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DOGMATISM, PERSUASION, AND INTOLERANCE
OF AMBIGUITY: AN ANALYSIS OF RESPONSE BIAS

BY

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B.A., Florida Technological University, 1972

THESIS

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CHAPTER I

INTRODUCTION

Review of Literature

Since Janis and Field identified the general factor of susceptibility to persuasion, or "persuasibility," in 1956,¹ it has been of particular interest to those concerned with attitude change and group dynamics.² Many studies have been conducted to analyze the personality correlates of persuasibility. Several investigators have found that those who are "persuasive are also 'dogmatic' or 'closed-minded', which seems almost a contradiction of terms if the concept 'closed-minded' is taken at fact value."³ This study was designed to investigate the possibility that the relationship might be explained by the existence of response bias in the Rokeach Dogmatism Scale. For example, do persuasive people have a high intolerance of ambiguity? Do persua-

¹ Irving L. Janis and Peter B. Field, "A Behavioral Assessment of Persuasibility: Consistency of Individual Differences," Sociometry, XIX (1956), 241-59.

² Carl I. Hovland and Irving L. Janis, Personality and Persuasibility (New Haven: Yale University Press, 1959), p. 1.

³ Gary Cronkhite, Persuasion: Speech and Behavioral Change (Indianapolis: The Bobbs-Merrill Company, Inc., 1969), p. 131.

sible people appear dogmatic because of the ambiguous nature of the stimulus? Does the subject's uncertainty tend to cause high scores on the Rokeach Dogmatism Scale?

In his theoretical formulation of open and closed mindedness, Milton Rokeach contended that individuals differ in their ability to receive, evaluate, and act on information relevant to a particular belief system. This individual difference is often referred to as open-(or closed)mindedness, that is, the degree to which an individual is receptive to new ideas and to arguments.⁴ A major factor determining the degree of open-mindedness, according to Rokeach, is the capacity to distinguish information about a given topic from information about the source of that topic. He suggested, then, that the person with an open belief system is more likely to resist pressures from external sources.⁵ Thus, it is the closed-minded, or dogmatic, person, according to Rokeach, who should be the most persuasible.

Using the Rokeach Dogmatism Scale, Form E, to identify persons who have closed systems of thinking, several investigators conducted studies that confirm such a relationship. Norris reported data that gives some support to the hypothesis of greater attitude change for the closed-minded subjects.⁶ After administering the Dogmatism Scale to 101 students, the experimenter presented them with four messages attacking

⁴Webster's Seventh New Collegiate Dictionary, (Springfield, Mass.: G. and C. Merriam Company, 1971), p. 591.

⁵Milton Rokeach, The Open and Closed Mind (New York: Basic Books, 1968), p. 58.

⁶Eleanor L. Norris, "Attitude Change as a Function of Open or Closed Mindedness," Journalism Quarterly, XLII (Autumn, 1965), 571-75.

positively-evaluated concepts. The topics attacked were annual chest x-rays for the detection of tuberculosis, the routine use of penicillin, tooth-brushing, and annual medical check-ups. The messages, written in news story form, were all presented as coming from the U.S. Public Health Service, a highly authoritative source. A two way analysis of variance showed that closed-minded subjects (those scoring above the mean of 129 on the Dogmatism Scale) did exhibit significantly greater attitude change than did open-minded subjects.⁷

Cronkhite states that the relationship between dogmatism and persuasibility has also been confirmed in studies by Hunt and Miller, and others by Cronkhite and Goetz. The results of these studies were reported in papers presented at the Speech Association of America in New York City in December of 1965.⁸

A number of experimenters have reported that subjects who score high on Adorno's F-Scale (a measure of authoritarianism quite similar to the Dogmatism Scale)⁹ are more likely to conform. One criticism of the F-Scale is that some ideological groups emerge as nonauthoritarianism when measured by the F-Scale.¹⁰ Further research, however, shows that most of these groups share some of the rigidities of authoritarianism.¹¹ Wells, Weinert, and Rubel, for example, presented subjects with pictures

⁷Ibid., 573.

⁸Cronkhite, Persuasion, p. 131.

⁹F. Lerlinger and Milton Rokeach, "The Factorial Nature of the F and D Scales," Journal of Personality and Social Psychology, IV (October, 1966), 397.

¹⁰Daryl J. Bem, Beliefs, Attitudes, and Human Affairs (Belmont: Brooks/Cole Publishing Company, 1970), p. 23.

¹¹Ibid.

of a traffic accident and asked them to say which driver was at fault.¹² The pictures were drawn so that the verdict was obvious. Under conditions designed to produce conformity pressure, however, subjects who yielded to these pressures had significantly higher authoritarianism scores than those who resisted the pressure.¹³ Additional support of the contention that authoritarians tend toward conformity has been presented by Jahoda and Cook,¹⁴ Block and Block,¹⁵ Crutchfield,¹⁶ and Harvey and Beverly.¹⁷

Review of the literature shows a lack of attempts to explain why there is a relationship between closed-mindedness and persuasibility, with the possible exception of a study by Powell.¹⁸ Though Powell's study was not concerned with persuasibility, he did find support for Rokeach's theory that open and closed-minded subjects differ in their

¹²W. D. Wells, Guy Weinert, and Marilyn Rubel, "Conformity Pressure and Authoritarian Personality," The Journal of Social Psychology, IV (October, 1966), 397.

¹³Ibid., 134.

¹⁴M. Jahoda and S. W. Cook, "Ideological Compliance as a Social Psychological Process," Totalitarianism, ed. C. J. Friedrich (Cambridge: Harvard University Press, 1954), pp. 203-22.

¹⁵J. Block and J. Block, "An Interpersonal Experiment on Reactions to Authority," Human Relations, V (February, 1952), 91-98.

¹⁶R. S. Crutchfield, "Conformity and Character," American Psychologist, X (May, 1955), 191-98.

¹⁷O. J. Harvey and George D. Beverly, "Some Personality Correlates of Concept Change Through Role Playing," Journal of Abnormal and Social Psychology, LXV (1962), 61-64.

¹⁸Fredric A. Powell, "Open and Closed Mindedness and The Ability to Differentiate Source and Message," Journal of Abnormal and Social Psychology, LXV (1962), 61-64.

ability to differentiate between sources and messages.¹⁹

Cronkhite, however, believes that the relationship between dogmatism and persuasibility may depend on the other unidentified factors.²⁰ He reports that, according to the Cronkhite and Goetz study, dogmatism and persuasibility are related to what experimenters termed "attitude instability," the tendency of a subject's attitude to fluctuate even in the absence of systematic attempts to persuade.²¹

Stewart suggested a possible integration between studies of tolerance for ambiguity, dogmatism, and persuasibility.²² Stewart's study represents an effort to integrate material in order to explain the relationship between persuasibility and dogmatism.

It seems likely that a subject's uncertainty may be an important factor in this relationship. Specifically, high scores on the Rokeach Dogmatism Scale may actually reflect the subject's uncertainty about items on the scale due to the ambiguous nature of the items. If the individual has no definite attitudes of either kind, according to Cronbach, then his response must be based on response set, and any inference to attitude content is invalid. Cronbach demonstrated that most students tend to respond "agree" rather than "disagree" when uncertain.²³

Berg and Rapaport presented evidence that the confounding of con-

¹⁹Ibid., 64.

²⁰Cronkhite, Persuasion, p. 132.

²¹Ibid.

²²Robert A. Stewart, "Integration of Tolerance for Ambiguity and Persuasibility Studies of Self Esteem," Psychological Reports, XXIII (December, 1968), 1104.

²³L. J. Cronbach, "Response Sets and Test Validity," Educational and Psychological Measurement, VI (1946), 479-82.

tent response by response-set tendencies is particularly likely when all items are keyed positively.²⁴ They gave subjects a questionnaire form which had no actual questions but which required the subjects to "imagine the Correct answer". The answers presented them were various options such as "true," "false," "yes," "uncertain," and "no". Response bias appeared at a high level of statistical significance, reaching chi square values above 80 in some cases. The major factor in the observed biases was the preference for "agree," "yes," and "true" type answers.²⁵ Since the Rokeach Dogmatism Scale consists exclusively of items keyed in a single direction, Peabody hypothesized that agreement response sets affect high scores on the Dogmatism Scale because agreement is always scored positively.²⁶ Two weeks after administering the Dogmatism Scale, he gave the same subjects reversals of the original items. He reasoned that true authoritarianism would be reflected by items whose original form was endorsed and reversed form rejected. The proportion of items meeting the criterion was .15. The nonauthoritarianism criterion, that is, disagreement with original and endorsement of reversed items, however, was met by 45% of the responses.²⁷ In addition, 32% of the responses were on the Double-agreement type, that is agreement to both original and reversed items.²⁸ Double agreement, then, is about twice

²⁴I. A. Berg and G. M. Rapaport, "Response Bias in an Unstructured Questionnaire," Journal of Psychology, XXXVIII (1954), 475-81.

²⁵Ibid., 481.

²⁶Dean Peabody, "Attitude Content and Agreement Set in Scales of Authoritarianism, Dogmatism, and Anti-Semitism and Economic Conservatism," Journal of Abnormal and Social Psychology, LXIII (1961), 10.

²⁷Ibid.

²⁸Ibid.

as frequent as true authoritarianism responses. Peabody also reported that of all the Dogmatism Scale items agreed to in the original, 67% were also agreed to in their reversed forms.²⁹ His results indicated that agreement with the originals could usually be attributed to agreement response set rather than attitudes favorable to dogmatism. Lichtenstein, Quinn, and Hover, using two different measures of agreement response set, also found data to indicate that the Dogmatism Scale is vulnerable to acquiescence response set.³⁰

Peabody believes that acquiescence response tendencies operate when an item is ambiguously worded. Most authoritarianism items, he contends, are ambiguous; thus, the high incidence of double agreement in the data.³¹

Rokeach has suggested that double-agreement can be explained by the fact that the subject tells the truth in one case because he sees no reason why he should not but deliberately lies in the second case because he sees the lie as being a more socially desirable answer.³² The assumption, however, that dogmatism scale reversals are viewed as socially more desirable than original items, according to McBride and Moran, appears untenable and unsupported.³³

²⁹Ibid.

³⁰E. Lichtenstein, R. P. Quinn, and G. L. Hover, "Dogmatism and Acquiescent Response Set," Journal of Abnormal and Social Psychology, LXIII (1961), 636-38.

³¹Peabody, "Attitude Content," 10.

³²Milton Rokeach, "The Double Agreement Phenomenon: Three Hypotheses," Psychological Review, LXX (July, 1963), 305.

³³Loren McBride and Gary Moran, "Double Agreement as a Function of Item Ambiguity and Susceptibility to Demand Implications of the Psychological Situation," Journal of Personality and Social Psychology, VI (May, 1967), 116.

Rokeach has objected to Peabody's claim that items in the Dogmatism Scale are ambiguous. He noted that Peabody's statement was made, "without providing the slightest independent empirical support, that response set is a function of ambiguity of items."³⁴

McBride and Moran, however, have demonstrated that double agreement on the Dogmatism Scale is, indeed, highly dependent upon the relative ambiguity of the items involved.³⁵ Three experimenters had 166 psychology students rate the ambiguity of each item on the Dogmatism Scale using an eight-point rating scale. In this manner, mean ambiguity scale values were obtained for each item. Both original and reversed forms of the Dogmatism Scale were administered to subjects. Data indicate that double agreement on the Dogmatism Scale correlated .83 with the rated ambiguity of items, a highly significant correlation.³⁶ They also presented strong evidence to indicate that approval-dependent individuals shows more double-agreement and point out that in other situations double-agreers would have been classified erroneously as authoritarians.³⁷ A study conducted by Miklich also yielded data indicating that the ambiguous items on the Dogmatism Scale did elicit more agreement response set.³⁸

Peabody contends that the existence of ambiguity on items of the Dogmatism Scale is generally recognized by those who have examined them

³⁴Rokeach, "Double Agreement," 307.

³⁵McBride and Moran, "Double Agreement," 117.

³⁶Ibid.

³⁷Ibid., 118.

³⁸D. R. Miklich, "Item Characteristics and Agreement-Disagreement Response Set," Dissertation Abstracts, XXVI (1965), p. 6210.

closely, with the possible exception of Rokeach.³⁹ In the construction of the dogmatism scales, according to Peabody, the intention to have both rational and irrational aspects in each item produced ambiguity. In addition, Miklich reported that his unpublished Ph.D. dissertation (1965) contains evidence to show that the content of the Dogmatism Scale is ambiguous.⁴⁰

Accumulated data, then, do seem to indicate that items on the Dogmatism Scale are ambiguous and that agreement response sets operate as a joint function with definite attitudes.

Thus, high scores on the Dogmatism Scale might well be re-interpreted as actually reflecting uncertainty. The relationship of this uncertainty to persuasibility fits well within the consistency theories of attitude change. Osgood and Tannenbaum, proponents of this theory of attitude change, contend that changes in evaluation are always in the direction of increased congruity with the existing frame of reference.⁴¹ For example, if a person or other some source of information which a subject regards positively (or negatively) supports an opinion which the subject regards negatively (or positively), there is a marked tendency to change either the evaluation of the opinion or the evaluation of the source in a direction which would reduce incongruity.⁴² Festinger, in

³⁹Dean Peabody, "Authoritarianism Scales and Response Bias," Psychological Bulletin, LXV (January, 1966), 13.

⁴⁰D. R. Miklich, "Peabody's Agreement Response Set Measure: A Reply to Samelson," Psychological Reports, XVIII (January-June, 1966), 200.

⁴¹C. E. Osgood and P. Tannenbaum, "The Principles of Congruity and the Prediction of Attitude Change," Psychological Review, LXIII (January, 1955), 43.

⁴²Ibid.

his congruity dissonance theory, also maintains that there is pressure toward consonant relations among cognitions and to avoid and reduce dissonance.⁴³ Therefore, as a subject tends to be certain about items he sees as ambiguous, dissonance may have arisen. If that subject had low tolerance for ambiguity, pressure to restore consonance or balance should be great. The combination of uncertainty, dissonance arousal, and low tolerance for ambiguity could lead to attitude change. Such a prediction fits Crutchfield's finding that subjects who have a high conformity score tend to agree with tests that represent an intolerance for ambiguity.⁴⁴

A high persuasibility score, then, may reflect uncertainty and intolerance of ambiguity on the part of the subject. Thus, the relationship between a high dogmatism score and a high persuasibility score may be explained in part by the fact that the subject has a high intolerance for ambiguity and is actually uncertain about items on the Dogmatism Scale due to their ambiguous nature. The purpose of this study is to examine this explanation.

Operational Definitions

1. High dogmatism: The Rokeach Dogmatism Scale, Form E, was administered to all subjects. Since upper and lower groups consisting of 25% from the extremes of the criterion score distribution are optimal for the study of test items,⁴⁵ the upper 25% of the dogmatism scores

⁴³Leon Festinger, A Theory of Cognitive Dissonance (Evanston: Row Peterson, 1957), p. 9.

⁴⁴Crutchfield, "Conformity and Character," 195.

⁴⁵Truman L. Kelley, "The Selection of Upper and Lower Groups for the Validation of Test Items," Journal of Educational Psychology, XXX (January, 1939), 24.

were considered high. Those scores of 169 and above were in the upper quartile.

2. Low Dogmatism: The lower 25% of the dogmatism scores were considered low. Scores of 134 and below were in the lower quartile.

3. High Persuasibility: A persuasibility score was obtained for each subject by use of the Janis-Field Persuasibility Test. The upper 25% of the scores, scores of 14 and above were considered high.

4. Low Persuasibility: The lower 25% of the scores, scores of 8 and below, were considered low.

5. High intolerance of ambiguity: An intolerance of ambiguity score was obtained for each subject by use of the Budner Intolerance of Ambiguity Scale. The upper 25% of the scores were considered high. Scores of 56 and above were in the upper quartile.

6. Low intolerance of ambiguity: The lower 25% of the scores, scores of 42 and below, were considered low.

7. Uncertainty Score: The Rokeach Dogmatism Scale, reconstructed by the author, to provide an uncertainty category (Form P), was administered to each subject. The total number of times a subject answered "Uncertain due to ambiguous nature of the statement," on Form P was that subject's uncertainty score.

Research Hypotheses

1. Subjects who score high on the persuasibility test will have significantly higher dogmatism scores than those who score low on the persuasibility test.

2. Subjects who score high on the intolerance of ambiguity scale will have significantly higher dogmatism scores than those who score low

on the intolerance of ambiguity scale.

3. Subjects who score high on the persuasibility test will have significantly higher intolerance of ambiguity scores than those who score low on the persuasibility test.

4. There will be a significant positive correlation between dogmatism scores and uncertainty scores.

5. Subjects who score high on the persuasibility test will have significantly higher uncertainty scores than those who score low on the persuasibility test.

6. Subjects who score high on the dogmatism scale will have significantly higher uncertainty scores than those who score low on the dogmatism scale.

7. Subjects who score high on the intolerance of ambiguity scale will have significantly higher uncertainty scores than those who score low on the intolerance of ambiguity scale.

The first two hypotheses were designed to determine the relationship between persuasibility and dogmatism and intolerance of ambiguity and dogmatism. Dogmatism scores provided the dependent variable, and persuasibility and intolerance of ambiguity, the independent variables.

The third hypothesis was designed to determine the relationship between persuasibility and intolerance of ambiguity. The dependent variable is intolerance of ambiguity, and persuasibility is the independent variable.

Hypothesis four was designed to determine whether or not a significant correlation exists between dogmatism scores and uncertainty scores.

The fifth, sixth, and seventh hypotheses were designed to determine the relationship between persuasibility, dogmatism, intolerance of ambiguity, and uncertainty scores. The independent variables are the persuasibility, dogmatism, and intolerance of ambiguity scores. The dependent variable is the uncertainty score.

CHAPTER II

DESIGN AND METHODOLOGY

Subjects

Subjects were 121 students enrolled in seven undergraduate speech classes at Auburn University. They were assigned to the classes by the Registrar on the basis of class requests in the order received and on the basis of class size.

Measurement

Janis-Field Persuasibility Test

This test consists of three components: (1) the Initial Questionnaire, followed by (2) Booklet I, containing five persuasive communications on five topics, each of which is followed by the three pertinent questions from the Initial Questionnaire, followed by (3) Booklet II, a second series of five persuasive communications on exactly the same topics as the first series, but taking diametrically opposite positions to those taken in the first series. After each communication in Booklet II the subjects are given the same opinion questions they had answered earlier in the Initial Questionnaire and in Booklet I. At three different times the subjects are asked to express their opinions: first, before any communication is presented; a second time, after reading the initial set of communications (Booklet I); and again

after reading an opposing set of communications (Booklet II). The tests are scored according to the number of opinion changes produced. The range of possible scores is 0 to 30, with higher scores representing more persuasible subjects.

The reliability of the persuasibility test was investigated by the author in a subsample of approximately 100 cases. The subsample was a stratified random sample of approximately equal numbers of male and female subjects. The split-half reliability was determined by giving each subject one persuasibility score on the 15 odd items and another score on the 15 even items. Just as with the total scores based on all 30 items, the subtest scores represent the number of items on which an individual showed an opinion change in the direction advocated by one or another of the communications. The raw reliability coefficient was found to be .69; the estimated value or the reliability coefficient was .81 when corrected by the Spearman-Brown formula.⁴⁶

The internal consistency of the persuasibility test was studied in the same subsample. Data showed a positive relationship among changes on the various topics comprising the persuasibility. Janis and Field report that the findings support the general hypothesis that there are consistent individual differences in the opinion changes elicited by a series of diverse communications.⁴⁷

Rokeach Dogmatism Scale, Form E

This scale is the most refined draft of a series of five editions that had been subjected to item analysis and reliability stud-

⁴⁶Carl Hovland and I. L. Janis, Personality and Persuasibility (New Haven: Yale University Press, 1959), p. 41.

⁴⁷Ibid., p. 43.

ies to isolate the most consistent and discriminating items. Form E is composed of 40 items, each attempting to measure a specific characteristic of the theory of open and closed belief-disbelief systems described by Rokeach.⁴⁸

The scale is presented as a personal opinion questionnaire containing the forty items to which the subject must respond in terms of the degree to which he agrees or disagrees with that statement. The response is made according to a six point scale ranging from "I agree very much" to "I disagree very much". The subject must indicate his opinion by responding with a plus or a minus 1, 2, or 3 depending on the extent to which he agrees or disagrees with the statement. All the statements are keyed in a single direction; that is, a positive answer always indicates closed-mindedness, while a negative answer always indicates open-mindedness. The more positive the response, then the more it contributes to the score of dogmatism, or more simply, closed-mindedness.

Rokeach reports reliability ranging from .68 to .93 with a median of approximately .78.⁴⁹ All but two of these reliability coefficients were calculated by the split-half method and corrected by the Spearman-Brown formula for increasing test length. Test-retest reliability coefficients yielded .84 with one month intervals and .71 with a five to six month interval.

The Dogmatism Scale has construct validity in that its construction was based directly on the very qualities Rokeach used to describe

⁴⁸Rokeach, The Open and Closed Mind, p. 73.

⁴⁹Ibid., p. 90.

dogmatism. Although high scores, as pointed out in the review of literature, might reflect a tendency to agree when uncertain, the scale does discriminate between individuals that actually do operate in a different manner on certain tasks. It separates individuals by the extent of their dogmatism with the dogmatism of others, based on the same standards.

Budner Intolerance of Ambiguity Scale

The scale is made up of 16 statements with each statement designed to tap at least one of the four postulated indicators of perceived threat and to refer to at least one of the three types of ambiguous situations defined. The perceived threat component is inserted to extract a reaction from the subjects. These 16 statements were selected after subjecting the initial group of 33 items to item analysis and reliability studies. The scale was administered to 813 subjects in 16 different groups. Reliabilities were computed by means of Cronbach's alpha formula, with the mean of the scale in these samples being approximately .49.⁵⁰ Though the magnitude of these reliability coefficients compares unfavorably with those usually reported, Budner lists three contributing factors: use of the alpha rather than the split-half coefficient which tends to overestimate the reliability figure; the freedom of the ambiguity scale from acquiescence and social desirability estimates, and the complex multidimensional nature of the concept itself since it is generally true that the more complex the construct and the more complex the measure, the lower will be the reliability

⁵⁰Stanley Budner, "Intolerance of Ambiguity as a Personality Variable," Journal of Personality, XXX (March, 1962), 34.

estimate.⁵¹ In addition, a 15 member experimental group was given the ambiguity scale twice, at intervals ranging from two weeks to two months, with a test-retest correlation of .85.

Validity was established by several methods. The scale shows significant correlation (.05) with three other scales designed to measure intolerance of ambiguity. Significant correlations were also obtained with the scale and judgements of autobiographical material (.05) and with the scale and peer ratings in terms of tolerance-intolerance of ambiguity (.01).

This scale has an equal number of positively and negatively keyed items. Very low and insignificant correlations were obtained between two measures of acquiescence and the Intolerance of Ambiguity Scale.⁵² Correlation between a measure of social desirability and the ambiguity scale seems to be relatively free of both acquiescent and social desirability response tendencies.⁵³

Procedure

The 121 subjects were in seven classes and each class was assigned a letter of identification: Groups A, B, C, D, E, F, and G. Tests were administered as a part of two regularly scheduled class meetings.

In the first treatment, all groups completed the Initial Questionnaire. Groups A, C, E, and G completed the Rokeach Dogmatism Scale, Form E. Groups B, D, and F completed Form P of the Dogmatism Scale. All groups completed Booklet I of the Janis-Field Persuasibility Test.

⁵¹Ibid., 35.

⁵²Ibid., 33.

⁵³Ibid.

In the second treatment, (two weeks after the first treatment), all groups completed the Budner Intolerance of Ambiguity Scale. Groups A, C, E, and G completed Form P of the Dogmatism Scale. Groups B, D, and F completed the Rokeach Dogmatism Scale, Form E.

All subjects responded to all materials.

Data Analysis

In analyzing the data, the mean scores of subjects were compared for statistical significant differences by the use of the t test. Kendall's tau coefficient was used to determine the correlation between dogmatism scores and uncertainty scores. Three t tests and one correlation measure were used.

CHAPTER III

RESULTS

Hypothesis 1 predicted that subjects who score high on the persuasibility test would have significantly higher dogmatism scores than those who scored low on the persuasibility test. The hypothesis was supported. Results were significant at the .05 level. All tests were one-tailed. Results of hypotheses 1 and 2 are presented in Table 1.

TABLE 1

SIGNIFICANCE OF THE DIFFERENCE BETWEEN DOGMATISM
SCORES OF SUBJECTS HIGH AND LOW IN PERSUASIBILITY AND
BETWEEN SUBJECTS HIGH AND LOW IN INTOLERANCE OF AMBIGUITY

Variables	No.	Mean of Dog, Scores	Variance	df	t
Hi Persuasi.	34	167.088	741.232	67	4.296*
Lo Persuasi.	35	135.971	1063.556		
Hi Intolerance	32	163.031	750.353	61	2.942*
Lo Intolerance	31	138.613	1430.110		

* Significant at the .05 level.

Hypothesis 2 predicted that subjects who scored high on the intolerance of ambiguity scale would have significantly higher dogmatism

scores than those who scored low on the intolerance of ambiguity scale. Results of the t test supported the hypothesis, showing significance at the .05 level, as indicated in Table 1.

TABLE 2

SIGNIFICANCE OF THE DIFFERENCE BETWEEN INTOLERANCE
OF AMBIGUITY SCORES OF SUBJECTS HIGH AND LOW IN
PERSUASIBILITY

Variables	No.	Mean of Intol. Scores	Variance	df	t
Hi Persuas.	34	49.647	81.750	67	0.190
Lo Persuas.	35	49.200	108.812		

Hypothesis 3 predicted that subjects who scored high on the persuasibility test would have significantly higher intolerance of ambiguity scores than those who scored low on the persuasibility test. As indicated in Table 2, the analysis using the t test failed to support the hypothesis.

Hypothesis 4 predicted a significant correlation between dogmatism scores and uncertainty scores. Kendall's Rank-Order Correlation was used to test the hypothesis. Results showed the value of Kendall's tau to be +.02, which represents practically no correlation at all. The hypothesis was rejected since results were not significant at the .05 level. The data used in Table 2 is shown in Appendix B.

Hypothesis 5 predicted that subjects who had high persuasibility scores would have significantly higher uncertainty scores than those who had low persuasibility scores. The t tests failed to support the

hypothesis, as indicated in Table 3.

TABLE 3

SIGNIFICANCE OF THE DIFFERENCE BETWEEN UNCERTAINTY SCORES OF SUBJECTS HIGH AND LOW IN PERSUASIBILITY, BETWEEN SUBJECTS HIGH AND LOW IN DOGMATISM, AND BETWEEN SUBJECTS HIGH AND LOW IN INTOLERANCE OF AMBIGUITY

Variables	No.	Mean of Unct. Scores	Variance	df	t
Hi Persuas.	34	1.853	4.553	67	1.947
Lo Persuas.	35	4.171	43.793		
Hi Dogmatism	31	2.258	5.598	61	0.723
Lo Dogmatism	32	3.125	39.145		
Hi Intol.	32	2.656	9.459	61	0.121
Lo Intol.	31	2.806	39.295		

There was no significant difference between the uncertainty scores of the two groups at the .05 level, and results were in the direction opposite to that predicted.

Hypothesis 6 predicted that subjects who had high dogmatism scores would have significantly higher uncertainty scores than those who had low dogmatism scores. The t test was used to analyze results, and the hypothesis was rejected. There was no significant difference between the uncertainty scores of the two groups. The results, however, were in the direction opposite that predicted, as seen in Table 3.

CHAPTER IV

DISCUSSION

Conclusion

First Conclusion

A relationship exists between high scores on the Rokeach Dogmatism Scale and high scores on the Janis-Field Persuasibility Test. People who are highly dogmatic appear to be significantly more persuasible than those who are not dogmatic. This finding was expected and agrees with results from earlier studies, (Supra, p. 2).

Second Conclusion

A relationship exists between high scores on the Rokeach Dogmatism Scale and high scores on the Budner Intolerance of Ambiguity Scale. People who are highly dogmatic appear to be significantly more intolerant of ambiguity than those who are not dogmatic.

Third Conclusion

People who are highly persuasible are not significantly more tolerant of ambiguity than those who are not persuasible. Contrary to the prediction included in Chapter I based on Crutchfield's results and the balance theories of attitude change, there seems to be no significant relationship between persuasibility and intolerance of ambiguity. Consequently, intolerance of ambiguity apparently is not a factor in the

relationship between dogmatism and persuasibility.

The contradiction with Crutchfield's earlier findings might be explained by considering possible differences between conformity, with which his experiment was concerned, and persuasibility as measured by the Janis-Field Test. Further investigation would be required to confirm this explanation and to establish the definite lack of relationship between persuasibility and intolerance of ambiguity.

Fourth Conclusion

Uncertainty due to the ambiguous items on the scale, as measured by the reconstructed form of the Rokeach Dogmatism Scale, is not a factor in the relationship between dogmatism and persuasibility. There was no significant correlation between dogmatism and uncertainty scores. No relationship was demonstrated between high persuasibility, dogmatism, or intolerance of ambiguity scores and high uncertainty scores.

Although there were no findings of statistical significance concerning the uncertainty score, the consistency of their direction raised some interesting questions. In every case in which the uncertainty scores were compared with the other three variables there was a tendency for the uncertainty score to be in the opposite direction from that predicted. For example, subjects who had high dogmatism scores, instead of having significantly higher uncertainty scores as predicted, had slightly lower uncertainty scores than those who had low dogmatism scores. Table 3 shows that the same was true for both persuasibility and intolerance of ambiguity. These results suggest the following possible conclusions:

- a. Those subjects who tend to be uncertain about items on the dogmatism scale because

of the ambiguous nature of the items are not erroneously classified dogmatic. Acquiescent response set based on the subject's uncertainty and ambiguity of the stimulus, therefore, could not be cited as a factor in the relationship.

- b. An alternative explanation is that the reconstructed form of the dogmatism scale failed to measure true uncertainty. If the scale did not actually measure uncertainty, it is still possible that at least a portion of the theory underlying this experiment is valid.

There are several reasons for believing the latter explanation is true. First, there was a tendency for the students to avoid selecting the uncertainty category. From a possible score range of 0 to 40 the overall mean of the uncertainty scores was only 2.78. In addition, 37 of the 121 subjects had a score of 0, indicating that they were not certain about any of the forty statements. When discussing the results with the students later, however, many of them expressed contradictory opinions. They complained that many of the statements on the scale were "unclear," "confusing," and "could be taken to mean different things to different people." When asked why their uncertainty scores did not reflect these findings, several explanations were:

"I didn't know it would be all right to mark that answer often;"

"I don't like to keep answering as if I don't have any opinions about things;"

"I didn't notice that we had a chance to be neutral--I was just used to the idea of agreeing or disagreeing."

The most logical explanation for the very low uncertainty scores seems to be that the college students who served as subjects have been somewhat "conditioned" to give yes or no answers and to avoid a neutral or uncertain position.

Additional evidence for the idea that the uncertainty category failed to elicit response from those who were actually uncertain can be found on the test papers in the form of erasures, changed answers, marks beside the statements, question marks, and omitted answers. For example, it was not uncommon for a subject to place a question mark in the margin beside an item, to circle a number, and later scratch through that answer and select another number. The ambivalence suggests uncertainty on the part of the subject, but the uncertainty category was avoided.

Based on the balance theories of attitude change, this study was designed to supply an "escape" or "way out" of the dissonance-producing ambiguous situation for those who were intolerant of ambiguity. It was theorized that the person who had a high intolerance score and also a high persuasibility score was prompted by response set tendencies to agree when uncertain and thus have a high dogmatism score. It was further predicted that he would state his uncertainty and neutrality when allowed to do so, thus escaping the dissonance situation.

The subjects, however, apparently did not see this choice as an escape. Perhaps, if one has a high intolerance of ambiguity, that is, sees ambiguous situations as threatening, he will avoid admitting that

he is facing an ambiguous situation. Perhaps seeing a situation as ambiguous and remaining uncertain about it would increase, rather than decrease, dissonance.

On the other hand, one who sees ambiguous situations as non-threatening (has an intolerance of ambiguity score) will admit more readily that he is faced with an ambiguous situation, call it that, and be content not to make a decision about it. Therefore, both the predicted results of the study and the contradictory actual results with regard to the uncertainty factor may still be consistent with balance theories.

Recommendations

Once the factors that cause the relationship between dogmatism and persuasibility are isolated, it might be possible to formulate principles of persuasion to be employed by a persuader with a given audience. This study failed to provide an acceptable explanation for this relationship. Several suggestions for further research, however, can be made.

1. More investigation is needed in order to confirm the lack of relationship between persuasibility and intolerance of ambiguity. A study designed to investigate the relationship using measures of persuasibility and intolerance other than the ones used in this study would be of value. This information would increase accumulated knowledge concerning the personality correlates of persuasibility.

2. It would be worthwhile to test the idea that response bias causes high dogmatism scores using other measures of uncertainty, such as double agreement, changed answers, et cetera. Although Peabody demon-

strated (Supra, p. 6) that double agreement was about twice as frequent as true authoritarianism responses, he did not show that double agreement was related to high scores on the dogmatism scale. Such a study might produce valuable results for understanding dogmatism scores.

3. Further testing is needed of Rokeach's contention that dogmatic subjects are more persuasible because they cannot separate the message from the source. Though Powell's experiment (Supra, p. 3) produced data supporting the idea that open-minded subjects can differentiate between source and message better than closed-minded subjects, similar findings, taking into consideration both persuasibility and dogmatism, would strengthen the conclusion.

4. Research should be conducted to determine the relationship between dogmatism and persuasibility using a measure of persuasibility that includes the alteration of more centralized beliefs. The topics on the Janis-Field Test are all aimed at altering what Rokeach calls inconsequential or peripheral beliefs (Type E).⁵³ Wright and Harvey found that authoritarians tend to "protect their attitudes toward a limited number of central concepts at the expense of the larger number of peripheral ones."⁵⁴ This finding suggests that dogmatic subjects might actually be more persuasible only when their less important beliefs are under question. This idea should be investigated experimentally.

Further investigation will produce more insight into the rela-

⁵³Ibid.

⁵⁴Milton Rokeach, Beliefs, Attitudes, and Values (San Francisco: Jossey-Bass, Inc., 1968), p. 11

tionship between persuasibility and dogmatism and possibly solidify concepts from which some principles of persuasion can be developed.

Summary

Several investigators have found that those who are highly susceptible to persuasion are significantly more dogmatic than those who are less susceptible to persuasion. Although Cronkhite, in his book, Persuasion: Speech and Behavioral Change, suggests that the relationship between these two variables seems surprising, few studies have been done to determine why the relationship exists.

This study was designed to investigate the possibility that persuasive people, who are expected to have a high intolerance of ambiguity, might appear to be dogmatic because of a response bias previously demonstrated in the Rokeach Dogmatism Scale.

Positive answers on the Rokeach Scale always signify dogmatism, and studies have shown that people tend to give positive answers when they are uncertain about ambiguous questions. Thus, it was hypothesized that a persuasive person who is highly intolerant of ambiguity might have a high score on the Rokeach Scale because of the response bias factor.

Subjects for the study were 121 undergraduate students at Auburn University. Tests were administered in order to obtain persuasibility, dogmatism, intolerance of ambiguity, and uncertainty scores for each subject.

The statistical measures applied to the data were three t tests and Kendall's Rank-Order Correlation.

Hypothesis 1 predicted that subjects who scored high on the per-

suasibility test would have significantly higher dogmatism scores than those who scored low on the persuasibility test. Hypothesis 2 predicted that subjects who scored high on the intolerance of ambiguity scale would have significantly higher dogmatism scores than those who scored low on the intolerance of ambiguity scale. Hypothesis 3 predicted that subjects who scored high on the persuasibility test would have significantly higher intolerance of ambiguity scores than those who had scored low on the persuasibility test. Hypothesis 4 predicted a significant correlation between dogmatism and uncertainty scores. Hypothesis 5 predicted that subjects who had high persuasibility scores would have significantly higher uncertainty scores than those who had low persuasibility scores. The sixth, and final hypothesis, predicted that subjects who had high dogmatism scores would have significantly higher uncertainty scores than those who had low dogmatism scores.

There were four principle conclusions drawn from the study. People who are highly dogmatic appear to be significantly more persuasible than those who are not dogmatic. People who are highly persuasible are not significantly more tolerant of ambiguity than those who are not persuasible. Thirdly, people who are highly dogmatic appear to be significantly more intolerant of ambiguity than those who are not dogmatic. Lastly, there was no significant correlation between dogmatism scores and uncertainty scores.

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APPENDIX A

Reconstructed Form of Rokeach Dogmatism Scale (Form P)

Instructions: Circle the number after each statement that represents your agreement or disagreement with that statement.

- 3 = Strong Agreement
- 2 = Moderate Agreement
- 1 = Slight Agreement
- 0 = Uncertainty due to ambiguous nature of the statement
- 1 = Slight Disagreement
- 2 = Moderate Disagreement
- 3 = Strong Disagreement

1. The United States and Russia have just about nothing in common.

3 2 1 0 -1 -2 -3

2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are the most intelligent.

3 2 1 0 -1 -2 -3

3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

3 2 1 0 -1 -2 -3

4. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

3 2 1 0 -1 -2 -3

5. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in opposite camps.

3 2 1 0 -1 -2 -3

6. A group which tolerates too much differences of opinion among its members cannot exist for long.

3 2 1 0 -1 -2 -3

7. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
3 2 1 0 -1 -2 -3
8. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
3 2 1 0 -1 -2 -3
9. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
3 2 1 0 -1 -2 -3
10. In the long run, the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
3 2 1 0 -1 -2 -3
11. The present is all too often full of unhappiness. It is only the future that counts.
3 2 1 0 -1 -2 -3
12. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all".
3 2 1 0 -1 -2 -3
13. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
3 2 1 0 -1 -2 -3
14. Most people just don't know what's good for them.
3 2 1 0 -1 -2 -3
15. In the history of mankind there have probably been just a handful of really great thinkers.
3 2 1 0 -1 -2 -3
16. There are a number of people I have come to hate because of the things they stand for.
3 2 1 0 -1 -2 -3
17. A man who does not believe in some great cause has not really lived.
3 2 1 0 -1 -2 -3

18. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

3 2 1 0 -1 -2 -3

19. Of all the different philosophies which exist in this world there is probably only one which is correct.

3 2 1 0 -1 -2 -3

20. A person who gets enthusiastic about too many causes is likely to be pretty "wishy-washy" as a person.

3 2 1 0 -1 -2 -3

21. To compromise without political opponents is dangerous because it usually leads to the betrayal of our own side.

3 2 1 0 -1 -2 -3

22. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

3 2 1 0 -1 -2 -3

23. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

3 2 1 0 -1 -2 -3

24. There are two kinds of people in the world: those who are for the truth and those who are against the truth.

3 2 1 0 -1 -2 -3

25. My blood whenever a person stubbornly refuses to admit he's wrong.

3 2 1 0 -1 -2 -3

26. A person who thinks primarily of his own happiness is beneath contempt.

3 2 1 0 -1 -2 -3

27. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

3 2 1 0 -1 -2 -3

28. Man on his own is a helpless and miserable creature.

3 2 1 0 -1 -2 -3

29. Fundamentally, the world we live in is a pretty lonesome place.

3 2 1 0 -1 -2 -3

30. Most people just don't give a "damn" for others.

3 2 1 0 -1 -2 -3

31. I'd like it if I could find someone who would tell me how to solve my problems.

3 2 1 0 -1 -2 -3

32. It is only natural for a person to be rather fearful of the future.

3 2 1 0 -1 -2 -3

33. There is so much to be done and so little time to do it in.

3 2 1 0 -1 -2 -3

34. Once I get worked up in a heated conversation I just can't stop.

3 2 1 0 -1 -2 -3

35. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

3 2 1 0 -1 -2 -3

36. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

3 2 1 0 -1 -2 -3

37. It is better to be a dead hero than a live coward.

3 2 1 0 -1 -2 -3

38. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein or Beethoven or Shakespeare.

3 2 1 0 -1 -2 -3

39. The main thing in life is for a person to want to do something important.

3 2 1 0 -1 -2 -3

40. If given the chance I would do something of great benefit to the world.

3 2 1 0 -1 -2 -3

APPENDIX B

SCORES USED IN COMPUTING KENDALL'S RANK-ORDER CORRELATION

Subject	Dogmatism Score	Uncertainty Score	# Higher	# Lower
1	63	10	4	114
2	74	34	0	119
3	81	6	10	105
4	89	0	81	0
5	95	0	81	0
6	103	0	81	0
7	109	2	34	57
8	112	1	57	34
9	112	2	34	56
10	113	0	78	0
11	114	3	26	30
12	114	1	55	33
13	116	0	76	0
14	116	3	26	28
15	121	1	54	32
16	121	11	1	103
17	121	4	17	80
18	121	2	30	52
19	122	3	24	26
20	122	4	17	78
21	123	2	20	52
22	123	2	28	52
23	124	0	67	0
24	124	5	12	81
25	125	1	46	31
26	125	0	65	0
27	129	0	65	0
28	130	0	65	0
29	133	2	27	47
30	134	0	64	0
31	134	1	45	27
32	134	0	63	0
33	135	1	45	26
34	135	0	26	0
35	135	0	45	25
36	136	4	16	64
37	137	18	0	84
38	138	2	25	81
39	138	2	25	0

Appendix B Continued:

Subject	Dogmatism Score	Uncertainty Score	#Higher	#Lower
40	139	0	57	24
41	139	1	41	0
42	139	0	56	38
43	140	2	25	38
44	141	0	55	0
45	142	0	55	0
46	142	1	40	21
47	142	5	11	60
48	143	2	24	35
49	143	4	14	54
50	143	1	37	21
51	144	7	7	63
52	144	1	36	21
53	145	4	13	52
54	145	1	35	21
55	146	0	46	0
56	147	2	21	31
57	147	0	45	0
58	147	0	45	0
59	147	8	6	56
60	149	10	1	59
61	151	0	43	0
62	151	11	0	59
63	152	1	31	17
64	152	0	41	0
65	153	2	18	26
66	153	0	40	0
67	153	5	7	45
68	154	0	39	0
69	154	2	17	24
70	155	1	28	14
71	155	1	28	14
72	155	1	28	14
73	156	9	1	45
74	156	0	34	0
75	157	2	16	20
76	158	5	6	38
77	158	4	7	35
78	159	0	31	0
79	159	3	9	29
80	160	2	13	19
81	163	1	22	12
82	163	2	13	18
83	163	3	9	26
84	163	9	1	35
85	164	2	11	18
86	164	0	24	0
87	164	0	24	0

Appendix B continued:

Subject	Dogmatism Score	Uncertainty Score	#Higher	#Lower
88	166	0	24	0
89	166	0	24	0
90	167	9	1	30
91	169	2	10	14
92	169	0	22	0
93	170	10	0	28
94	170	5	3	24
95	171	2	8	13
96	174	6	0	23
97	174	4	2	21
98	180	2	6	13
99	180	6	0	21
100	181	2	5	13
101	181	2	5	13
102	183	0	13	0
103	183	1	7	6
104	184	0	12	0
105	184	1	7	5
106	186	0	11	0
107	187	1	7	4
108	187	2	5	7
109	189	0	9	0
110	193	4	1	10
111	193	6	0	10
112	195	2	3	6
113	196	1	3	3
114	199	0	5	0
115	205	1	3	2
116	207	1	3	2
117	206	3	0	2
118	211	3	0	2
119	211	0	1	0
120	214	3	0	1
121	249	0	0	0