

PERCEIVED SIZE OF OUTGROUPS
AS A FUNCTION OF
POLITICAL AND RELIGIOUS DOGMATISM

by

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INTRODUCTION

Purpose of the Study

This study was designed to test two hypotheses deriving from Rokeach's theory of political and religious dogmatism (13, 15). First, it was predicted that high dogmatic individuals would make greater estimates of the size of racial and religious outgroups than would low dogmatic individuals; and second, that all subjects would show a systematic trend in their estimates of the sizes of religious outgroups relative to the position of these outgroups on the disbelief gradient.

Several earlier studies have dealt with the question of distortions of perception as a function of social attitudes. Hammond (7) suggests the use of distortions as indirect measures of attitudes. This error-choice technique is essentially the presentation of a series of apparently factual, multiple choice questions in which no correct choices are given, but rather, choices above and below the correct value. The author concluded from a validation by known groups that the direction of the error was indicative of the subject's attitude. Malherbe (8) found that, when he asked applicants for public service positions in the Union of South Africa to underline the percentage which they thought the Jews constituted of the whole population of South Africa, the central tendency of the responses was about 20 per cent while the true value was only slightly above one per cent. The author had no measure of the prejudice of his respondents, but nonetheless, felt that their prejudice was, at least in part, responsible for the overestimations.

Allport and Kramer (2), in a study with students at Harvard and Radcliffe, who had previously been given an anti-Semitic attitude test, and who were

shown 20 photographs of male college students, found that those with higher prejudice scores responded more often when asked to identify the Jews among the pictures.

In view of this evidence, it would seem that there might be a considerable relationship between the perceived size of outgroups, particularly racial outgroups, and a direct measure of prejudice such as the California E (Ethnocentrism) Scale (1). This stands, however, in the form of a prediction rather than a conclusion, since the relationship has not been demonstrated empirically. For this and other reasons, the Ethnocentrism Scale was included in the present study.

While Ethnocentrism and Dogmatism are significantly and positively related, it does not follow that the prediction of a relationship between Ethnocentrism and the perception of the size of outgroups is the basis for predicting a relationship between Dogmatism and the perceived size of outgroups. It is the purpose of the following sections to develop the rationale for this prediction.

A Definition of Dogmatism

Political and Religious Dogmatism, as formulated by Rokeach, (15) grew out of the formulations of The Authoritarian Personality (1), and is an attempt at a more general construct of authoritarianism than that supplied by The Authoritarian Personality.

Both Political and Religious Dogmatism and Authoritarianism have been operationalized in scales, the D (Dogmatism) Scale and the F (Facism) Scale, respectively. The F Scale is closely tied to authoritarianism of the right in political-economic philosophy and with anti-Semitism. The D Scale is an attempt to measure general authoritarianism, independent of specific

ideological content.

In discussing dogmatism, it is necessary to discuss a set of concepts in terms of which cognitive systems may be described. The first such conceptual tool is the organization of the total cognitive system into belief and disbelief systems, that is, into a system of beliefs or expectations which are accepted as true and a system of beliefs or expectations accepted as false. The disbelief system may be thought of as being composed of several disbelief subsystems, rather than a single one, with these disbelief subsystems arranged along a gradient of similarity to the belief system. This is spoken of as the disbelief gradient. The belief and disbelief systems are interdependent and the whole may be conceived as varying in terms of structure and content.

Structurally, the total belief-disbelief system can be described as varying along an open-to-closed continuum. This continuum is a function of several variables. A relatively closed belief-disbelief system is assumed to have a high degree of isolation within and between belief and disbelief systems; a high degree of differentiation between the belief system and any of the disbelief subsystems; a relatively high degree of dedifferentiation among the disbelief subsystems; a relatively greater degree of communication between centrally located beliefs about absolute authority and peripherally located beliefs perceived to stem from such authority; a relatively greater isolation among these peripheral beliefs; and a relatively narrow time perspective (13, 15).

With regard to content, while the specific content of both central and peripheral parts may vary with ideological systems, it is possible to specify that generally the formal content of the central part of the system, to the degree that it is closed, will have to do with the absolute beliefs in and

about positive and negative authority, either external or internal, and related beliefs representing attempts at self-perpetuation of such authority.

In addition, the central beliefs can be thought of as providing a framework for other beliefs representing patterns of rejection and qualified acceptance of people in general according to their patterns of agreement and disagreement with the belief-disbelief system.

Dogmatism, then, is a hypothetical cognitive state which mediates objective reality within the person and which is defined by Rokeach (13), p. 195, as follows:

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

Dogmatism and Rejection

Presumably, the rejection accorded disbelievers, who could also be termed outgroup members, arises from a threat perceived to emanate from the disbelief system toward the validity of the belief system. In addition, consider the proposition that, although for closed cognitive systems there is a high degree of isolation between belief and disbelief systems, the degree of isolation varies with the disbelief gradient. Where there is more communication between a given disbelief subsystem and the belief system there is more occasion for threat to the validity of the belief system, and hence, there should be more rejection of proponents of some disbelief subsystems than there is of others. In other words, rejection should vary systematically with the disbelief gradient, and furthermore, the more closed the system, or the greater the degree of dogmatism, the greater should be the rejection, point for point. Research by Rokeach and Jensen(18) has verified this conten-

tion and suggests that the rejection curve may be U-shaped; that is, that the highly similar outgroups, "splinter groups" or "renegades", and the highly dissimilar outgroups tend to be rejected more than those in the middle ranges.

Hypotheses

It is stated above that rejection of outgroups is found to be greater for high dogmatic individuals than for low dogmatic individuals. If this rejection stems from the perception of threat to the belief system from the disbelief subsystem, then it follows that high dogmatic individuals should perceive a greater threat than do low dogmatic individuals. When threat is perceived from a given source, frequently one of two things happens. Either the person magnifies or minimizes the source of threat. These reactions to threat have been recognized in the concepts of perceptual accentuation and perceptual defense. High Dogmatic individuals, then, would be expected to exhibit either more accentuation or more defense in their perceptions of these threatening outgroups. Since earlier studies (8, 2) have shown a reaction similar to perceptual accentuation in dealing with racial outgroups, it is expected that high dogmatic individuals will make more use of perceptual accentuation than of perceptual defense. Therefore, it is assumed that, for high dogmatic individuals, the perceived size of an outgroup is a positive function of the perceived threat from that group. The studies cited above also support the prediction that on the average Ss will overestimate, regardless of their level of dogmatism. Therefore it is implied that the greater estimations predicted for high D Ss will indicate greater distortion in the direction of overestimation.

The general hypothesis states that:

High dogmatic individuals will make greater estimates of the size of outgroups¹ than will low dogmatic individuals.

This was tested in the form of two specific hypotheses, as follows:

(1) High dogmatic individuals will make greater estimates of the size of racial outgroups than will low dogmatic individuals.

(2) High dogmatic individuals will make greater estimates of the size of religious outgroups than will low dogmatic individuals.

It has also been stated above that rejection bears a relationship to the disbelief gradient and that this relationship appeared to be U-shaped.

A third specific hypothesis follows that:

(3) All subjects' estimates of the sizes of religious outgroups will bear a systematic relationship to the position of those outgroups on the disbelief gradient.

A subsidiary assumption, not stated as an hypothesis, was that this relationship would be somewhat U-shaped with relatively greater estimates of size for both the most similar religious outgroup and the least similar one than for those groups in intermediate positions.

RESEARCH DESIGN

General Plan

In order to test the above hypotheses, the first step was the identification of high dogmatic and low dogmatic subjects. The second step was the obtaining of the subjects' estimates of the percentage of given populations

¹For the purpose of this study, outgroup is defined as any group of which the individual is not a member (race) or for which he does not indicate a preference (religion).

belonging to given racial and religious groups. The third step was the ascertainment of the subjects' religious preference. The fourth was obtaining the subjects' ratings of five other religious denominations with regard to the similarity of these denominations to the subject's own religious preference. Next the estimates of the sizes of the racial outgroups were compared for the high and low dogmatic subjects to test Hypothesis 1. The following step was the comparison of the estimates of the sizes of the religious outgroups made by high and low dogmatic subjects and the test of Hypothesis 2. Finally, the estimates of the sizes of religious outgroups at different positions on the disbelief gradient were compared to test Hypothesis 3.

Instruments

The instruments used in this study were the following: (a) a 40-item form of Rokeach's D (Dogmatism) Scale (15), (b) a 19-item form of the California E (Ethnocentrism) Scale (1)², (c) a 41-item G.S.E.Q. (Group Size Estimation Questionnaire), (d) a form for the ranking of seven religious groups as to their similarity to the subject's own religion, (e) a statement of the subject's religious preference, (f) statements of the subject's age, sex, and class status, and (g) scores for each subject on the ACE (American Council on Education Psychological Examination) obtained by the Counseling Center at Kansas State University at the time the subjects enrolled.

The D and E Scale items were mixed in a 59-item form and the gs were

²The changes from the "Suggested Final Form" of the E Scale are as follows: (a) item G1. concerning "Zootsuiters" was deleted, (b) in item G3. reading, "Now that a new world organization is set up... .", the word "new" was deleted, and (c) item G8. reading, "The best guarantee of our national security is for America to have the biggest army and navy in the world and the secret of the atom bomb." was changed to read, "The best guarantee ... and navy in the world and the lead in the missiles race." These changes were made in order to bring the scale up to date (1, p. 142).

instructed to give whole number responses from plus three to minus three which corresponded to responses of strongly agree to strongly disagree. No zero or neutral response was allowed. These were scored by adding four to each item and summing to give a score for each S on both the D Scale and the E Scale. One or two omissions were scored as if they had been responses of zero. If three or more items were omitted, the data from that S were discarded.

For the G.S.E.Q., the Ss were instructed to respond by writing in a percentage estimate, to the nearest one-half of one per cent, of the size of a given group in a given population. The items were all of the general form: "What per cent of the people in (the United States) are (Negro)?" The responses to 18 of the 41 items on the G.S.E.Q. were analyzed for this thesis; the four racial items on each of the three populations and six of the religious items on the United States population. In earlier studies, (7, 8) multiple choice questions were used to determine distortion, but it was felt that this technique might place artificial limits on the variation of estimates, therefore, all items on the G.S.E.Q. were "open-end" questions. A copy of the entire questionnaire including all instruments except the ACE is to be found in Appendix A. A copy of the verbal instructions read to the Ss is to be found in Appendix B.

Subjects

Scales and questionnaires were administered to 431 students enrolled in four general psychology classes at Kansas State University in the second semester of 1958-1959. Since certain of the estimation items dealt with racial minority groups, and since it was impossible to obtain a satisfactorily large sample from any of these groups, the responses from those who were members

of any of these groups were removed from consideration. Also deleted were the responses of those who completed half or fewer of the items on the G.S.E.Q., those who left three or more items blank on either the D Scale or the E Scale, and those for whom scores on the ACE were not available. This brought the usable sample down to 399 Caucasian, Christian, American-born, undergraduate students between the ages of 18 and 28 years.

Procedures

The total questionnaire, which included all the instruments except the ACE, was administered during regular class-meeting time. Verbal instructions, supplementing the instructions in the form itself, were given after the questionnaires were distributed. The instructions were intended to serve a threefold purpose. First, the instructions were intended to give directions for responding to the various items on the questionnaire. Second, the instructions were meant to assure the subjects their anonymity. The third purpose of the instructions was to establish the set in the subjects that the G.S.E.Q. was an information test. A copy of the verbal instructions may be found in Appendix B.

After the instructions were given, the subjects filled out the questionnaires and handed them in as they left the room.

RESULTS

Descriptive Results

Dominance. The scores of the 399 Ss on the D Scale were approximately normally distributed around a mean score of 165.4 with a standard deviation of 23.13. On the basis of this obtained distribution of D scores, which was comparable to other distributions reported elsewhere (15), the Ss were divided

into high, middle, and low dogmatic groups.

The high D group comprised those subjects who had Dogmatism scores in the upper quarter of the distribution. These 100 scores ranged from 182 to 242. The low D group comprised those Ss having scores in the lower quarter of the distribution. These 100 scores ranged from 94 to 149. The remaining 199 middle D Ss had scores ranging from 150 to 182.

Table 1 shows the composition of the high and low D groups on other measurements taken. It may be seen that the male-female ratios are very similar as are mean ages of the groups. The class status of the groups does differ somewhat, but there is little reason to expect estimates of size to vary with class status.

The mean ACE scores do not differ significantly.

Table 1. Composition of the high and low D groups with regard to other variables measured.

Variable	High D	Low D
Sex: Male	75	71
Female	25	29
Mean age	19.6	20.1
Class: Freshman	61	37
Sophomore	25	32
Junior	11	17
Senior	3	14
ACE Scores: Mean	102.1	106.3
Standard Deviation	22.7	19.9

Religious Denomination. The numbers of members for each of the denominations included in the study were tallied and the totals are shown in Table 2.

Table 2. Composition of the sample of 319 with regard to religious preference and Dogmatism.

Religion	High D	Middle D	Low D	Total
Baptist	2	18	5	25
Catholic	18	17	8	43
Episcopalian	1	4	3	8
Lutheran	13	19	15	47
Methodist	41	72	36	149
Presbyterian	9	27	11	47
Total	84	157	78	319

The Disbelief Gradient. In the analysis of the six religious items, the first step was the computation of the disbelief gradients for the six groups represented in the sample. An earlier study (19) reported similar gradients, or similarity continua, from lay individuals of these six denominations in an entirely different region. Table 3 presents these two sets of disbelief gradients or similarity continua. The first column gives those previously acquired and the second column those derived from the present study. In the body of the table, the denominations are abbreviated by their initial letters for convenience.

Table 3. Similarity continua from prior and present studies.

Denomination	Continuum from Prior Study	Continuum from Present Study
Baptist	M P L E C	M P L E C
Catholic	E L P M B	E L P M B
Episcopalian	C L P M B	C M L P B
Lutheran	P M E B C	P M E B C
Methodist	P B L E C	P B L E C
Presbyterian	M B L E C	M B L E C

In the case of both sets of continua, these final orders are the averages of the similarity rankings of the cut-groups by all members of each of

the groups.

The only differences in the two sets of continua are those for Episcopalians, and, since in the present study, they are a very small group ($N = 8$), this is not seen as a major discrepancy between the findings of the two studies.

Group Size Estimation. The distributions of responses to the 18 G.S.E.Q. items considered in this study were markedly skewed with the median being consistently lower than the mean. With all of these items the true values (see Appendix C) were consistently lower than either of the measures of central tendency, supporting the assumption of a general tendency to overestimate the sizes of outgroups.

Due to skewness of these distributions, specialized techniques were necessary for the analysis and the statistical testing of the hypotheses.

Estimations of Racial Outgroups. In the analysis of the 12 racial items only the first hypothesis was applicable, so the statistical treatment was directed at determining whether high D individuals made significantly higher estimates than did low D individuals.

For analyses of this type, a single tailed t test of the difference of the mean estimates of the high D and low D groups would have been an appropriate test of the hypothesis, but since the assumption of normality could not be met, the Mann-Whitney U test was used. This is a non-parametric test which is reported to have a power-efficiency of 95.5 per cent when N is as large as in the present study (21).

Estimations of Religious Outgroups. In the analysis of the six religious items, there was a further deletion of S_s because they expressed a preference for some denomination not included in the study or they failed to respond to one or more of the items. The final number of usable sets of responses to these items was 319. Table 2 shows the composition of this

sample with regard to D and religious preference.

Inspection of Table 2 shows that any attempt to analyze the relationship between magnitude of estimate and the position of the estimated group on the disbelief gradient on a religion-by-religion basis raises the problem of the reliability of the statistics due to the small numbers of cases in several of the religious groups. The logical solution to this problem was to combine the religions and analyze over the combined disbelief gradient, but this raised additional problems. First, the distributions of estimates were not normal, and second, these distributions did not have the same means or variances. The first of these problems was solved by the use of a square root transformation and the second by expressing each estimate as a standard (Z) score deviate from the mean of its own distribution.

The raw data included estimates of the sizes of groups made by members of these groups and, before any legitimate comparisons could be made, these were deleted so that the distributions were estimates of the groups as outgroups only. That is, estimates by group members were not included in the distribution of estimates of that group from which the Z scores were derived.

After the above transformations were made, Hypothesis 2 was tested by use of a single-tailed t test of the difference between the mean transformed estimate of the size of religious outgroups made by high D \bar{X} s and the mean transformed estimate of the size of religious outgroups made by low D \bar{X} s.

The transformed data were also treated with an analysis of variance which evaluated the variance attributable to the position on the disbelief gradient of the stimulus group. This technique provided a test of Hypothesis 3.

Tests of the Hypotheses

Test of Hypothesis 1. Hypothesis 1 was tested by comparing the responses of the high D Gs with those of the low D Gs on each of the 12 racial items by means of the Mann-Whitney U test (21). Table 4 shows the probability values associated with the obtained values for U when these comparisons were made.

As may be seen in Table 4, on only one of the twelve items were the estimates made by the 100 high D Gs significantly higher than were the estimates of the 100 low D Gs. This was the item dealing with the percentage of Negroes at Kansas State University. It will also be noted that on three of the other items the estimates of the low D Gs were higher than those of

Table 4. Probabilities associated with the obtained values of the U statistic when the responses of high D subjects were compared with the responses of low D subjects on the racial items.

Item	Probability
Negro - U.S.	.449
Negro - Kansas	.350
Negro - K.S.U.	.043*
Oriental - U.S.	.145
Oriental - Kansas	.161
Oriental - K.S.U.	.198
Jew - U.S.	.359
Jew - Kansas	.439
Jew - K.S.U.	.929
Spanish-American - U.S.	.528
Spanish-American - Kansas	.839
Spanish-American - K.S.U.	.222

* p less than .05

the high D §s (as indicated by p values in excess of .50). In one of these cases, on the percentage of Jews at Kansas State University, the difference approaches significance.

These results fail to support the hypothesis that high dogmatic individuals will make greater estimates of the size of racial outgroups than will low dogmatic individuals.

As the reader may recall, only the prediction of a greater perception of threat, and therefore, a greater reaction, either accentuation or defense, was derived directly from dogmatism theory. In view of the negative findings, it was speculated that the high D §s, rather than showing accentuation only, could be manifesting extreme reactions in both directions. This would result in greater variability for the high D §s. In considering this point, the distributions of responses to the racial items made by the high D, middle D, and low D subjects were compared by inspection. For each of the twelve items, the three curves practically superimposed when plotted to scale appropriate to their respective Ms. It was concluded that the high D §s were not making more than their share of extreme responses.

Test of Hypotheses 2 and 3. As the reader will recall, there were two reasons for transforming the estimates of the religious outgroups before testing Hypotheses 2 and 3. The first reason was that the distributions of estimates for a given item were markedly skewed with the median lower than the mean. The use of a square root transformation made these distributions much more nearly normal to the extent that the use of parametric statistics could be considered. Even after the square root transformations, however, the distributions still did not have equal means and standard deviations, so a second transformation was made. Each square root of an estimate was expressed as a Z deviate from the mean of its own distribution. The final

transformed estimate is equal to the square root of the raw estimate for a given item by a given \underline{S} , minus the mean of the distribution of square roots of the estimates for the given item, divided by the standard deviation of the distribution of square roots of the estimates for that item.

As a test of Hypothesis 2, the mean transformed estimates of all religious outgroups made by high D \underline{S} s and by low D \underline{S} s were compared. The five Z Score values, representing the five estimates for each subject, were averaged, yielding a single score for each \underline{S} . These scores were then averaged for the high and low D groups. As may be seen in Table 5, the high D \underline{S} s made significantly greater estimates of the sizes of religious outgroups than did low D \underline{S} s.

Table 5. Summary of the comparison between the mean transformed estimates of the sizes of religious outgroups by high and low dogmatic \underline{S} s.

D Level	N	Mean Estimate	Difference	t	df
High D	84	.091	.239	2.26*	160
Low D	78	-.148			

*p less than .025

Table 6 shows the differences between the mean transformed estimates made by the high and low D groups at each of the five positions on the disbelief gradient. It may be seen that, while the differences are all in the same direction, only two are significant at the five per cent level. The first and fourth have associated probabilities less than .10 and the fifth has an associated probability of less than .15.

Table 6. Summary of the comparisons between the mean transformed estimates of the sizes of religious outgroups at five positions on the disbelief gradient made by high and low dogmatic Ss.

Position	Difference	df	t
First	.280	160	1.64
Second	.239	160	1.85*
Third	.310	160	1.97*
Fourth	.191	160	1.29
Fifth	.178	160	1.18

* p less than .05

To test the third hypothesis, the transformed estimates were treated with a simple F test, wherein the variance between positions was compared with the variance within positions on the disbelief gradient. As may be seen in Table 7, a mean square of .878 did not yield an F ratio significant at the five per cent level. Therefore, the null hypothesis was not rejected. It may be concluded that the data fail to support the prediction that estimates of the sizes of religious outgroups will bear a systematic relationship to the position of the stimulus group on the disbelief gradient of the responding group.

Table 7. Analysis of variance of transformed estimates of the sizes of religious outgroups at five positions on the disbelief gradients of the respondents.

Source of Variation	Sum of Squares	df	Mean Square	F
Between Positions	3.51	4	.878	.99
Within Positions	<u>1414.34</u>	<u>1590</u>	.890	
Total	1417.85	1594		

With 4 and 1590 df, the critical value of F at the five per cent level is 2.37.

While the evidence does not support the third hypothesis of a systematic trend in the size of the estimates of groups at different points on the disbelief gradient, neither does it clearly refute it. Table 8 shows the mean transformed estimates of all Ss by the D group and by the position of the estimated group on the disbelief gradient. For purposes of comparison, the average transformed estimate corresponding to estimates equal to the true values throughout is approximately -1.18 .

Table 8. Mean transformed estimates by D level of the subjects and position on the disbelief gradient of the estimated group.

D group	N	Position of estimated group					Overall
		First	Second	Third	Fourth	Fifth	
High D	84	.095	.094	.098	.097	.073	.091
Middle D	157	.169	.114	-.079	-.060	.003	.029
Low D	78	-.185	-.145	-.211	-.095	-.105	-.148
Overall	319	.063	.046	-.065	-.027	-.005	.002

While these overall means over the disbelief gradient are not significantly different, there is the suggestion of a shallow U. Reference to Figure 1 will show the same data plotted graphically. It would seem that further investigation of this question might be merited.

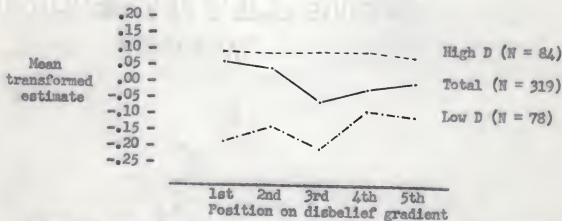


Figure 1. Mean transformed estimates by position on the disbelief gradient of the estimated group and the D level of the subjects.

Results of the Secondary Analysis Involving the E Scale

Earlier research has shown that D scores and E scores are positively related (15). The sample used in this study ($N = 399$) yielded a product moment correlation coefficient of .41, which is consistent with earlier findings. Because of this correlation and in view of the negative evidence found for the first hypothesis, it was decided to investigate the effect of degree of Ethnocentrism, both alone and as it varied with Dogmatism, upon the estimates of the sizes of the racial outgroups.

The scores of the 399 §s on the E scale were approximately normally distributed around a mean score of 67.7 and having a standard deviation of 17.11. On the basis of this distribution, the §s were divided into high, middle, and low groups.

The high E group comprised those subjects who had E scores in the upper quarter of the distribution. These 100 scores ranged from 78 to 124. The low E group comprised those §s having scores in the lower quarter of the distribution. These 100 scores ranged from 25 to 57. The remaining 199 middle E §s had scores ranging from 57 to 78.

The correlation between D scores and E scores is evidenced by the manner in which the high and low groups on D overlap with the high and low groups on E. This may be seen by reference to Table 9.

Table 9. Number of subjects in each of the D and E categories.

	High E	Middle E	Low E	Total
High D :	43	49	8	100
Middle D:	48	103	48	199
Low D :	9	47	44	100
Total :	100	199	100	399

Using the Mann-Whitney U test (21), the estimates of the 100 high E Ss were compared with the estimates of the 100 low E Ss for the 12 racial items. Reference to Table 9 will show clearly the other comparisons made. It will be seen that there were two pairs of groups of about equal numbers which are in the middle range on one variable and in the extreme groups on the other. The responses of the 49 high D-middle E Ss were compared with those of the 47 low D-middle E Ss. The responses of the 48 high E-middle D Ss were also compared with the responses of the 48 low E-middle D Ss. In addition, the responses of the 43 Ss high on both D and E were compared with the responses of the 44 Ss who were low on both.

When the responses of a group of subjects who are high on one variable and in the middle range on the other are compared with the responses of a group of subjects low on the first variable and in the middle range on the second, there is a partial control of the variation of the second variable, and it is possible in this way to derive some idea of what effect each variable may have independent of the other. The final comparison is of interest in that it essentially raises the correlation between the two variables and might allow the derivation of the effect of the two variables acting together.

Table 10 shows data for these comparisons comparable to that shown above (Table 4) for the comparison of high and low D subjects' estimates on the same racial outgroups. For convenience in the following discussion, the data of Table 4 are included in Table 10.

Considering now the second column of Table 10, it is seen that in all cases the estimates of the 100 high E Ss exceeded those of the 100 low E Ss, and that for five of these items, the difference is significant at or beyond the 5 per cent point.

Table 10. Probabilities associated with obtained values of the Statistic U when comparisons were made of estimates by subjects at various levels of Dogmatism and Ethnocentrism.

Item	: High D : Low D	: High E : Low E	: D with : Middle E	: E with : Middle D	: High D and E : Low D and E
Negro - U.S.	.449	.020*	.425	.017*	.373
Negro - Kans.	.350	.043*	.712	.079	.276
Negro - K.S.U.	.043*	.331	.015*	.520	.105
Oriental - U.S.	.145	.008**	.571	.013*	.052
Oriental - Kans.	.161	.009**	.476	.038*	.093
Oriental - K.S.U.	.198	.046*	.104	.017*	.403
Jew - U.S.	.359	.064	.195	.028*	.522
Jew - Kans.	.439	.201	.264	.037*	.744
Jew - K.S.U.	.929	.079	.571	.052	.661
Spanish-American U.S.	.528	.107	.540	.142	.418
Spanish-American Kans.	.839	.339	.626	.488	.579
Spanish-American K.S.U.	.222	.093	.164	.278	.200

* p less than .05

** p less than .01

When the variation of E is controlled, the high D *Ss* still showed significantly higher estimates on only one of the twelve items. When, on the other hand, the variation of D is controlled, the high E *Ss* showed significantly higher estimates than the low E *Ss* on six of the twelve items and this in spite of the fact that N and, consequently, the degrees of freedom were reduced to about one half of their previous values.

When the comparison was made between the group which was high on both D and E and the group which was low on both, as can be seen in the last column in Table 10, there were no significant differences.

Since Dogmatism and Ethnocentrism are positively correlated, and since Ethnocentrism was not equated for the high and low D groups, an alternative interpretation of the difference between the mean estimates of the sizes of religious outgroups made by high D and low D subjects is that this difference is wholly a function of the difference in Ethnocentrism of the criterion groups.

In order to shed some light on this interpretation, the responses of the high D - middle E Ss were compared with the responses of the low D - middle E Ss. Table 11 summarizes this comparison. It will be noted that, while the difference is still in the same direction and of nearly the same magnitude, it no longer attains significance. The probability associated with the obtained value of t is less than .10, but greater than .05. This is primarily a function of the decreased numbers of cases in the groups considered.

Table 11. Summary of the comparison between mean transformed estimates of the sizes of religious outgroups by high D - middle E and by low D - middle E subjects.

D - E Level	Mean Estimate	Difference	t	df
High D - middle E	.038			
Low D - middle E	-.181	.219	1.41	75

DISCUSSION

In considering the twelve racial items, only the first hypothesis was tested. This was the proposition that high D Ss would make higher estimates of the size of outgroups than would low D Ss. The results of these analyses, except for one item, make this hypothesis untenable when the outgroup considered is a racial one.

As the reader will recall, an earlier discussion is made of the logic for positing this hypothesis. This includes these steps: (a) the conceptual definition of dogmatism includes intolerance of or rejection of people who adhere to one or another of the disbelief subsystems which (b) is presumed to arise from perceptions of threat to the validity of the belief system, and (c) this threat is assumed to be related to the perceived size of

the outgroup.

This appears, still, to be a logical development if the outgroup in question is actually challenging or threatening the validity of the belief system. This would be the case where a group is in existence due to shared beliefs of some kind, as with religious groups, but there is some serious question whether racial or ethnic outgroups actually stand in this position. Members of these groups are members purely by merit of their birth to other members of that group and, while there may be some commmality of belief in a fairly gross sense, this is not the basis upon which the group is composed.

The point of this is that, while racial outgroups, in this case racial minority groups, may be threatening in some way or ways--and the fairly positive results with the E comparisons suggests that this may be the case--they are not necessarily threatening to the validity of the belief system. This seems plausible in light of the fact that members of different racial groups may share common belief systems in religion, in conceptual schools regarding the theories of their professions, and in their politics.

The evidence that high E Ss fairly consistently made higher estimates on the racial items than did low E Ss is not inconsistent with the above discussion. Ethnocentrism is a tendency to exalt one's own ethnic group and to judge others by its standards. This certainly contains an element of prejudice, as well as an awareness of ethnic group boundaries.

It would follow that individuals with higher degrees of ethnocentrism would probably perceive more threat from the ethnic outgroup, and the evidence from this study tends to support this contention.

A possible explanation for the finding of no differences between the estimates of high and low E Ss on the three Spanish-American items is the fact that there is really little intercourse or conflict between this rather

small minority and the majority in the Kansas area. However, it seems possible that this would be very different in the Southwest where there is much more contact and conflict.

This hypothesis does not, however, explain the results of the final comparison of the responses of those high on both D and E with the responses of those low on both. This result appears inexplicable and might very well merit further investigation along with the hypothesis suggested above.

The situation with the religious items is much more straightforward, since here we have groups composed on the basis of shared belief systems and, apparently, shared disbelief systems as well since fairly stable disbelief gradients have been found.

With these items, the second and third hypotheses were tested and positive evidence was found for the second in that high D \bar{S} s were found to give significantly higher estimates of religious outgroups than low D \bar{S} s. The average transformed value corresponding to correct estimates throughout the items is much lower than the mean for the low D group, so it may be said that, on the average, all groups of \bar{S} s overestimated the sizes of all the religious outgroups. It may be said, then, that the high D \bar{S} s overestimated the sizes of the religious outgroups significantly more than did the low D \bar{S} s. In other words, the high D group showed greater perceptual distortion than did the low D group.

An alternative interpretation in terms of intelligence was not supported by the data. t tests were run between the mean ACE scores of the high D and low D groups, as well as between the means of the middle D group and each of the others. In no case was a significant difference found. The t values ranged between .52 and .94 with associated probabilities greater than .30.

An alternative interpretation in terms of Ethnocentrism was considered.

A comparison was made of the responses of a group of high D - middle E Ss and a group of low D - middle E Ss. The difference between the means of these groups did not attain significance. However, this is not considered crucial to the hypothesis for two reasons.

The first of these is purely statistical. The absolute difference is of approximately the same magnitude as the high D - low D difference, but the N of each group is only about half that of the original groups. Decreasing the N with a t test usually makes the test less sensitive and, therefore, a larger difference is necessary for detection.

The second reason is theoretical. Dogmatism is considered to be a rather genotypic personality variable. The ethnic prejudice measured by the Ethnocentrism Scale, on the other hand, may be considered a relatively more phenotypic variable. The concern of this thesis is with relating the perception of size of outgroups to what is considered the more basic variable of the two. If there is also a relationship with Ethnocentrism, this is of interest, but it is not seen as reflecting greatly upon the relationship with dogmatism.

SUMMARY AND CONCLUSIONS

Summary

This study was designed to test two hypotheses deriving from Rokeach's formulations of Political and Religious Dogmatism. First, that high dogmatic individuals would make greater estimates of the size of racial and religious outgroups than would low dogmatic individuals; and second, that all subjects would show a systematic trend in their estimates of the sizes of religious outgroups relative to the position of these outgroups on the disbelief gradient.

Data were collected from 399 students in four general psychology classes

at Kansas State University. The Dogmatism and Ethnocentrism Scales were administered together with the Group Size Estimation Questionnaire. The items on the Group Size Estimation Questionnaire were of the form "What per cent of the people in the (United States) are (Negro)?" The racial items analyzed were for four racial groups in each of the three populations; the United States, Kansas, and Kansas State University. The religious items analyzed were for six religious groups in the United States population. The subjects were also asked to specify their own religious preference and to rank six other religions regarding their similarity to the subject's own preference.

These 399 Ss were divided on the basis of their Dogmatism scores, into groups of 100 high D Ss, 100 low D Ss, and 199 middle D Ss. The responses to the twelve racial items were analyzed using the Mann-Whitney U test. The estimates made by the high D Ss were not shown to be greater than those made by the low D Ss.

For the analysis of the six religious items, the responses of 319 Ss who stated preference for one of the religions under consideration were used. A disbelief gradient was calculated for each religious group from the similarity rankings of the other denominations. A comparison of mean responses for the high D and low D Ss showed that high D Ss made significantly higher estimates of the sizes of religious stimulus groups than did low D Ss. It was determined that the criterion groups did not differ significantly on their mean ACE scores, their mean ages, or on the proportions of male and female Ss.

An analysis of variance was used in testing the second hypothesis. The position of the stimulus group on the disbelief gradient was not found to contribute a significant amount of variance. The second hypothesis,

therefore, was not supported, as the size estimates of religious outgroups were not found to be systematically related to the position of these groups on the disbelief gradient.

A secondary analysis of the responses to the racial items was made in order to derive some insight into the lack of relationship between dogmatism and estimates of racial outgroups. The 399 Ss were divided, on the basis of their Ethnocentrism scores, into three groups; 100 high E Ss, 100 low E Ss, and 199 middle E Ss. A comparison of size estimates by the high and low E groups indicated a positive relationship between ethnocentrism and estimates of the sizes of racial outgroups. A further comparison between the estimates of Ss high on both D and E and Ss low on both showed no differences. This finding suggested that dogmatism acted to suppress the relationship between ethnocentrism and amount of overestimation. No satisfactory explanation of this has been posited.

Possible interpretations of these results were discussed. It was suggested that high D Ss might not differ from low D Ss in their estimates of the size of racial outgroups because these outgroups do not necessarily challenge or threaten the validity of the belief system, since membership in racial or ethnic groups is not based upon shared belief and disbelief systems. On the other hand, religious groups are based upon shared belief and disbelief systems, and positive evidence was found for the first hypothesis with the estimates of religious outgroups.

Conclusions

Within the limits imposed by the sample and methods, the following conclusions may reasonably be drawn:

(a) The data do not support the hypothesis that high dogmatic individuals will overestimate the size of racial outgroups more than will low dogmatic individuals.

(b) The data do support the hypothesis that high dogmatic individuals will overestimate the size of religious outgroups more than will low dogmatic individuals.

(c) The data do not support the hypothesis that the degree of overestimation of religious outgroups will bear a systematic relationship to the position of these outgroups on the disbelief gradient.

(d) Complete replication has been made of the findings of earlier studies establishing the positions of five religious outgroups on the disbelief gradients for members of five religious denominations.

(e) Implications of the differential results in the testing of the first hypothesis with racial and religious outgroups for the generality of the theory of Political and Religious Dogmatism have been discussed.

(f) Suggestions have been made for further investigation and research.

ACKNOWLEDGMENTS

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Thanks are due also to Dr. Lowell Schipper and to the other members of the Department of Psychology here at Kansas State University for their helpful discussion and counsel.

Special appreciation is tendered his wife to whom this thesis is dedicated.

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APPENDICES

Appendix A

APPENDIX A

APPENDIX A

APPENDIX A

APPENDIX A

Handwritten text, likely bleed-through from the reverse side of the page. The text is mostly illegible due to fading and blurring, but appears to contain several lines of information, possibly a list or a set of instructions.

Project No. 453642/3

So that you may receive credit for having participated in an experiment, please fill out the following information. You need not sign any other sheet in this group.

Full Name _____

Instructor _____

Class Meeting Time _____

Project No. 453642

DO NOT SIGN YOUR NAME

The following questions are part of a study to determine how well known are some of the facts about our country, state, and campus. Answer them the best you can, using percent to the nearest one half of one percent ($\frac{1}{2}\%$). Please answer all questions. Even if you do not know the correct answer, use your best estimate.

- _____ 1. What percent of the people in the United States are Negro?
- _____ 2. What percent of the people in the United States are Catholic?
- _____ 3. What percent of the people in Kansas are members of the Chamber of Commerce?
- _____ 4. What percent of the people in Kansas are Oriental (Chinese, Japanese, or Korean)?
- _____ 5. What percent of the students at Kansas State College are Methodist?
- _____ 6. What percent of the people in the United States are members of a labor union?
- _____ 7. What percent of the people in the United States are Spanish-American (Mexican or South American, not including the Caribbean Islands)?
- _____ 8. What percent of the students at Kansas State College are Mormon (members of the Church of Jesus Christ of the Latter Day Saints)?
- _____ 9. What percent of the people in the United States are members of the Chamber of Commerce?
- _____ 10. What percent of the students at Kansas State College are Jewish?
- _____ 11. What percent of the people in the United States are Methodist?
- _____ 12. What percent of the people in the United States are members of the National Association of Manufacturers?
- _____ 13. What percent of the students at Kansas State College are Negro?
- _____ 14. What percent of the people in Kansas are members of labor unions?
- _____ 15. What percent of the people in Kansas are Mormon?
- _____ 16. What percent of the people in Kansas are members of the American Management Association?
- _____ 17. What percent of the students at Kansas State College are Oriental?
- _____ 18. What percent of the people in Kansas are Lutheran?
- _____ 19. What percent of the people in Kansas are Jewish?
- _____ 20. What percent of the students at Kansas State College are Catholic?

- _____ 21. What percent of the people in Kansas are members of the National Association of Manufacturers?
- _____ 22. What percent of the people in the United States are Lutheran?
- _____ 23. What percent of the people in the United States are Oriental?
- _____ 24. What percent of the people in the United States are Presbyterian?
- _____ 25. What percent of the people in the United States are members of the American Management Association?
- _____ 26. What percent of the people in Kansas are Catholic?
- _____ 27. What percent of the people in the United States are Jewish?
- _____ 28. What percent of the students at Kansas State College are Lutheran?
- _____ 29. What percent of the students at Kansas State College are Spanish-American?
- _____ 30. What percent of the people in Kansas are Episcopalian?
- _____ 31. What percent of the people in Kansas are Negro?
- _____ 32. What percent of the students at Kansas State College are Presbyterian?
- _____ 33. What percent of the people in the United States are Baptist?
- _____ 34. What percent of the people in Kansas are Spanish-American?
- _____ 35. What percent of the people in the United States are Episcopalian?
- _____ 36. What percent of the people in Kansas are Baptist?
- _____ 37. What percent of the people in the United States are Mormon?
- _____ 38. What percent of the students at Kansas State College are Baptist?
- _____ 39. What percent of the students at Kansas State College are Episcopalian?
- _____ 40. What percent of the people in Kansas are Presbyterian?
- _____ 41. What percent of the people in Kansas are Methodist?

Go back over items 1 through 41 in this part of the questionnaire. Circle the numbers of those items where you did not have to guess, because you knew the answer.

42. Please rank the following religious faiths on their similarity to your own faith. Rank the most similar to your own as 1 and the least similar as 7 if you own faith is not on the list, or as 6 if it is on the list. Do not rank your own faith.

Religion	Rank
a. Baptist	_____
b. Catholic	_____
c. Episcopalian	_____
d. Lutheran	_____
e. Methodist	_____
f. Mormon	_____
g. Presbyterian	_____

43. What is your religious preference? _____

44. Are you a member? _____

45. Please check the most appropriate completion to the following statement.

When a dispute or difference of opinion arises between labor and management, I ---

- _____ a. almost always find myself favoring management.
 _____ b. more often than not favor management.
 _____ c. seldom favor either side more than the other.
 _____ d. more often than not favor labor.
 _____ e. almost always find myself favoring labor.

46. What percent of the students at Kansas State College would answer the above question in each manner?

- a. _____
 b. _____
 c. _____
 d. _____
 e. _____

DO NOT SIGN YOUR NAME

BACKGROUND DATA

SEX (Circle one): M F

AGE (in years) : _____

CLASS (Circle One): Fresh. Soph. Jr. Sr.

If you are a foreign student, write the name of your home
country. _____

Project No. 453643

DO NOT SIGN YOUR NAME

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

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

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

- _____ 1. It is only when a person devotes himself to an ideal or cause that his life becomes meaningful.
- _____ 2. The worst danger to real Americanism during the past 50 years has come from foreign ideas and agitators.
- _____ 3. A person who thinks primarily of his own happiness is beneath contempt.
- _____ 4. It is better to be a dead hero than a live coward.
- _____ 5. A group which tolerates too much difference of opinion among its own members cannot exist for long.
- _____ 6. There may be a few exceptions, but in general, Jews are pretty much alike.
- _____ 7. The main thing in life is for a person to want to do something important.
- _____ 8. To end prejudice against the Jews, the first step is for the Jews to try sincerely to get rid of their harmful and irritating faults.
- _____ 9. There are a number of persons I have come to hate because of the things they stand for.
- _____ 10. There is so much to be done and so little time to do it in.
- _____ 11. The trouble with letting Jews into a nice neighborhood is that they gradually give it a typical Jewish atmosphere.
- _____ 12. Most people just don't know what's good for them.
- _____ 13. Negro musicians may sometimes be as good as white musicians, but it is a mistake to have mixed Negro-white bands.

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

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

- _____ 14. In a discussion, I often find it necessary to repeat myself several times to make sure I am being understood.
- _____ 15. Now that a world organization is set up, America must be sure that she loses none of her independence and complete power as a sovereign nation.
- _____ 16. In times like these, a person must be pretty selfish if he considers his own happiness primarily.
- _____ 17. It is only natural that a person should have a much better acquaintance with ideas he believes in than with ideas he opposes.
- _____ 18. A man who does not believe in some great cause has not really lived.
- _____ 19. Certain religious sects who refuse to salute the flag should be forced to conform to such patriotic action, or else be abolished.
- _____ 20. I'd like it if I should find someone who would tell me how to solve my personal problems.
- _____ 21. Of all the different philosophies which have existed in this world, there is probably only one which is correct.
- _____ 22. Manual labor and unskilled jobs seem to fit the Negro mentality and ability better than more skilled or responsible work.
- _____ 23. In this complicated world of ours, the only way we can know what is going on is to rely on leaders or experts who can be trusted.
- _____ 24. One trouble with Jewish business men is that they stick together and prevent other people from having a fair chance in competition.
- _____ 25. While I don't like to admit this even to myself, I sometimes have the ambition to be a great man, like Einstein, or Beethoven, or Shakespeare.
- _____ 26. The best guarantee for our national security is for America to have the biggest army and navy in the world, and the lead in the missiles race.
- _____ 27. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary at times to restrict the freedom of certain political groups.
- _____ 28. Most Negroes would become overbearing and disagreeable if not kept in their place.
- _____ 29. If a man is to accomplish his mission in life, it is sometimes necessary to gamble "all or nothing at all."
- _____ 30. Most people just don't give a "damn" about others.

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

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

- _____ 31. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.
- _____ 32. A person who gets enthusiastic about a number of causes is likely to be a pretty "wishy-washy" sort of person.
- _____ 33. There is something different and strange about Jews; it's hard to tell what they are thinking and planning, and what makes them tick.
- _____ 34. If given the chance, I would do something that would be of great benefit to the world.
- _____ 35. In times like these, it is often necessary to be more on guard against ideas put out by certain people or groups in one's own camp than by those in the opposing camp.
- _____ 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.
- _____ 37. It is only natural and right for each person to think that his family is better than any other.
- _____ 38. Once I get wound up in a heated discussion, I just can't stop.
- _____ 39. There are two kinds of people in this world: those who are on the side of truth and those who are against it.
- _____ 40. Man on his own is a helpless and miserable creature.
- _____ 41. The United States and Russia have just about nothing in common.
- _____ 42. I can hardly imagine myself marrying a Jew.
- _____ 43. In the history of mankind, there have probably been just a handful of really great thinkers.
- _____ 44. Negroes have their rights, but it is best to keep them in their own districts and schools and to prevent too much contact with whites.
- _____ 45. The highest form of government is a democracy, and the highest form of democracy is a government run by those who are most intelligent.
- _____ 46. Filipinos are all right in their place, but they carry it too far when they dress lavishly and go around with white girls.
- _____ 47. The present is all too often full of unhappiness. It is the future that counts.
- _____ 48. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what is going on.
- _____ 49. Fundamentally, the world we live in is a pretty lonely place.

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

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

- _____ 50. 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.
- _____ 51. The worst crime a person can commit is to attack publicly the people who believe in the same thing he does.
- _____ 52. It would be a mistake ever to have Negroes for foremen and leaders over whites.
- _____ 53. 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.
- _____ 54. The people who raise all the talk about putting Negroes on the same level as whites are mostly agitators trying to stir up conflicts.
- _____ 55. Most of the ideas which get published nowadays aren't worth the paper they are printed on.
- _____ 56. It is only natural for a person to be rather fearful of the future.
- _____ 57. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- _____ 58. America may not be perfect, but the American Way has brought us about as close as human beings can get to a perfect society.
- _____ 59. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF PSYCHOLOGY
RESEARCH ON THE
EFFECTS OF STRESS

APPENDIX B

Verbal Instructions for Questionnaire

General Instructions

1. Fill out the information on the first page. (give them the Inst's. name and the class meeting time) When you are all through with this questionnaire, tear this first page off and put it in this box. The purpose of this record is only to assure you of getting the experimental points for participating in these projects. We are not interested in who answered which question how. We just want to be sure that you get all the points that are coming to you.
2. Now let us turn to the next page. (read inst.) In answering the first 41 questions, consider all the people in the different groups mentioned, the total population of the United States, the total population of Kansas, and the total number of students at Kansas State College. For instance, if I asked you "What per cent of the people in the United States are female?" you should consider all the people including children.
3. If you will turn to the instructions after question 41 (read inst.) Perhaps you can do this as you go along and save some time.
4. Now let's turn to the next page. First write in now the answer to question # 43. (read question) Now look at the list of religious faiths in # 42. If your religion is in this list, draw a line through it and on through the space following it. (read inst.) Some of you will now have 6 to rank, while others will have 7. Now look through the list and find the religion which is most similar to your own and put a 1 after it in the space provided. (so on for 2, 3, 4, 5, 6-7)
5. Now, let's turn to the second form which is right after the background data sheet. (read inst.) Let me emphasize again that there is no right answer to these items except your own personal opinion.
6. Are there any questions?

المجلد الثاني
الجزء الثاني
العدد الثاني
الطبعة الثانية

APPENDIX C

Table of the true percentages made up by certain groups of the populations of the United States, Kansas, and Kansas State University. *

Group	Population		
	: United States	: Kansas	: Kansas St. Univ.
Negro	10.0	4.0	0.5
Spanish-American	1.0	0.5	0.5
Oriental	0.5	0.5	1.5
Jewish	3.5	0.5	0.5
Baptist	12.0	5.0	7.0
Catholic	21.5	13.0	11.5
Episcopalian	1.5	1.0	0.5
Lutheran	4.5	5.0	7.0
Methodist	7.5	12.0	17.5
Mormon	1.0	0.5	0.5
Presbyterian	2.5	4.0	7.0
Labor Unions	10.5	8.0	---
Chamber of Commerce	0.5	0.5	---
Am. Mgt. Assoc.	0.5	0.5	---
Nat. Assoc. Mfg.	0.5	0.5	---

* Values are expressed to the nearest one-half of one per cent except for values of 0.5 which imply a value of from 0 to 0.749. Values were obtained from publications of the U. S. Bureau of the Census (22), and the National Council of the Churches of Christ in the U.S.A. (8) as well as from the records of Kansas State University and from several of the groups themselves.

PERCEIVED SIZE OF OUTGROUPS
AS A FUNCTION OF
POLITICAL AND RELIGIOUS DOGMATISM

by

ROBERT THORNTON McCAY

B. S., Colorado State University, 1957

AN ABSTRACT OF A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Psychology

KANSAS STATE UNIVERSITY
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This study was designed to test two hypotheses derived from Rokeach's formulations of Political and Religious Dogmatism. First, that high dogmatic individuals would make greater estimates of the size of racial and religious outgroups than would low dogmatic individuals; and second, that all subjects would show a systematic trend in their estimates of the sizes of religious outgroups relative to the position of these outgroups on the disbelief gradient.

Data were collected from 399 students in four general psychology classes at Kansas State University. The Dogmatism and Ethnocentrism Scales were administered together with the Group Size Estimation Questionnaire. The items on the Group Size Estimation Questionnaire were of the form "What per cent of the people in the (United States) are (Negro)?" The racial items analyzed were for four racial groups in each of three populations: the United States, Kansas, and Kansas State University. The religious items analyzed were for six religious groups in the United States population. The subjects were also asked to specify their own religious preference and to rank six other religions regarding their similarity to the subject's own preference.

These 399 Ss were divided on the basis of their Dogmatism scores, into groups of 100 high D Ss, 100 low D Ss, and 199 middle D Ss. The responses to the twelve racial items were analyzed using the Mann-Whitney U test. The estimates made by the high D Ss were not shown to be greater than those made by the low D Ss.

For the analysis of the six religious items, the responses of 319 Ss who stated preference for one of the religions under consideration were used. A disbelief gradient was calculated for each religious group from the similarity rankings of the other denominations. A comparison of mean responses for the high D and low D Ss showed that high D Ss made significantly higher

estimates of the sizes of religious stimulus groups than did low D Ss. It was determined that the criterion groups did not differ significantly on their mean ACE scores, their mean ages, or on the proportions of male and female Ss.

An analysis of variance was used in testing the second hypothesis. The position of the stimulus group on the disbelief gradient was not found to contribute a significant amount of variance. The second hypothesis, therefore, was not supported, as the size estimates of religious outgroups were not found to be systematically related to the position of these outgroups on the disbelief gradient.

A secondary analysis of the responses to the racial items was made in order to derive some insight into the lack of relationship between dogmatism and estimates of racial outgroups. The 399 Ss were divided, on the basis of their Ethnocentrism scores, into three groups; 100 high E Ss, 100 low E Ss, and 199 middle E Ss. A comparison of size estimates by the high and low E groups indicated a positive relationship between ethnocentrism and estimates of the sizes of racial outgroups. A further comparison between the estimates of Ss high on both D and E and Ss low on both showed no differences. This finding suggested that dogmatism acted to suppress the relationship between ethnocentrism and amount of overestimation. No satisfactory explanation of this has been posited.

Possible interpretations of these results were discussed. It was suggested that high D Ss might not differ from low D Ss in their estimates of the size of racial outgroups because these outgroups do not necessarily challenge or threaten the validity of the belief system, since membership in racial or ethnic groups is not based upon shared belief and disbelief systems. On the other hand, religious groups were based upon shared belief and disbelief

systems, and positive evidence was found for the first hypothesis with the estimates of religious outgroups.