Increased  $n$  would have allowed for a more complete analysis of data, more stable statistics, and perhaps for more significance among predictor variables. (2) The utilization of more than one message and varying the difficulty or other characteristics of the message would increase generalizability. If a method of creating equivalent comprehension tests on differing content were employed, variability in message inductions would be possible.

## REFERENCES

- Adams, J.C. Reduction of Cognitive Dissonance by Seeking Consonant Information. Journal of Abnormal and Social Psychology, 62, 1961, 74-78.
- Andersen, K., and Clevenger, T., Jr. A Summary of Experimental Research in Ethos. Speech Monographs, 30, 1963, 59-70.
- Andersen, P. Credibility and Learning. Master's Thesis. Illinois State University, 1972.
- Berlo, K.K., and Lemert, J.B. A Factor Analytic Study of the Dimensions of Source Credibility. Paper presented at the Speech Association of America Convention, New York, December, 1961.
- Berlo, K.K., Lemert, J.B. and Mertz, R. Dimensions for Evaluating the Acceptability of Message Sources. Public Opinion Quarterly, 33, 1969, 563-576.
- Brodbeck, M. The Role of Small Groups in Mediating the Effects of Propaganda. Journal of Abnormal and Social Psychology, 52, 1956, 166-170.
- Canon, L.K. Self-Confidence and Selective Exposure to Information. Conflict, Decision, and Dissonance: L. Festinger, ed., Stanford: Stanford University Press, 1964.
- Cooper, E. and Johoda, M. The Evasion of Propaganda: How Prejudiced People Respond to Anti-Prejudice Propaganda. Journal of Psychology, 23, 1947, 15-25.
- Cronkhite, G. Persuasion: Speech and Behavioral Change. New York: Bobbs-Merrill, 1969.
- Edwards, A.L. Political Frames of Reference as a Factor Influencing Recognition. Journal of Abnormal and Social Psychology, 36, 1941, 34-50.
- Ehrlich, D., et. al. Postdecision Exposure to Relevant Information. Journal of Abnormal and Social Psychology, 54, 1957, 98-102.
- Feather, N.T. Acceptance and Rejection of Arguments in Relation to Attitude Strength, Critical Ability, and Intolerance for Inconsistency. Journal of Abnormal and Social Psychology, 69, 1964, 127-136.

- Feather, N.T. Cognitive Dissonance, Sensitivity, and Evaluation. Journal of Abnormal and Social Psychology, 66, 1963, 157-163.
- Feather, N.T. Cigarette Smoking and Lung Cancer: A Study of Cognitive Dissonance. Australian Journal of Psychology, 14, 1962, 55-64.
- Festinger, L. Behavioral support for Opinion Change. Public Opinion Quarterly, 28, 1964a, 404-417.
- Festinger, L., ed. Conflict, Decision, and Dissonance. Stanford: Stanford University Press, 1964b.
- Festinger, L. and Thibaut, J. Interpersonal Communication in Small Groups. Journal of Abnormal and Social Psychology, 46, 1951, 92-99.
- Freedman, J., and Sears, D. Advances in Experimental Social Psychology. L. Berkowitz, ed., Vol. 2, New York: Academic Press, 1965.
- Fulton, R.B. The Measurement of Speaker Credibility. Journal of Communication, 20, 1970, 270-279.
- Gerard, H.B. The Effect of Different Dimensions of Disagreement on the Communication Process in Small Groups. Human Relations, 6, 1953, 249-271.
- Guthrie, Marilee. Effects of Credibility, Metaphor, and Language Intensity on Comprehension, Attitude, and Terminal Credibility. Master's thesis, Illinois State University, 1972.
- Haiman, F.S. An Experiment in Informative Speaking. Quarterly Journal of Speech, 34, 1948, 355-360.
- Hastorf, A., and Cantril, H. They Saw a Game: A Case Study. Journal of Abnormal and Social Psychology, 49, 1954, 129-134.
- Highlander, J.P. Audience Analyzer Measurements and Informational Effects of Speaker Variables in Radio Talks. Doctoral dissertation, University of Wisconsin, 1953.
- Hovland, C.I., and Mandell, W. An Experimental Comparison of Conclusion-Drawing by the Communicator and by the Audience. Journal of Abnormal and Social Psychology, 47, 1952, 581-588.
- Hovland, C.I., Harvey, O.J., and Sherif, M. Assimilation and Contrast Effects in Reactions to Communication and Attitude Change. Journal of Abnormal and Social Psychology, 55, 1957, 244-252.

- Hovland, C.I. and Sherif, M. Social Judgment. New Haven: Yale University Press, 1961.
- Hovland, C.I., and Weiss, W. The Influence of Source Credibility on Communication Effectiveness. Public Opinion Quarterly, 15, 1951, 635-650.
- Jones, E., and Kohler, R. The Effects of Plausibility on the Learning of Controversial Statements. Journal of Abnormal and Social Psychology, 57, 1958, 315-320.
- Kelman, H.C., and Hovland, C.I. Reinstatement of the Communicator in Delayed Measurement of Opinion Change. Journal of Abnormal and Social Psychology, 48, 1953, 327-335.
- Kendall, P., and Wolfe, K.M. The Analysis of Deviant Cases in Communications Research. Communications Research, 1948-1949. P.R. Lazarfeld and F.M. Stanton, eds., New York: Harper, 1949.
- Key, V.O., Jr. Media: Specter and Reality. Speech Communication: Analysis and Readings, Martin and Andersen, eds., Boston: Allyn and Bacon, Inc., 1968.
- King, R.R. An Experimental Study of the Effect of Ethos Upon the Immediate and Delayed Recall of Information. Central States Speech Journal, 17, 1966, 22-28.
- Lefford, A. The Influence of Emotional Subject Matter on Logical Reasoning. Journal of General Psychology, 34, 1946, 127-151.
- Levine, J.M., and Murphy, G. The Learning and Forgetting of Controversial Material. Journal of Abnormal and Social Psychology, 38, 1943, 507-517.
- McCroskey, J.C., Scales for the Measurement of Ethos. Speech Monographs, 33, 1966, 65-72.
- McCroskey, J.C., Scott, M.D., and Young, T.J. The Dimensions of Source Credibility for Spouses and Peers. Paper Presented at the Western Speech Association Convention, Fresno, November, 1971.
- McCroskey, J.C., Jensen, T., and Todd, C. The Generalizability of Source Credibility Scales for Public Figures. Paper presented at Speech Communication Association Convention, Chicago, Illinois, December, 1972.

- McGuire, W.J. A Syllogistic Analysis of Cognitive Relationships. Attitude Organization and Change, M.J. Rosenberg, et. al., eds., New Haven: Yale University Press, 1960.
- Miller, J. Summary of Experimental Research on Argument. Quarterly Journal of Speech, 1969, 276-286.
- Mills J. Avoidance of Dissonant Information. Journal of Personality and Social Psychology, 2, 1965a, 589-593.
- Mills J. Effect of Certainty About a Decision Upon Postdecision Exposure to Consonant and Dissonant Information. Journal of Personality and Social Psychology, 2, 1965b, 749-752.
- Mills, J. and Ross, A. Effects of Commitment and Certainty Upon Interest in Supporting Information. Journal of Abnormal and Social Psychology, 68, 1964, 552-555.
- Mills, J., Aronson, E., and Robinson, H. Selectivity in Exposure to Information. Journal of Abnormal and Social Psychology, 59, 1959, 250-253.
- Nichols, R.G. Factors in Listening Comprehension. Speech Monographs, 15, 1948, 154-163.
- Osgood, C.E. Suci, G.J., and Tannenbaum, P.H. The Measurement of Meaning. Urbana, Ill. University of Illinois Press, 1957.
- Postman, L., Bruner, J.S., and McGinnes, L. Personal Values as Selective Factors in Perception. Journal of Abnormal and Social Psychology, 43, 1948, 150-157.
- Rea, R.G. An Experimental Study of Source Credibility and Order of Presentation in Persuasion. Masters thesis, University of Arkansas, 1961.
- Rosen, S. Postdecision Affinity for Incompatible Information. Journal of Abnormal and Social Psychology, 63, 1961, 183-190.
- Schunk, J. Probability and Desirability Determinants of Relationships Among Beliefs and Rhetorical Propositions. Doctoral dissertation, University of Illinois, 1967.
- Sherif, M., Sherif, C., and Nebergall, R. Attitude and Attitude Change. Philadelphia: Saunders, 1965.
- Taylor, W.L. Application of 'Cloze' and Entropy Measures to the Study of Contextual Constraints in Samples of Continuous Prose. Unpublished doctoral dissertation, University of Illinois, 1954.

- Thistlethwaite, D. Attitude and Structure as Factors in the Distortion of Reasoning. Journal of Abnormal and Social Psychology, 45, 1950, 442-458.
- Tompkins, P.K., and Samovar, L.A. An Experimental Study of Source Credibility on the Comprehension of Content. Speech Monographs, 31, 1964, 120-123.
- Waly, P., and Cook, S.W. Effect of Attitude on Judgments of Plausibility. Journal of Personality and Social Psychology, 2, 1965, 745-749.
- Weidman, R. The Development of Scales for the Measurement of Salience. Illinois State University, 1972.
- Wenzlaff, V. Source Credibility: A Summary of Experimental Research. Paper presented at the Speech Communication Association Convention, San Francisco. December, 1971.
- Wheless, L.R. The Effects of Comprehension Loss on Persuasion. Speech Monographs, 38, 1971, 327-330.
- Whittaker, J.O. Resolution of the Communication Discrepancy Issue in Attitude Change. Attitude, Ego-Involvement and Change, C. Sherif and M. Sherif, eds., New York: John Wiley & Sons, Inc., 1967.

Lawrence Wheless is Director of Undergraduate Studies in the Department of Speech Communication at West Virginia University. Acknowledgement and appreciation is expressed to Marilee Guthrie (Philadelphia), Terry Bush (Illinois State University), and Dennis Martin (Illinois State University) for their assistance in the administration of the study.

TABLE I  
VALIDATION OF CREDIBILITY INDUCTIONS

Credibility Dimension	High $\bar{X}$	Moderate $\bar{X}$	Low $\bar{X}$	F-ratio
1. Competence	38.24(n=34)	26.46(n=26)	13.69(n=13)	135.15
2. Sociability	37.07(n=28)	25.28(n=25)	11.60(n=20)	201.38
3. Composure	38.50(n=24)	24.56(n=32)	10.24(n=17)	267.77
4. Extroversion	37.68(n=37)	26.40(n=25)	12.51(n=11)	162.44
5. Character	36.55(n=22)	25.93(n=28)	11.39(n=23)	141.87

TABLE II

## REGRESSION EQUATIONS FOR Ss WHO READ VOLUNTARILY

Dependent Variable	% of Variance Predicted	Regression Equation
1. Perceptual-Comprehension of Source Attitude	39	$Y = 56.34 + \text{Sociability}(0.07) + \text{Competence}(-0.40) + \text{Salience}(-0.63) + \text{Attitude Intensity}(-0.34) + \text{Composure}(0.18) + \text{Involvement}(0.18) + \text{Extroversion}(0.12) + \text{Character}(0.11)$
2. Discrepancy in Perception of Source Attitude	37	$Y = -2.02 + \text{Salience}(0.39) + \text{Sociability}(-0.05) + \text{Competence}(0.27) + \text{Involvement}(-0.17) + \text{Extroversion}(-0.14) + \text{Composure}(-0.10) + \text{Character}(-0.10) + \text{Attitude Intensity}(0.13)$
3. Perceptual-Comprehension of Message Attitude	46	$Y = 55.03 + \text{Extroversion}(-0.05) + \text{Salience}(-0.47) + \text{Involvement}(0.21) + \text{Competence}(-0.34) + \text{Composure}(0.23) + \text{Attitude Intensity}(-0.21) + \text{Character}(0.02) + \text{Sociability}(-0.01)$
4. Discrepancy in Perception of Message Attitude	42	$Y = -3.82 + \text{Salience}(0.31) + \text{Involvement}(-0.14) + \text{Competence}(0.21) + \text{Composure}(-0.12) + \text{Attitude Intensity}(0.10) + \text{Character}(-0.05) + \text{Extroversion}(-0.05) + \text{Sociability}(0.03)$
5. Recall-Comprehension	0	$Y = 0$

TABLE III

REGRESSION EQUATIONS FOR Ss WHO WERE FORCED TO READ

Dependent Variable	% of Variance Predicted	Regression Equation
1. Perceptual-Comprehension of Source Attitude	0	$Y=0$
2. Perceptual-Comprehension of Message Attitude	48	$Y=26.38+\text{Composure}(0.24)+\text{Competence}(-0.09)+\text{Salience}(0.19)+\text{Extroversion}(0.05)+\text{Attitude Intensity}(0.07)+\text{Character}(-0.09)+\text{Sociability}(0.05)+\text{Involvement}(0.02)$
3. Discrepancy in Perception of Message Attitude	41	$Y=4.52+\text{Involvement}(-0.06)+\text{Composure}(-0.11)+\text{Extroversion}(-0.07)+\text{Competence}(0.09)+\text{Attitude Intensity}(0.11)+\text{Sociability}(-0.06)+\text{Salience}(0.06)$
4. Recall-Comprehension	45	$Y=3.25+\text{Character}(0.31)+\text{Attitude Intensity}(0.18)+\text{Salience}(0.24)+\text{Involvement}(-0.22)+\text{Composure}(-0.11)+\text{Sociability}(0.18)+\text{Extroversion}(-0.08)+\text{Competence}(-0.09)$