



Western Michigan University
ScholarWorks at WMU

Masters Theses

Graduate College

9-1966

Dogmatic and Decision-Making in a Variable Risk Situation

Robert E. Jones
Western Michigan University

Follow this and additional works at: https://scholarworks.wmich.edu/masters_theses



Part of the Psychology Commons

Recommended Citation

Jones, Robert E., "Dogmatic and Decision-Making in a Variable Risk Situation" (1966). *Masters Theses*. 3649.

https://scholarworks.wmich.edu/masters_theses/3649

This Masters Thesis-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Masters Theses by an authorized administrator of ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.



**DOGMATISM AND DECISION-MAKING IN A
VARIABLE RISK SITUATION**

by

Robert E. Jones

**A Thesis submitted to the
Faculty of the School of Graduate
Studies in partial fulfillment
of the
Degree of Master of Arts**

**School of Graduate Studies
Western Michigan University
Kalamazoo, Michigan
September 1966**

ACKNOWLEDGEMENTS

The investigator would like to express his sincere appreciation to Dr. John Nangle for his assistance, suggestions, and patience during the course of this study. A note of appreciation is also extended to Dr. E. J. Asher and Dr. F. Fatzinger for their assistance and suggestions.

TABLE OF CONTENTS

	page
INTRODUCTION	1
METHOD	6
RESULTS	14
DISCUSSION	25
SUMMARY	29
REFERENCES	30
APPENDIX A	32
APPENDIX B	34

LIST OF TABLES

	page
Table 1 Comparison of D Scale Scores for High and Low Dogmatism Groups	9
Table 2 Comparison of Need-Achievement Scores for High and Low Dogmatism Groups	10
Table 3 Distribution of Risk-Taking Responses of High and Low Dogmatism Groups	15
Table 4 Chi Square Analysis for Differences in Frequencies of Betting Responses in High, Intermediate, and Low Risk Categories	18
Table 5 Chi Square Analysis of Repetitive Betting Behavior for High and Low Dogmatism Groups	19
Table 6 Chi Square Analysis of Variable Betting Behavior for High and Low Dogmatism Groups	21
Table 7 Analysis of Betting Responses for High and Low Dogmatism Groups Following a Loss	22
Table 8 Analysis of Betting Responses for High and Low Dogmatism Groups Following a Win	24

LIST OF FIGURES

	page
Figure 1 Risk-taking chart used by subjects	11
Figure 2 Number of responses in each betting category for high and low dogmatism groups	16

DOGMATISM AND DECISION-MAKING IN A VARIABLE RISK SITUATION

Previous studies in the literature concerning decision-making place much emphasis upon the use of economic, mathematical and logico-deductive models in describing and explaining how decisions are made. Very seldom, however, have investigators undertaken to consider decision-making as a process at least partially dependent upon personality correlates. The few studies reported in this area have explored such personality correlates as the cautious versus the risky personality or the confident versus the doubtful person with respect to differences in decision-making.

One study conducted by Mosteller and Nogee (1955) examined risk-taking behavior with two groups, one comprised of National Guardsmen and the other consisting of Harvard undergraduates. The investigators found that, relative to high and low payoff with dice and play money, the students bet odds which presumably would return payoffs proportional to the risk involved. It was suggested that the middle class value system, which places a premium on success, led students to make choices which returned an amount of money commensurate with the risk involved.

Another study on risk-taking behavior, this one undertaken by Scodel, Ratoosh, and Minas (1959), investigated risk-taking behavior among Harvard undergraduates and U.S. Air Force personnel. Using a probability system with dice incorporating a high and low payoff,

it was found that strength of need achievement was directly related to the selection of high-probability, low payoff alternatives. More low payoff choices were selected by high need-achievers, while low need-achievers selected high payoffs.

Stone (1964), using four measures for examining expected return on bets in a risk-taking situation, found neither scholastic performance nor intelligence to be related to high-probability, low-payoff criteria. He did, however, find a moderately high positive correlation between acquiescence and selection of high-probability, low-payoff bets. Stone concluded that the variance in response between high and low-payoff subjects could be more fully understood through an examination of personality rather than intellectual capacity factors.

Vroom (1959) investigated the relationship between decision-making and participation as a function of high and low authoritarian personality traits. In his study he endeavored to determine how authoritarian individuals functioned in a group decision-making situation. Specifically, the study was aimed at discovering how certain personality characteristics interact with democratic leadership styles. In dealing with high and low authoritarian personalities, he found that the attitudes of those scoring low in authoritarianism perpetuated favorable group interactions under decision-making circumstances. The positive or negative effects of authoritarianism on the group were measured by the number of suggestions given by the subjects and by their ability to accept the ideas of other individuals in the group. The high authoritarians, on the other hand, did not accept the ideas of others in the group nor did they

contribute to the decision of the whole group as readily as the low authoritarians.

McClelland (1956), in a study with young children, explored the relationship between risk-taking behavior and need-achievement. He found that those with high need-achievement tended to select alternatives which were in an intermediate range of probability of success. The children that McClelland differentiated as low need-achievers made choices which were either highly probable of success or highly probable of failure. McClelland postulated that this discrepancy was partially due to a fear of failure among the children who were low need-achievers.

Relationships between need-achievement and degrees of risk-taking were also studied by Atkinson, Bastian, Earl, and Litwin (1960). It was suggested by them that risk-taking was more likely to occur when risks involved the use of skill than when skill was not necessary in the betting situation. Littig (1962) concluded that a skill-oriented group was more often willing to take chances by making bets involving lower probabilities of winning than was a non-skill oriented group.

Block and Petersen (1955) investigated the relevance of certain personality variables to the amount of confidence displayed by subjects in making decisions. Subjects who were overly confident, as measured by their certainty in reporting differences in the length of two lines, were found to require a long time in making decisions. Block and Petersen also found a third group whose speed of decision-making was predicated upon the discernability of differences in the

perceptual situation.

Examining the decision-making characteristics of the group, Rim (1964) reported that group decisions appeared to be more risky than individual decisions in that the former chose decisions which entailed a greater gamble. Using Eysenck's Short Questionnaire For the Measurement of Two Dimensions of Personality, Rim found that subjects scoring high on the Extroversion Scale tended to take more chances than those scoring high on the Neuroticism Scale.

Accident rates and personality factors were found to be correlated with high and low risk-taking by Conger, Gaskill, Glad, Rainey, Sawrey, and Turrell (1959). The results indicated that those subjects taking moderate risks in a game situation also tended to take either moderate or low risks when driving an automobile.

It was the specific aim of this investigation to explore the possible presence of differential decision-making tendencies in high and low dogmatic individuals in a situation involving risk. The definition for dogmatism which was used is taken from The Open and Closed Mind, by Rokeach (1960). Basically, Rokeach defines the highly-dogmatic personality as involving a closed cognitive system; the low dogmatic personality is characterized by an open cognitive system. More particularly, he stated that:

Dogmatism means a relatively closed cognitive organization of beliefs and disbeliefs about reality, organized around a central set of beliefs about absolute authority which, in turn, provides a framework for patterns of intolerance and qualified tolerance toward others (p. 58).

The central focus, then, of this study is the acquisition of information which may allow a better understanding of the possible

link between particular personality correlates and decision-making under risk situations.

A hypothesis to be tested in this investigation is that the high dogmatic person will tend to choose alternatives in a risk-taking situation which have either extremely high or low probabilities of payoff. The low dogmatic individual, on the other hand, will choose alternatives which are in the intermediate range of payoff probability.

It is also hypothesized that the low dogmatic or flexible individual will tend to shift more frequently to different odds from trial to trial while the high dogmatic or rigid personality will tend to more often make the same bet over successive trials.

METHOD

Subjects

The Ss used in the study were 26 male and 24 female undergraduate students enrolled in a General Psychology class at Western Michigan University. The mean age of this group was 20.4 years.

Measures of Personality Variables

Dogmatism

The Rokeach Dogmatism Questionnaire (D scale) was used. It has a reported reliability of .91 (Rokeach, 1961). Content areas included were: over identification with a cause, time perspective, punitiveness toward ideological renegade, martyrdom, refusal to compromise ideologically, identification with the intellectually elite, egocentrism, and self-righteousness (see Appendix B for the entire scale).

A typical item from the Rokeach Scale is as follows:

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

The method of scoring followed the system developed by Rokeach (1961). Only positive and negative scale values were utilized; i.e., each question assessed either agreement or disagreement. The values ranged from a +3 to a -3 as follows:

- +3: I agree fully
- +2: I agree on the whole
- +1: I agree a little
- 1: I disagree a little
- 2: I disagree on the whole
- 3: I disagree fully

Total adjusted scores were obtained by adding a constant of +4 to each answer in order to eliminate negative scores. The following written instructions preceded the Rokeach Dogmatism Scale:

The following is a study of what the public feels about a number of important social and personal questions. The best answer to each question below is your own personal opinion, therefore a wide variation is to be expected. Many different and opposing points of view are covered in this questionnaire; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others; whether you agree or disagree with any statement you can be sure that many people feel the same as you do.

Need Achievement

A total of 29 items from The Edwards Personal Preference Inventory (1959) were used in order to obtain a measure of the strength of the need for achievement. The items from the E.P.P.I. also served to disguise the meaning of items from the Rokeach D scale.

The instructions for the questions from the E.P.P.I. were as follows:

Included in this questionnaire you will find some statements about things you may or may not like; about ways you may or may not feel. Please look at the example below.

A. I like to talk about myself to others.

B. I like to work toward some goal I have set for myself.

Ss were to select the statement from each pair which was most characteristic of their preferences.

For the complete set of need-achievement items see the Edwards Personal Preference Schedule, the Psychological Corporation, New York, 1959.

Formation of Experimental Groups

The 25 Ss with the highest scores (high dogmatism) and the 25 Ss with the lowest scores (low dogmatism), derived from the Rokeach D Scale, were selected from an initial group of 107 students enrolled in General Psychology at Western Michigan University. For a comparison of the D scale scores for high and low dogmatism groups, see Table 1. These experimental groups were then evaluated for equivalency on the basis of scores obtained from the Edwards Personal Preference Schedule (see Table 2). The two groups were found not to differ from each other in terms of this measure of the strength of the need for achievement. The individual scores on both scales for each group may be found in Appendix A.

The Task

Using play money and a chart of probabilities, (see Fig. 1), the Ss threw dice and placed bets for 20 successive trials. The Ss were given complete freedom to select each bet based upon their preference. The only restriction was that a fixed amount of 30¢ could be bet each trial. While the Ss were looking at the probability table, the following instructions were verbally given by E:

This is the second part of the research study in which you volunteered to participate.

TABLE 1

COMPARISON OF D SCALE SCORES FOR
HIGH AND LOW DOGMATISM GROUPS

GROUPS	N	MEAN	S	SE	df	t	P
High Dogmatic	25	285.88	20.4	4.08	48	4.41	<.01
Low Dogmatic	25	197.60	14.7	2.94			

TABLE 2
COMPARISON OF NEED-ACHIEVEMENT SCORES FOR
HIGH AND LOW DOGMATISM GROUPS

GROUPS	N	MEAN	S	SE	df	t	P
High Dogmatic	25	12.80	4.13	.826	48	.063	>.05
Low Dogmatic	25	13.16	4.19	.838			

LETTERS	A	B	C	D	E	F	G	H	I
Winning Numbers	2,3, 4,5, 6,7, 10,11, 12	5,6, 7,8, 9	2,4, 6,8, 10,12	8,9, 10	5,6	7	9	3	12
Chances	3-4	2-3	1-2	1-3	1-4	1-6	1-9	1-18	1-36
Payoff	.10	.15	.30	.60	.90	\$1.50	\$2.40	\$5.10	\$10.80
	A	B	C	D	E	F	G	H	I

Figure 1. Risk taking chart used by subjects in dice-throwing.

Please look at this table (Fig. 1). You will notice that there are various probabilities listed which accompany potential winning numbers. These numbers are possible totals which occur when two dice are thrown. For example, the chances are 1 in 6 of getting a 7 when two dice are thrown (please look in column F). The reason for the 1 in 6 probability is that there are 36 possible combinations in throwing two dice and 6 which could total 7. Are there any questions?

I will give you six dollars of play money to start with and each bet will be for 30¢ of the play money I give you. Please place your money on the letter which you wish to bet each time. You will get 20 throws. You are in competition with the rest of the students also involved in this part of the study. There will be several winners who will win some real money. I will let you know at the end of the study who the real winners were.

The winners will be determined by how much money is accumulated after 20 throws.

Each response of the S was recorded on a sheet duplicating the betting chart with the letters A through I printed on it. For example, if D was first chosen, representing a bet on the numbers 8, 9, or 10 with the odds of 1 to 3, a "1" was placed in column D on the E's chart. The winnings were given to each S or losses taken away following each trial. The E then marked the number "2" in the column following the letter chosen next by the subject. If the subject was successful in a throw, the number was circled by E. The responses were then totaled for each individual under each betting category chosen.

From the data thus obtained, rigidity and variability of betting behavior was measured. Response rigidity was calculated by totaling the number of times each response was repeated on the next trial. Responses which deviated from the immediately preceding response were designated as variable responses. The direction of response variability was examined by totaling the number of times a subject chose either

higher or lower odds following failure of a betting response.

Response variability following successful (winning) betting was also examined.

RESULTS

In Table 3 are shown the empirically obtained distributions of betting responses made for each of the nine betting categories by the high and low dogmatism groups. These data are graphically depicted in Figure 2.

The chi square statistic was utilized in testing the obtained distributions of betting odds selections for each probability level to ascertain whether or not the differences in frequency could be attributed to chance. Table 3 also shows a summary of the results of these tests. The theoretical frequencies for each group for any particular set of odds were derived from an assumption of equal distribution of responses.

For winning odds of .667 ($\chi^2 = 8.58$, $df = 1$), .500 ($\chi^2 = 19.44$, $df = 1$), .110 ($\chi^2 = 13.50$, $df = 1$), and .025 ($\chi^2 = 15.68$, $df = 1$), the two groups were found to differ from one another in terms of the frequency with which bets were placed in those particular categories. These differences departed from chance, being significant at the .01 level of confidence.

Additionally, the two groups differed from each other in the frequency with which bets were placed where the odds were one-in-eighteen. This was significant at the .02 level of confidence ($\chi^2 = 6.32$, $df = 1$).

It can be seen that the high dogmatism group placed a larger number of bets in the .667 and .500 categories than did the low

TABLE 3

COMPARISONS OF RISK-TAKING RESPONSE DISTRIBUTIONS
FOR HIGH AND LOW DOGMATISM GROUPS

Betting Categories	A	B	C	D	E	F	G	H	I
Probability	3-4 ^a	2-3	1-2	1-3	1-4	1-6	1-9	1-18	1-36
High Dogmatic	19 ^b	31 ^b	161	136	66	38	30	8 ^b	11
Low Dogmatic	17	11	91	144	65	44	66	23	39
Chi Square	0.03	8.58**	19.44**	0.23	0.01	0.44	13.50**	6.32*	15.68**

^a 3-4 equivalent to a winning throw of the dice expected
3 times out of every 4 tosses

^b Yate's correction for continuity applied

* $P < .02$

** $P < .01$

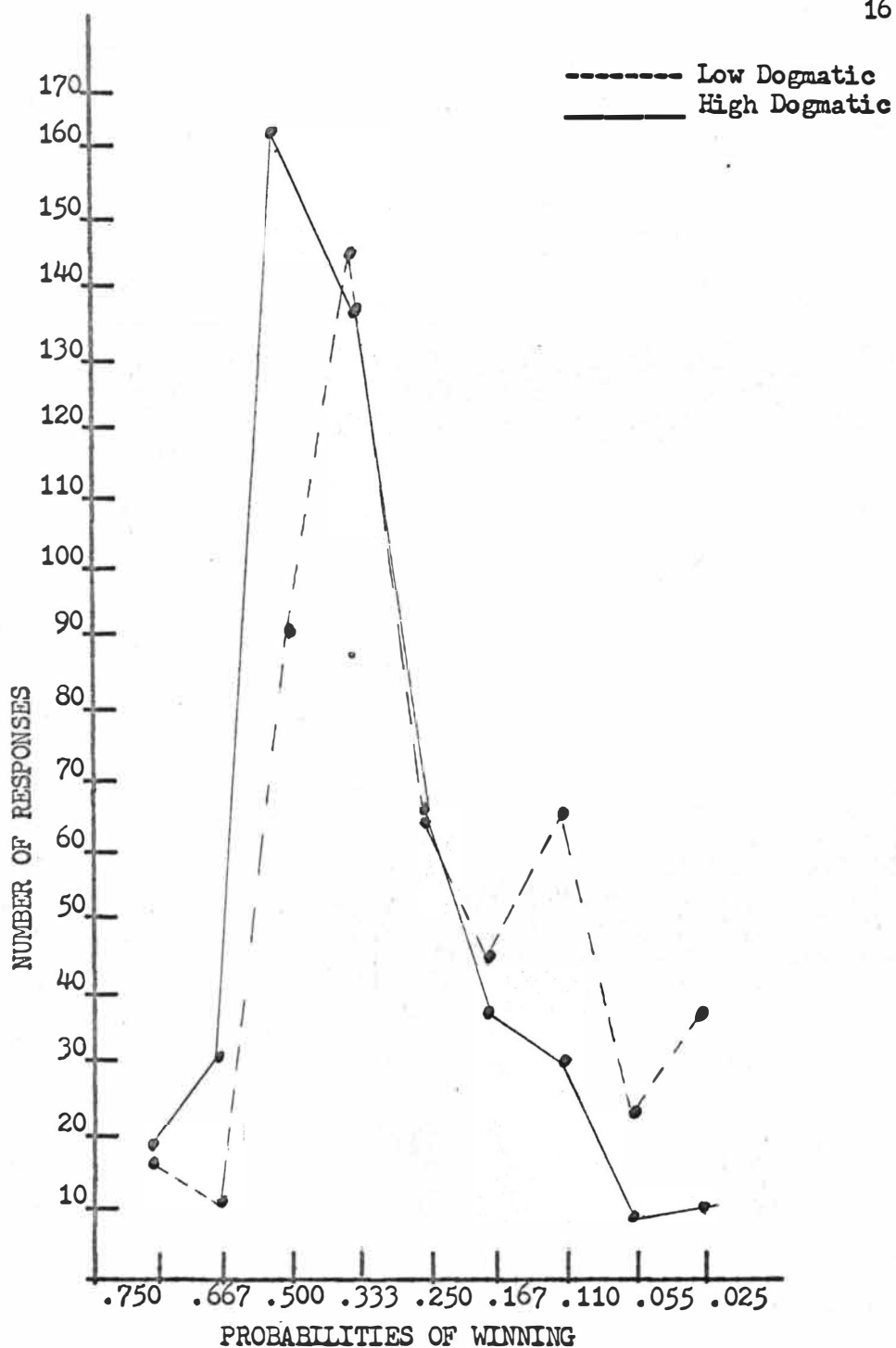


Figure 2. Number of responses at each betting category for high and low dogmatism groups.

dogmatism group. Conversely, the low dogmatism group made significantly more bets than did the high dogmatism group in the categories where the risks were relatively large (probabilities of winning = .110, .055, .025).

When the frequencies of betting responses were examined for the two groups in those instances where Ss selected odds of 3 out of 4, 1 out of 3, 1 out of 4, or 1 out of 6, they were found not to vary from the distribution expected on the basis of pure chance, ($\chi^2 = 0.03, 0.23, 0.01$, respectively where $df = 1$, $P > .05$).

Table 4 summarizes a chi square analysis made in terms of assessing the significance of the differences in frequencies of betting responses between high and low dogmatism Ss for high, intermediate, and low risk categories. These categories were arbitrarily established in the following manner: Low Risk included the odds of winning from .750 to .500; Intermediate Risk included the odds of winning from .333 to .167; and the High Risk category incorporated the probabilities of .110 to .025.

The high risk zone contained 49 or 9.8% of the total bets for the low dogmatic group. In the low risk zone, 211 bets or 42.2% were made by the high dogmatic individuals contrasted with 119 bets (23.8% of the total) made by the low dogmatic group. In the intermediate range of probabilities were found 240 bets or 48% of the high dogmatic Ss' total responses as compared to 253 or 50.6% of the low dogmatic Ss' bets. A significant relationship was found to exist between the number of bets placed in risk categories and dogmatism ($\chi^2 = 61.12$, $df = 2$, $P < .01$).

As reflected in Table 5, a chi square test was made to evaluate

TABLE 4

CHI SQUARE ANALYSIS FOR DIFFERENCES IN FREQUENCIES
OF BETTING RESPONSES IN HIGH, INTERMEDIATE,
AND LOW RISK CATEGORIES

Category	Frequency of Responses		df	χ^2	P
	High Dog.	Low Dog.			
Low Risk	211	119			
Intermediate Risk	240	253	2	61.12	<.01
High Risk	49	128			

TABLE 5

CHI SQUARE ANALYSIS OF REPETITIVE
BETTING BEHAVIOR FOR HIGH AND
LOW DOGMATISM GROUPS

Groups	Number of Repetitive Bets			df	χ^2	P
	0-5	6-8	9-11			
High Dog.	3	8	14	2	3.94	>.05
Low Dog.	9	6	10			

the independence or association between betting behavior and standing on a measure of dogmatism where no consideration was given to wins or losses in the immediately preceding trial. This revealed that the frequencies with which repetitive responses were made were not associated with high or low dogmatism ($\chi^2 = 3.94$, $df = 2$, $P > .05$).

A chi square analysis of the frequencies with which variable responses were made can be found in Table 6. In this case no consideration had been given to the occurrence of wins or losses in the immediately preceding trial. The extent to which Ss changed to different betting odds was not found to be associated with high or low dogmatism ($\chi^2 = 4.08$, $df = 2$, $P = > .05$).

A more detailed analysis was undertaken in order to explore any differences that might exist between the two experimental groups in the direction of betting immediately subsequent to either a loss or a win. Direction in this instance referred to a change in odds of either a higher or lower probability, or to a bet of the same odds as the immediately preceding trial.

When the betting behavior immediately following a loss was examined (see Table 7), it was found that the high dogmatism group significantly differed from the low dogmatism group in terms of the extent to which lower risks were selected, ($\chi^2 = 7.86$, $df = 2$, $P < .05$). The high dogmatism group of Ss tended to more frequently choose lower risk odds after a loss than did the low dogmatism group which tended to less often select a lower risk bet.

An examination of those instances in which Ss repeated a bet at the same odds as the previous trial subsequent to a loss disclosed

TABLE 6

CHI SQUARE ANALYSIS OF VARIABLE BETTING
BEHAVIOR FOR HIGH AND LOW
DOGMATISM GROUPS

Groups	Number of Variable Bets			df	χ^2	P
	0-5	6-8	9-11			
High Dog.	10	6	9	2	4.08	>.05
Low Dog.	4	6	15			

TABLE 7

ANALYSIS OF BETTING RESPONSES FOR
HIGH AND LOW DOGMATISM GROUPS
FOLLOWING A LOSS

		Number of Bets					
Risk Category	Groups	0-2	3-5	6-8	df	χ^2	P
Lower Risk	High Dog.	3	12	10	2	7.86	<.05
	Low Dog.	12	8	15			
Same Risk	High Dog.	18	7 ^a		1	.357	>.05
	Low Dog.	15	10				
Higher Risk	High Dog.	18	7 ^a		1	3.98	<.05
	Low Dog.	10	15				

^a Due to small cell frequencies, categories were collapsed to include 3-8 bets for both groups.

no differences in the extent to which high and low dogmatism groups made this type of selection ($\chi^2 = 0.357$, $df = 1$, $P > .05$).

When the betting behavior immediately following a loss was examined, it was found that the high dogmatism group significantly differed from the low dogmatism group in terms of the extent to which higher risks were selected ($\chi^2 = 3.98$, $df = 1$, $P < .05$). The low dogmatism group more often selected higher risk odds following a loss than did the high dogmatism group which tended to avoid making bets at a higher risk level after losing.

In Table 8 are found the data pertaining to an analysis of the betting behavior taking place immediately subsequent to a winning trial. It was determined that the high dogmatism group did significantly differ from the low dogmatism group in the degree to which lower risks were chosen ($\chi^2 = 6.44$, $df = 2$, $P < .05$). The high dogmatism group more frequently selected lower risks after winning than did the low dogmatism group.

It was found that the two groups did not differ from each other with reference to the frequency with which bets of the same odds as those previously made were repeated after winning ($\chi^2 = 0.11$, $df = 2$, $P > .05$).

When a change in direction of betting odds after a win to some higher risk level was evaluated, it was found that the low dogmatism group placed significantly more bets than did the high dogmatism group, which tended to make fewer bets in a higher risk category ($\chi^2 = 3.98$, $df = 1$, $P < .05$).

TABLE 8

ANALYSIS OF BETTING RESPONSES FOR
HIGH AND LOW DOGMATISM GROUPS
FOLLOWING A WIN

		Number of Bets					
Risk Category	Groups	0-2	3-5	6-8	df	χ^2	P
Lower Risk	High Dog.	5	9	11	2	6.44	<.05
	Low Dog.	9	13	3			
Same Risk	High Dog.	9	6	10	2	0.11	>.05
	Low Dog.	7	8	10			
Higher Risk	High Dog.	18	7 ^a		1	3.98	<.05
	Low Dog.	10	15				

^a Due to small cell frequencies, categories were collapsed to include 3-8 bets for both groups.

DISCUSSION

The results from this study partially supported the hypothesis that Ss scoring low on dogmatism would tend to choose a larger number of intermediate risk bets, while Ss scoring high on dogmatism would tend to select those associated with very high or low probability levels under variable risk conditions. The data indicated that the majority of bets were placed in the intermediate risk categories by both groups. High dogmatic Ss did choose more frequently those odds associated with the higher probabilities of success when contrasted to the low dogmatic Ss ($P < .01$). On the other hand, the low dogmatic Ss selected more often those odds associated with the lower probabilities of success than did Ss scoring high on the dogmatism scale ($P < .01$, $P < .02$).

The selection of a relatively high number of intermediate risk bets; i.e., risk probabilities of .333 to .500, by Ss both high and low in dogmatism seemed to indicate a possible tendency on the part of many subjects, at least in this study, to seek some kind of perceived balance between risk involved and the amount of payoff possible. Win probabilities of .333 and .500 had associated with them the highest frequencies of betting responses for both groups: high dogmatism, 136 and 161; low dogmatism, 144 and 91, respectively. It is within this area that a combination of likelihood of winning and payoff tend to maximize expected return. Above .500 risk is less, but payoff diminishes considerably;

below .333 the chances of losing greatly increase, although payoff is higher.

As brought out earlier, (McClelland, 1953), a fear of experiencing failure or lack of confidence may cause Ss to choose among alternatives in risk situations which have relatively higher probabilities of success. In the present study, dislike of a possible failure experience may have led the high dogmatism Ss to select odds with relatively high success potential. Since the highly dogmatic individual often believes that only his own ideas are correct, (Rokeach, 1961), he may feel defensive when any of these beliefs or expectancies fail to be substantiated or confirmed. The low dogmatic person, on the other hand, may be more willing to gamble, under certain circumstances, on lower probabilities of success. He can perhaps more readily accept the challenge of high risk-taking because it may not be associated with a threat to the maintenance of existing beliefs or expectancies.

The second hypothesis involving a comparison of repetitive and non-repetitive responses for each group was not confirmed. Results were not significant at the .05 level of confidence, although the findings did show some tendency for the high dogmatic Ss to make more repetitive bets than the low dogmatic Ss in this risk-taking situation. The frequencies were certainly in the expected direction if one conceptualizes dogmatism as involving a continuum of flexibility or rigidity of behavior.

An examination of losses revealed a significant difference between the high and low dogmatism groups with respect to the

differential selection of lower and higher risk bets immediately following losing trials. In this case, the high dogmatic group showed an inclination to more frequently switch to a lower risk bet after having lost. The low dogmatic Ss were more likely to change to a bet involving a higher risk. This was significant at the .05 level of confidence. However, the data did not indicate a tendency for the high dogmatic Ss to select any more frequently than the low dogmatic Ss the same set of odds on the trials immediately following failure (P .05).

When a comparison of betting responses immediately following winning trials was examined, it was found that the high dogmatic Ss chose more often those odds associated with lesser risk-taking, while the low dogmatic Ss chose more frequently the higher-risk bets after a win (P .05). Again selection of bets, equal in risk to the previous one following a win, was not associated with differences in dogmatism between the two groups (P .05).

The data suggest that the two groups operated in a fairly consistent fashion after both winning and losing. The high dogmatic group displayed a tendency to move toward odds with greater success potential, while the low dogmatic group tended to move in the direction of greater risk-taking.

A comparison of the data contained in Tables 7 and 8 revealed a tendency for Ss in both groups to change to some other set of odds immediately following a loss, whereas subsequent to a win, both groups demonstrated an inclination to repeat the same bet again (where the odds were the same) on the next trial.

It would seem to be of some value in the design of future experiments of this nature to utilize failure which entails personal loss. In the study just completed, the subjects were placed in a risk situation where loss was in terms of simulated money which had not been "earned" by them to begin with. Also, an examination of risk-taking behavior where winning and/or losing were systematically manipulated or held constant might be attempted in order to examine more explicitly the direction and magnitude of risk-taking following specified levels of winning and/or losing for Ss scoring high and low on a measure of dogmatism.

Data from this study indicated that within a sample of college students, those scoring high on dogmatism, as compared with those scoring low on this dimension, tended to select betting odds suggesting a more "conservative" type of behavior in terms of betting more often on a relatively sure thing. In contrast, the low dogmatism group displayed a greater willingness to "take a chance" by placing bets associated with lower success probabilities.

SUMMARY

This study involved an investigation of the decision-making tendencies of 25 high dogmatic and 25 low dogmatic Ss. The hypothesis that high dogmatic personalities would choose extreme ends of a probability continuum and that the low dogmatic Ss would choose the intermediate categories was partially confirmed. High dogmatic Ss as a group tended to make more bets associated with odds where chances of success were high in comparison with the low dogmatic group ($P < .01$). In addition to the high-success choices, the high dogmatic group selected a preponderance of the intermediate probabilities. The low dogmatic Ss also chose the intermediate probability odds, but fewer of the high probability ones in comparison with the high dogmatism group ($P < .01$, $P < .02$).

The second hypothesis was not supported. The successive repetition of choices (rigidity) did not serve as a means, in this study, of differentiating between the high and low dogmatism Ss. This was not significant at the .05 level of confidence.

The direction of betting choices following failure was found to be associated with high and low dogmatism. Direction of choice following winning also was significantly associated with level of dogmatism ($P < .05$).

REFERENCES

- Atkinson, J.W., Bastian, J.R., & Litwin, G.H. The achievement motive, goal setting, and probability preferences. J. Abnorm. Soc. Psychol., 1960, 61, 207-215.
- Block, J., & Petersen, P. Some personality correlates of confidence, caution, and speed in decision situation. J. Abnorm. Soc. Psychol., 1955, 51, 34-41.
- Conger, J., Gaskill, H., Glad, D., Rainey, R., Sawrey, W., & Turrell, E. Personal and interpersonal factors in motor vehicle accidents. Amer. J. Psychiatry, 1957, 113, 1069-1074.
- Edwards, Allen L. Edwards Personal Preference Schedule. New York: The Psychological Corporation, 1959, 5-24.
- Littig, L.W. Effects of skill and chance orientations on probability preferences. Psychol. Rep., 1962, 10, 67-70.
- McClelland, D.C. Risk-taking in children with high and low need for achievement. Unpublished manuscript available from the author, 1956.
- McGlothlin, W.H. Stability of choices among certain alternatives. Amer. J. Psychol., 1956, 69, 604-615.
- McNemar, O. Psychological Statistics, New York; John Wiley & Sons, p. 75-80, 205-210.
- Mosteller, F., & Nogee, P. An experimental measurement of utility. J. Polit. Econ., 1951, 59, 371-404.
- Rim, Y. Personality and group decisions involving risk. The Psychological Record. 1964, 14, 37-45.
- Rokeach, Milton. The nature and meaning of Dogmatism. Psychol. Rev., 1954, 61, 194-204.
- Rokeach, Milton. The Open and Closed Mind. New York; Basic Books, Inc., 1960, 1-140.

Rokeach, Milton. A distinction between dogmatic and rigid thinking. J. Abnorm. Soc. Psychol., 1955, 50, 87-93.

Scodel, A., Ratoosh, P., Minas, J. Some personality correlates of decision making under conditions of risk. Behavioral Science, 1959, 4, 19-28.

Appendix A

SCORES FOR HIGH AND LOW DOGMATISM GROUPS FROM THE
ROKEACH DOGMATISM SCALE AND THE
EDWARDS PERSONAL PREFERENCE SCALE

Low Dogmatism

Subject	Rokeach Scale	E.P.P.I.
1	216	20
2	186	14
3	186	15
4	190	15
5	198	13
6	206	8
7	208	13
8	205	13
9	216	10
10	200	12
11	202	16
12	194	4
13	201	11
14	212	9
15	189	21
16	213	8
17	203	16
18	188	8
19	148	10
20	202	12
21	209	16
22	208	15
23	208	20
24	209	17
25	<u>147</u>	<u>13</u>
	4944	329

High Dogmatism

Subject	Rokeach Scale	E.P.P.I.
1	269	18
2	277	14
3	268	10
4	265	6
5	307	15
6	291	15
7	280	14
8	277	6
9	275	12
10	289	15
11	307	15
12	349	11
13	273	11
14	294	13
15	275	8
16	303	15
17	267	7
18	269	12
19	334	18
20	273	8
21	287	14
22	311	14
23	281	9
24	263	22
25	<u>263</u>	<u>19</u>
	7147	320

Appendix B

ITEMS USED FROM ROKEACH DOGMATISM SCALE

1. 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. _____
2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent. _____
3. 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. _____
4. To compromise with our political opponents is to be guilty of appeasement. _____
5. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side. _____
6. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups. _____
7. Its all too true that people just won't practice what they preach. _____
8. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently than we do. _____
9. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes. _____
10. Most of the ideas which get printed today aren't worth the paper they are written on. _____
11. If given the chance I would do something of great benefit to the world. _____
12. My hardest battles are with myself. _____
13. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood. _____
14. There are two kinds of people in this world: those who are for the truth and those who are against the truth. _____
15. There's no use wasting your money on newspapers which you know in advance are just plain propaganda. _____
16. Man on his own is a helpless and miserable creature. _____

17. It is sometimes necessary to resort to force to advance an ideal one strongly believes in. _____
18. I am afraid of people who want to find out what I'm really like for fear they'll be disappointed. _____
19. It is by returning to our glorious and forgotten part that real social progress can be achieved. _____
20. If I had to choose between happiness and greatness, I'd choose greatness. _____
21. Most people just don't give a "damn" for others. _____
22. I have often felt that strangers were looking at me critically. _____
23. The United States and Russia have just about nothing in common. _____
24. I'd like it if I could find someone who would tell me how to solve my personal problems. _____
25. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all". _____
26. In the history of mankind there have been probably just a handful of great thinkers. _____
27. If given the chance I would do something of great benefit to the world. _____
28. I am sure I am being talked about. _____
29. Communism and Catholicism have nothing in common. _____
30. There are certain "isms" which are really the same even though those who believe in those "isms" try to tell you they are different. _____
31. A group which tolerates too much differences of opinion among its own members cannot exist for long. _____
32. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on. _____
33. The present is too often full of unhappiness. It is only the future that counts. _____
34. Most people just don't know what's good for them. _____

35. My blood boils whenever a person stubbornly refuses to admit he's wrong. _____
36. Young people should not have too easy access to books which are likely to confuse them. _____
37. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person. _____
38. A man who does not believe in some great cause has not really lived. _____
39. Most people are failures and it is the system which is responsible for this. _____
40. In times like these, a person must be pretty selfish if he considers primarily his own happiness. _____
41. 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 the opposing camp. _____
42. Even though I have a lot of faith in the intelligence and wisdom of the common man, I must say that the masses behave stupidly at times. _____
43. It is only natural for a person to be rather fearful of the future. _____
44. At times I think I am no good at all. _____
45. Fundamentally, the world we live in is a pretty lonesome place. _____
46. It is only when a person devotes himself to an ideal or cause that life becomes meaningful. _____
47. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what others are saying. _____
48. There is so much to be done and so little time to do it in. _____
49. People say insulting and vulgar things about me. _____
50. The principles I have come to believe in are quite different from those believed in by most people. _____
51. In a discussion I sometimes interrupt others too much in my eagerness to put across my own point of view. _____

52. 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. _____
53. There are a number of people I have come to hate because of things they stand for. _____
54. 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. _____
55. There is nothing new under the sun. _____
56. It is better to be a dead hero than a live coward. _____
57. Once I get heated up in a heated discussion I just can't stop. _____
58. To achieve the happiness of mankind in the future it is sometimes necessary to put up with injustices in the present. _____
59. While the use of force is wrong by and large, it sometimes is the only way possible to advance a noble ideal. _____
60. The main thing in life is for a person to want to do something important. _____
61. In a heated discussion people have a way of bringing up irrelevant issues rather than sticking to the main issue. _____
62. The worst crime a person could commit is to attack publically the people who believe in the same thing he does. _____
63. Of all the different philosophies which exist in this world there is probably only one which is correct. _____
64. I sometimes have a tendency to be too critical of the ideas of others. _____
65. A person who thinks primarily of his own happiness is beneath contempt. _____
66. To one who really takes the trouble to understand the world he lives in, its an easy matter to predict future events. _____