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DOGMATISM AND RIGIDITY AS
DETERMINANTS OF COGNITION

Thesis for the Degree of M. A.
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Warren Carl McGovney
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DETERMINANTS OF COGNITION

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DOGMATISM AND RIGIDITY AS
DETERMINANTS OF COGNITION

By

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INTRODUCTION

The present study is part of a larger project presently underway under the direction of Dr. Milton Rokeach of Michigan State College on the phenomenon of dogmatism. The primary aim here will be to investigate certain cognitive aspects of dogmatism and to distinguish such aspects from rigidity. Within the past several years, a great volume of research has been done concerning the concept of rigidity (1) (3) (4) (5) (6). On the contrary, very little has been undertaken concerning the nature of dogmatism until quite recently (7) (8). It is not the intent of this research to present the historical development of the concept of rigidity since the data available is so voluminous that this would constitute a major task in itself. However, the concept of dogmatism is a relatively new one and will be discussed rather fully in the paragraphs to follow.

Rokeach (8) bases his concept of dogmatism on the observations of a number of persons in real life situations who, in various social contexts, were observed to be dogmatic. He defines dogmatism as follows: "(1) a closed cognitive system of thinking and believing about reality, (2) organized around a set of authoritarian beliefs and (3) providing a frame of reference for attitudes of intolerance and qualified tolerance toward people in general." (8, p. 3)

This investigation concerns itself primarily with the first defining characteristic of dogmatism, namely, its closed character. Rokeach conceives further of two levels of resistance to change, rigidity and dogmatism. "Rigidity refers to person-to-thing or animal-to-thing relations (and) dogmatism by its very nature refers to person-to-person communication." (8, p. 4)

Dogmatism is distinguished from rigidity as follows, according to Rokeach:

Both dogmatism and rigidity refer to forms of resistance to change but dogmatism is conceived to represent a relatively more intellectualized and abstract form than rigidity. Where dogmatism refers to organizations of ideas, beliefs and attitudes into closed ideological systems, rigidity has been generally defined in terms of the way a person or an animal attacks, solves or learns specific tasks and problems having alternative solutions. Thus dogmatism is seen as a higher-order, more organized form of resistance to change (8, p. 4).

Experiments on rigidity have been confined to the subject's ability or inability to overcome a single experimental set or approach to a problem. This is true of the map studies undertaken by Rokeach (5), the jar problems of Luchins (4) and many of the various measures reported by Cattell and Tiner (1). It is also evident in the following definition of rigidity:

Rigidity is defined as "...the inability to change one's set when the objective conditions demand it, as the inability to restructure a field in which there are alternative solutions to a problem in order to solve that problem more efficiently." (5)

Dogmatism, on the other hand, refers to organizations of sets rather than single sets. These closed sets are organized into a belief system and a disbelief system. The former refers to those beliefs accepted as true; the latter refers to all other alternatives accepted as false. These alternatives are not all salient to the belief system, but those which are the closest are the ones most vehemently attacked. Thus while the Communists attack Capitalism they are most vehement in their attack on the Trotskyites (8).

The cognitive structure of the dogmatic individual is further differentiated in terms of central and peripheral parts. The central part has to do with those about positive and negative authority; peripheral are those which are seen to emanate from positive and negative authority. Those beliefs seen to emanate from positive authority are perceived as true and those seen to emanate from negative authority are perceived as false. It is this relationship between central and peripheral which gives the closed system its systematic character. Dogmatic individuals do not resist change per se, for a change can be brought about rapidly if it is initiated by the central authority figure. Rokeach points out further that there is no communication between the peripheral beliefs but only between central and peripheral parts. A change in one peripheral belief will not affect a change in any other peripheral beliefs; the cognitive structure remains the same although the content may change. Thus it can be said

that while various peripheral beliefs are systematically related to each other via the central authority region there is nevertheless a lack of intercommunication or integration among the various peripheral beliefs.

Rokeach points out further differentiation between dogmatism and rigidity (8) by stating that one can tie his shoelaces rigidly but he can never tie his shoelaces dogmatically. The expression of dogmatism depends upon a social situation; an individual can never be dogmatic when alone, its expression depends on the interchange of ideas or beliefs. It is in regard to this social aspect that Rokeach has introduced the idea that the dogmatic individual has a closed cognitive system (8) in that his own views are impervious to change. He insulates himself from the recognition of views which are in opposition to his own beliefs. In this respect Rokeach discusses a number of cognitive mechanisms which the individual may use to coerce reality so that it conforms with his own particular belief system (8). Methods designed to preserve one's belief-disbelief system intact are: (a) cognitive isolation between belief and disbelief system, (b) assimilation into the belief system, (c) cognitive isolation within the belief system, (d) de-differentiation within the disbelief system; the accentuation of similarities and the minimization of differences and (e) cognitive narrowing.

Set may be defined as an expectancy that a particular

type of behavior will lead to a particular result.

The purpose of the present investigation is to demonstrate experimentally the difference between dogmatism and rigidity. The intent is to confront subjects with a cognitive task which, if it is to be solved, involves two discrete stages of problem solution: (1) the overcoming of two or more separate sets and (2) the integration of the sets overcome into a solution of the problem. It is the general hypothesis that individuals high and low in rigidity, as measured by a personality scale, will be distinguished from each other on (1) above, namely, their relative ease in overcoming separate sets. On the other hand, it is further hypothesized that individuals high and low in dogmatism, as measured by a personality scale, will be distinguished from each other on (2) above, namely, their relative ease in integrating sets already overcome. More specifically, the following six hypotheses will be tested:

- A. Concerning total time taken to solve the problem which involves both the overcoming of sets and their integration:
 - 1. Persons high in rigidity should take more time to complete the problem than persons low in rigidity.
 - 2. Persons high in dogmatism should take more time to complete the problem than persons low in dogmatism.
- B. Concerning the overcoming of specific sets:
 - 1. Persons known to be high in rigidity should take more time in the overcoming of the sets than persons low in rigidity.

2. Persons high in dogmatism should take no more time in overcoming the sets than persons low in dogmatism.

C. Concerning the integration of sets already overcome:

1. Persons high in dogmatism should take more time in integrating the sets already overcome than persons low in dogmatism.
2. Persons high in rigidity should take no more time in integrating the sets already overcome ~~than~~ persons low in rigidity.

THE DENNY DOODLEBUG PROBLEM

The cognitive task employed will be called the Denny Doodlebug Problem. This problem was devised by Dr. M. Ray Denny of Michigan State College while he was a student at the University of Iowa and revised by Dr. Milton Rokeach, Dr. M. Ray Denny, Mr. Elliot Beitner and the writer.

The problem as given to the subjects is as follows:

THE CONDITIONS:

Joe Doodlebug is a strange sort of imaginary bug. He can and cannot do the following things:

1. He can jump in only four different directions, north, south, east and west, not diagonally. (Not southeast, northwest, etc.)
2. Once he starts in any direction, that is north, south, east or west, he must jump four times in that same direction before he can switch to another direction.
3. He can only jump, not crawl, fly or walk.
4. He can jump very large distances or very small distances, but not less than one inch per jump.
5. Joe cannot turn around.

THE SITUATION:

Joe has been jumping all over the place getting some exercise when his master places a pile of food three feet directly west of him. Joe notices that the pile of food is a little larger than he. As soon as Joe sees all this food he stops dead in his tracks facing north. After all his exercise Joe is very hungry and wants to get to the food as quickly as he possibly can. Joe examines the situation and then says, "Darn it, I'll have to jump four times to get the food!"

THE PROBLEM:

Joe Doodlebug was a smart bug and he was dead right in his conclusion. Why do you suppose Joe Doodlebug had to take four jumps, no more and no less, to reach the food?

The correct solution is that Joe had already taken one jump east before the food was placed down and therefore had to take three more jumps east before he could change his direction and then take one big sideways jump west to the food; a total of four jumps as required by the problem.

To be noted first is that this problem includes three discrete sets or, if you will, three isolated beliefs which must first be overcome and then interrelated in order to arrive at the correct solution. The mere overcoming of the three sets will not in itself lead to the solution. The sets must also be integrated. The sets in the problem are as follows:

- (a) The facing set: Joe does not have to face the food in order to eat it.
- (b) The direction set: Joe can jump sideways and backwards as well as forward.
- (c) The movement set: Joe was moving east when the food was presented.

The overcoming of each of these sets necessitates the removal of older sets. The subject is asked during the experiment to go along with a hypothetical system of reality which contradicts present reality and which involves the overcoming, at least temporarily, of sets inherent in present reality

for the sake of solving the problem. In the case of set (a) above (the facing set) the subjects must overcome the notion that the food must be faced from the north, south, the east or the west and arrive at the notion that Joe can face the food by landing on top of it. As can be seen from the conditions set forth the food is a bit larger in area than Joe. In the case of set (b) the subjects had to overcome the idea that Joe could only jump forward. He could, of course, also jump sideways and backwards. Set (c) requires the subject to perceive Joe in the process of moving rather than at the beginning of a sequence of four jumps in a given direction as the problem begins.

It should be noted further that the overcoming of each of the sets itself will not necessarily lead to the solution. An integration of these three sets is indispensable for the solution. The solution of the problem, namely, that Joe jumps three times sideways to the east and once sideways to the west to land on top of the food, involves the integration of each of the three sets.

If the theoretical distinction between the two concepts, dogmatism and rigidity, is a valid one then one should expect that subjects high in rigidity, as measured by a personality scale, should take more time to overcome the first set, more time to overcome the second set and more time to overcome the third set than subjects low in rigidity (Hypothesis B,1). Conversely, subjects high in dogmatism, as

measured by another personality scale, by virtue of the greater strength of their closed system should take more time to integrate the sets already overcome into a new system as compared with those low in dogmatism (Hypothesis C,1). Furthermore, one should not expect that subjects differing in dogmatism would differ significantly in speed of overcoming specific sets (Hypothesis B,2), nor should one expect subjects differing in rigidity to differ significantly in speed of integration (Hypothesis C,2).

SUBJECTS AND PROCEDURE

One hundred and nine students, mostly sophomores, enrolled in Psychology 201 at Michigan State College were employed as subjects. These students were all native white and non-Jewish with a mean age of 20.44 years. There were 64 males and 45 females in this group. These subjects were given a battery of tests which included the twenty-two item "California Psychological Inventory Rigidity Scale" devised by Dr. Harrison Gough and Dr. Nevitt Sanford (3). This test is shown in Appendix A. Dr. Gough and Dr. Sanford report an uncorrected split-half reliability of .93. In another study by Rokeach, it was found to have a reliability of .83, corrected by the Spearman-Brown formula.

Also given was the "Dogmatism Scale" (7) as devised by Dr. Milton Rokeach. This is a thirty-six item test and is shown in Appendix B. This test, in the present study, was found to have a reliability of .73, corrected by the Spearman-Brown formula. Both of these tests were scored by the use of a Likert-type scale ranging from plus three for complete agreement to a minus three for complete disagreement.

From the total group of 109 subjects, four groups of fifteen subjects each were chosen as follows:

- A. Fifteen subjects, eight males and seven females, who scored highest both on the Rigidity and the Dogmatism Scales.
- B. Fifteen subjects, seven males and eight females, who scored lowest both on the Rigidity and the Dogmatism Scales.
- C. Fifteen subjects, eleven males and four females, who scored low on the Rigidity Scale and high on the Dogmatism Scale.
- D. Fifteen subjects, seven males and eight females, who scored high on the Rigidity Scale and low on the Dogmatism Scale.

Thus there were a total of thirty subjects high in rigidity, (Groups A and D) and thirty subjects low in rigidity (Groups B and C). There were also a total of thirty subjects high in dogmatism, (Groups A and C) and thirty subjects low in dogmatism (Groups B and D).

These sixty subjects were then individually scheduled to take the Denny Doodlebug Problem.¹ Each problem interview required approximately forty-five minutes and the sixty interviews were conducted over a three and one-half week period. All of the interviews were conducted within the space of one school quarter. At no time was the writer aware of the scores obtained by the subjects on the personality tests. This information was obtained only after the data on the Denny Doodlebug Problem were analyzed by the writer.

¹ Of the sixty subjects initially selected for individual testing, 58 showed up. Two additional subjects were selected from the larger pool of subjects to complete the sample.

Each interview was conducted in the same manner and timed with a wrist watch. The procedure and instructions were as follows:

"Today you are going to be given a newly devised test of general intelligence. The problem is not a simple one but the solution can be reached by good logical analysis. Here is the problem. Read it over carefully."

After the subject reads the problem, the experimenter continues:

"I'd like to ask you to think out loud as you work the problem so I can let you know whether you are correct or not. You may ask questions as you go along and may refer to the problem at any time and you can use the scratch paper any way you see fit. Now let's read the problem over together."

The total time allowed for the solution of the problem was thirty minutes. The experimenter willingly answered all questions pertaining to possible solutions.

For the first fifteen minutes of the problem the subject was permitted to work continuously regardless of whether he was able to overcome any or all of the three sets by himself. If he overcame any of the three sets by himself, the time taken to overcome the set was recorded. At the end of the fifteen minutes the experimenter interrupted the subject and asked:

"Have you figured it out yet?"

If the subject had not, the experimenter gave a hint designed to overcome one of the three sets. Which hint was given by the experimenter depended upon which sets the

subjects had overcome on their own. If the subjects had not solved the problem and had not overcome any of the sets, as indicated by verbal report, then the experimenter gave the first hint designed to overcome the facing set. The subjects were then told that they would be given five minutes more to solve the problem. If no solution was forthcoming at the end of this time, the subjects were given a second hint designed to overcome the direction set. The subjects were then told that they would be given five minutes more to solve the problem. If no solution was forthcoming at the end of this time, the subjects were given the third hint designed to overcome the movement set. The subjects were then told that they would be given five minutes more to solve the problem. The problem was terminated at the end of thirty minutes whether or not a solution had been reached.

In the case where subjects overcame one set on their own within the first fifteen minutes of the problem, they were given the second set at the end of that fifteen minute period and the third set at the end of the twenty minute period. In the case where subjects overcame two sets on their own within the first fifteen minutes of the problem, they were given the third hint at the end of that fifteen minute period.

By means of the procedure outlined above, three types of time measures were obtained as follows:

1. Total time taken to solve the problem. This total time was then broken down into two types of set scores as shown below.
2. Time taken to overcome sets.
 - a. Time taken to overcome the first set.
 - b. Time taken to overcome the second set.
 - c. Time taken to overcome the third set.
3. Time taken to integrate sets already overcome.
 - a. Time taken after the first set was overcome.
 - b. Time taken after the second set was overcome.
 - c. Time taken after the third set was overcome.

The subjects began working on the problem after the following instructions were given:

"Unless you have any questions about the problem itself, we will begin. You have fifteen minutes to solve the problem."

If the correct solution had not been reached within the fifteen minutes, the experimenter then said:

"OK, time's up. Have you figured it out yet?"

The hints were given as needed and as follows:

1. The facing set was given in the following way as needed:

"I'm going to give you a hint. 'Joe does not have to face the food in order to eat it.' (Repeat hint.) OK, I'll give you five more minutes."

2. The direction set was given in the following way as needed:

"I'll give you another hint: 'Joe can jump sideways and backwards as well as forward.' (Repeat hint.) I'll give you five more minutes."

3. The movement set was given in the following way as needed:

"Let's read the problem again. (E and S reread the problem.) Now here is a last hint: 'Joe was moving east when the food was presented.' (Repeat hint.) You have five more minutes."

The interview was concluded with the following instructions:

"Write down on the sheet of scratch paper just what you thought of this problem as a test of your intelligence. Your opinion is valuable to us."

When this was completed, the experimenter continued as follows:

"Before you leave I want to tell you a couple of things about the problem. First of all, it was not a test of general intelligence. Secondly, here is the solution. (This was told if S had not solved the problem.) Mrs. Thomas (the subjects' class teacher) will give you some idea as to how this problem is related to the other tests you took in class. It is extremely important that you do not discuss this problem with your classmates for previous knowledge of the problem would ruin the experiment. I might also tell you that your name will in no way be connected with the results of this experiment. Thanks for your help."

During the interview period, the experimenter recorded all the statements made by the subjects.

As an illustration of the scoring technique employed, the writer will present a typical case and indicate how it was scored. After five minutes of the problem had elapsed, the subject stated that Joe could jump sideways. At the end of the fifteen minute period only this set had been overcome and the experimenter then gave the subject the hint which gave him the facing set. After a total of twenty minutes had elapsed and the subject had not overcome

the third set, it was presented to him by the experimenter in the form of a hint. Four minutes later, twenty-four minutes after the start of the problem, the subject reached the correct solution.

In this illustration, the following scores were obtained:

1. The total time taken to solve the problem was twenty-four minutes.
2. Time taken to overcome sets.
 - a. Time taken to overcome the first set was five minutes.
 - b. Time taken to overcome the second set was fifteen minutes.
 - c. Time taken to overcome the third set was twenty minutes.
3. Time taken to integrate sets already overcome.
 - a. Time taken after the first set was overcome was nineteen minutes.
 - b. Time taken after the second set was overcome was nine minutes.
 - c. Time taken after the third set was overcome was four minutes.

This scoring procedure was followed for all of the subjects.

RESULTS

First some relevant findings of the initial group of 109 subjects will be presented. The mean personality rigidity score was a plus 4.74 and the mean personality dogmatism score was a negative 19.05. A Pearson r was computed between rigidity and dogmatism which was found to be a positive .47. American Council of Education total scores were available for 93 of these subjects. The Pearson correlation between these scores and dogmatism was a plus .13. The Pearson correlation between these scores and rigidity was a negative .22. These correlations suggest that dogmatism and rigidity are related to I.Q., as measured by the American Council of Education test, to a very small extent.

For the sixty subjects who were given the Denny Doodlebug Problem, the mean rigidity score was a negative 4.42 and the mean dogmatism score was a negative 19.75. The mean dogmatism and rigidity scores of each of the four groups of fifteen subjects is shown in Table 1, page 19.

Table 1 is merely an informative table indicating the actual mean differences between the four selected groups. It should be noted that the mean rigidity scores

TABLE 1
MEAN DOGMATISM AND RIGIDITY
SCORES FOR THE GROUPS TESTED

Group	Mean Dogmatism Score	Mean Rigidity Score
Group A		
High In Dogmatism And High In Rigidity	3.40	21.00
Group B		
Low In Dogmatism And Low In Rigidity	-45.00	-18.27
Group C		
High In Dogmatism And Low In Rigidity	- 6.80	- .07
Group D		
Low In Dogmatism And High In Rigidity	-30.60	15.00

TABLE 2
COMPARISON BETWEEN HIGH AND LOW DOGMATIC GROUPS
AND BETWEEN HIGH AND LOW RIGID GROUPS ON THE
TOTAL TIME TAKEN TO SOLVE THE DENNY DOODLEBUG PROBLEM*

Group	N	Mean	σ	Fest- inger's F	D.F.**	Signif- icance Level
High Dogmatic	30	22.62	5.13	1.06	L=1022	5%
Low Dogmatic	30	21.37	5.18		S=1168	
High Rigid	30	23.05	4.31	1.10	L= 786	5%
Low Rigid	30	20.93	5.78		S=1714	

* Using a one tail test of significance.

** Under Degrees of Freedom, L stands for the larger variance and S stands for the smaller variance.

range from a plus 21.00 to a minus 18.27 and the dogmatism scores from a plus 3.40 to a minus 45.00. From this it can be noted that while the rigidity scores are relatively equally distributed, the dogmatism scores are definitely positively skewed. The N of 109 from which this sample was chosen was similarly skewed for the dogmatism measure and skewed in the opposite direction, to a lesser degree, for the rigidity measure.

In Table 2, page 19, is presented the mean total times taken to solve the problem by those high and low in dogmatism and those high and low in rigidity. As can be seen from this table, the highly dogmatic group took a mean total time of 22.62 minutes to solve the problem as compared with a mean total time of 21.37 minutes for the low dogmatic group. Similarly, the highly rigid group took a mean total time of 23.05 minutes to solve the problem as compared with a mean total time of 20.93 minutes for the low rigid group.

Because of the fact that the distributions of the various time scores were positively skewed, a one-tailed² application of Festinger's F test was employed throughout (2). The test assumes that the measure used varies freely from zero to infinity. When the values of both p and n are greater than fifteen there is little difference between this test and the normal t test since the larger the value of p the less the skewness of the population (2). With the present data p was often less than 15.

² It should be pointed out that ordinarily the F test is a two tail test but since the direction of the differences was predicted in advance, a one tail test should be used.

The general formula of this non-parametric test is as follows: $F = \frac{M_1}{M_2}$ where M_1 is the larger mean. The degrees of freedom for the larger and smaller variance is obtained by the formula: $df = 2np$ where n is the number of cases and $p = \frac{M^2}{\sigma^2}$. The values of n and p are found for both the larger and smaller variances by the use of this group of formulae. The significance of the F obtained may be determined by reference to Snedecor's Tables of F .

The difference in the mean total times taken by the High and Low Dogmatic groups were found to be significantly different from each other beyond the five percent level of confidence when Festinger's F test was employed. The difference in the mean total times taken by the High and Low Rigid groups were also found to be significantly different from each other beyond the five percent level.

These findings corroborate the first two hypotheses (A,1 and A,2), namely that persons high in rigidity should take more time to complete the problem than persons low in rigidity and that persons high in dogmatism should take more time to solve the problem or to complete it than persons low in dogmatism. The total time taken to complete the Denny Doodlebug Problem differentiates significantly the High from the Low dogmatic groups and also the High from the Low rigid groups. The analysis thus far, however, does not tell one to what extent these

TABLE 3

COMPARISON BETWEEN HIGH AND LOW RIGID GROUPS AND
BETWEEN HIGH AND LOW DOGMATIC GROUPS ON THE VARIOUS
MEASURES INVOLVING THE OVERCOMING OF SETS*

I. Number of minutes taken to overcome first set.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Rigid	30	8.55	5.49		L = 145	
Low Rigid	30	5.85	5.17	1.46	S = 77	5%
High Dogmatic	30	7.40	5.39		L = 92	
Low Dogmatic	30	7.00	5.64	1.06	S = 113	N.S.
II. Number of minutes taken to overcome second set.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Rigid	30	15.95	1.55		L = 1049	
Low Rigid	30	14.37	3.45	1.11	S = 6334	1%
High Dogmatic	30	15.28	2.84		L = 1238	
Low Dogmatic	30	14.93	3.29	1.02	S = 1745	N.S.
III. Number of minutes taken to overcome third set.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Rigid	30	19.87	2.73		L = 1364	
Low Rigid	30	18.37	3.85	1.08	S = 3179	1%
High Dogmatic	30	19.23	3.05		L = 1343	
Low Dogmatic	30	19.00	4.02	1.01	S = 2383	N.S.
IV. Number of sets overcome within the first fifteen minutes.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Rigid	30	.80	.70		L = 115	
Low Rigid	30	1.30	.94	1.62	S = 79	1%
High Dogmatic	30	1.07	.93		L = 80	
Low Dogmatic	30	1.03	.80	1.04	S = 100	N.S.

* Using a one tail test of significance.

** Under Degrees of Freedom, L stands for the larger variance and S stands for the smaller variance.

differences are attributable to relative differences in ease or difficulty of overcoming individual sets or to ease or difficulty of integration of new sets after the old sets had been overcome.

Let us consider first the problem of the amount of time taken to overcome the individual sets. The results relevant to this are shown in Table 3, page 22.

With respect to time taken to overcome the first set, one finds that the High and Low Rigid groups are significantly different from each other in the amount of time taken. The former took a mean time of 8.55 minutes while the latter took a mean time of only 5.85 minutes. This difference is significant at the five percent level of confidence. In contrast, the High Dogmatic group is not significantly different from the Low Dogmatic group on this measure. This same method of interpretation may be used on all of the measures presented in Table 3. It will be noted that for the time taken to overcome the second and third sets, the High and Low Rigid groups are also significantly different from each other at the one percent level of confidence. Furthermore, as was found to be the case with the first measure, the High and Low Dogmatic groups again do not differ significantly from each other.

The results shown on time taken to overcome one, two or three sets are further corroborated by a fourth measure

TABLE 4

TIME TAKEN TO SOLVE THE DENNY DOODLEBUG PROBLEM AFTER THE FIRST, SECOND AND THIRD SETS WERE OVERCOME BY HIGH AND LOW DOGMATIC GROUPS AND HIGH AND LOW RIGID GROUPS*

I. Number of minutes taken to solve problem after first set overcome.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Dogmatic	30	15.22	5.68	1.06	L = 431	N.S.
Low Dogmatic	30	14.37	5.35		S = 433	
High Rigid	30	15.08	5.59	1.08	L = 437	N.S.
Low Rigid	30	14.50	5.50		S = 418	

II. Number of minutes taken to solve problem after second set overcome.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Dogmatic	30	7.68	4.35	1.26	L = 187	5%
Low Dogmatic	30	6.08	3.57		S = 174	
High Rigid	30	7.20	4.09	1.10	L = 187	N.S.
Low Rigid	30	6.57	3.98		S = 163	

III. Number of minutes taken to solve problem after third set overcome.						
Group	N	Mean	σ	Fest- inger's F	D.F.**	Significance Level
High Dogmatic	30	3.25	3.37	1.30	L = 56	N.S.
Low Dogmatic	30	2.50	2.99		S = 42	
High Rigid	30	3.82	3.16	1.36	L = 88	N.S.
Low Rigid	30	2.80	2.16		S = 101	

* Using a one tail test of significance.

** Under Degrees of Freedom, L stands for the larger variance and S stands for the smaller variance.

number of sets overcome within the first fifteen minutes. These data are also shown in Table 3, page 22. In support of the findings discussed with respect to time taken to overcome the first, the second and the third sets, it is found that the High and Low Rigid groups are significantly different from each other but that the High and Low Dogmatic groups are not. The mean number of sets overcome by the High Rigid group was .80 while the mean number of sets overcome by the Low Rigid group was 1.30, this difference being statistically significant at the one percent level of confidence. In contrast, the mean number of sets overcome within the first fifteen minutes by the High and Low Dogmatic group are 1.07 and 1.03 respectively. This difference is not significant.

It is thus seen that the High and Low Rigid are significantly different from each other on all four measures involving ease of overcoming individual sets while High and Low Dogmatic groups are insignificantly different from each other on all four measures. These findings confirm, in a dramatic way, Hypotheses B,1 and B,2 namely that persons known to be high in rigidity should take more time in the overcoming of sets than persons low in rigidity and persons high in dogmatism should take no more time in overcoming the sets than persons low in dogmatism.

Table 4, page 24, indicates the results on time taken to solve the Denny Doodlebug Problem after the first,

second and third sets were overcome. In line with Hypotheses C,1 and 2, it is anticipated that the High and Low Dogmatic groups will differ significantly on time taken to integrate the new sets after the older sets were no longer operating (Hypothesis C,1) but that the High and Low Rigid groups would not (Hypothesis C,2). Accordingly, the writer does not expect either the High and Low Dogmatic groups or the High and Low Rigid groups to differ significantly from each other on time taken to solve the problem after the first set was overcome. For integration implies at the very least the presence of two elements to be interrelated. One must look to the second and third measures, namely (1) time taken to solve the problem after the second set was overcome and (2) time taken to solve the problem after the third set was overcome, to provide one with a measure of integration of new sets.

Turning now to the first measure shown in Table 4 (time taken to solve the problem after the first set was overcome) one finds that the mean times taken were not significantly different either between the High and Low Dogmatic groups or between the High and Low Rigid groups. This is as expected.

However, on the time taken to solve the problem after the second set was overcome, the High and Low Dogmatic groups are significantly different from each other

and the High and Low Rigid groups are not. The High Dogmatic group took a mean time of 7.68 minutes while the Low Dogmatic group took only a mean time of 6.08 minutes. This difference is significant at the five percent level of confidence. In contrast, the High and Low Rigid groups took mean times of 7.20 minutes and 6.57 minutes respectively. This difference is not significant.

Turning finally to the third measure (the time taken to solve the problem after the third set was overcome) no significant differences either between the High and Low Dogmatic groups or between the High and Low Rigid groups was found.

The American Council of Education test total scores were correlated with time taken to overcome the first set, number of sets overcome in the first fifteen minutes, total time taken to solve the problem after the second set was overcome and total time taken to solve the problem. The Pearsonian correlations were $-.23$, $-.24$, $-.21$ and plus $.36$ respectively. Only the last correlation between total time taken to solve the problem and total American Council of Education test scores was significant. With such low correlations, intelligence was not considered to be a significant variable affecting the results, especially since the correlation between American Council of Education test scores and speed of overcoming sets or between American Council of Education test scores and speed of integrating sets overcome were not significant.

DISCUSSION

In general the findings are regarded as having substantiated the hypotheses presented. Both the High and Low Dogmatic groups and the High and Low Rigid groups were found to differ significantly on the total time taken to solve the Denny Doodlebug Problem. That these findings were not necessarily due to the operation of similar thought processes was demonstrated by the further findings regarding time taken to overcome sets and time taken to solve the problem after the various sets were overcome. As will be recalled, the High and Low Rigid groups did and the High and Low Dogmatic groups did not differ significantly from each other on the time taken to overcome the first set, time taken to overcome the second set, time taken to overcome the third set and the number of sets overcome within the first fifteen minutes. Furthermore, the High and Low Dogmatic groups did and the High and Low Rigid groups did not differ significantly on the time taken to solve the problem after the second set was overcome.

It has already been pointed out why neither the High and Low Dogmatic groups nor the High and Low Rigid groups differed significantly on the time taken to solve the problem after the first set was overcome. Namely that

the integration process cannot begin to operate until at least two sets have been overcome. Indeed, the fact that no significant differences were found in this connection lends strong support to the significant differences found on the time taken to solve the problem after the second set was overcome.

If the integration process should make itself evident after the overcoming of two sets surely, it may be argued, it should be even more evident after three sets were overcome. Hence, in accordance with Hypothesis C,1, it should be expected that the High and Low Dogmatic groups should have been found to differ significantly on time taken to solve the problem after the third set was overcome. This was not found to be the case. Neither the High and Low Dogmatic groups nor the High and Low Rigid groups differed significantly on this measure.

Some possible explanations for the positive findings with respect to the second measure (Table 4) and the negative findings with respect to the third measure (Table 4) should be considered.

The subject in the experiment did not know how many sets the Denny Doodlebug Problem contained. The only basis he had for integration was after the first two sets had been given by the experimenter or overcome by the subject. Hence the measure of the time taken to solve the problem after the first two sets were

overcome is considered to be the best measure of the integration period. By the time the subject had been given the third set or had overcome it by himself, too much time spent in integrating had already expired. In a sense then the third measure provides one only with a measure of the "tail-end" of the integration period rather than the total integration period which began after the overcoming of the second set and ended at the completion of the problem. It is furthermore hardly reasonable to suppose that the integration period began after the third set was overcome.

In line with these considerations, no significant difference between the High and Low Dogmatic groups should have been expected on time taken to solve the problem after the overcoming of the third set.

To be considered next are some of the qualitative findings which distinguished the High Dogmatic from the Low Dogmatic subjects. A record was kept of all the comments made by all of the subjects during the experiment. In line with Rokeach's formulation of dogmatism as involving not only closed systems of thinking and believing but also the rejection of people and alternatives who threaten such closed systems, it is hypothesized that subjects high in dogmatism would more frequently make comments indicative of such rejection than those low in dogmatism.

One person high in dogmatism wrote the following when asked her opinion of the Denny Doodlebug Problem as a test of general intelligence:

"The problem without a doubt was a good one for Einstein but under the circumstances of being nervous and being watched I don't think it was quite fair for a college freshman."

Other subjects known to be high in dogmatism made statements implying rejection of the experiment or the experimenter as follows:

"Stupid bug, he could get there in one jump it seems to me."

"Let him starve to death!"

"There is probably a catch here."

"I don't believe he has to jump four times."

"What if you don't agree with it?"

"That's crazy!"

"That's irrelevant!"

In collaboration with Rokeach, the numerous comments made by the subjects were categorized as dogmatic and non-dogmatic. In making these categorizations the identification of the subject was deleted. A total of fifty comments were categorized as dogmatic. Of these, 33 were made by the High Dogmatic group and 17 by the Low Dogmatic group. By Chi Square, after the application of Yate's Correction, this difference was found to be significant at the five percent level of confidence ($\text{Chi Square} = 4.50$).

These findings do not differentiate between the High and Low Rigid groups for after applying Yate's Correction, a Chi Square of .02 was obtained. This value of Chi Square is not significant.

In spite of the fact that the hypotheses were confirmed, it is believed that there are certain phases of this research which could have been improved. For instance, at the end of thirty minutes the problem was stopped whether or not the subject solved the problem. The writer feels that the methodology could be improved in future experimentation with the Denny Doodlebug Problem by extending the time limit. Second, while the problem was given under ego-threatening conditions the contents of the problem appeared ludicrous to some of the subjects who consequently remained in relatively good humor throughout the experiment. Minor revisions in the wording of the problem would overcome this. Third, the time was gauged by a standard wrist watch. It is believed that a stop watch would have given more exact data and would have discriminated better the differences between the groups investigated.

SUMMARY AND CONCLUSIONS

The primary aim of this study was to investigate certain cognitive aspects of dogmatism and to distinguish such aspects from rigidity. Dogmatism was defined as "(1) a closed cognitive system of thinking and believing about reality, (2) organized around a set of authoritarian beliefs and (3) providing a frame of reference for attitudes of intolerance and qualified tolerance toward people in general." (8, p. 3) It is a higher level of resistance to change than rigidity. Rigidity was defined as "... the inability to change one's set when the objective conditions demand it..." (5)

In the study the following hypotheses were tested:

- A. Concerning total time taken to solve the problem which involves both the overcoming of sets and their integration:
 - 1. Persons high in rigidity should take more time to complete the problem than persons low in rigidity.
 - 2. Persons high in dogmatism should take more time to complete the problem than persons low in dogmatism.
- B. Concerning the overcoming of specific sets:
 - 1. Persons known to be high in rigidity should take more time in the overcoming of the sets than persons low in rigidity.
 - 2. Persons high in dogmatism should take no more time in overcoming the sets than persons low in dogmatism.
- C. Concerning the integration of sets already overcome:
 - 1. Persons high in dogmatism should take more time in integrating the sets already overcome than persons low in dogmatism.

2. Persons high in rigidity should take no more time in integrating the sets already overcome than persons low in rigidity.

In order to test these hypotheses, the subjects were confronted with a cognitive task, The Denny Doodlebug Problem. The problem contained three separate sets which had to be overcome and then integrated by the subject before the correct solution could be reached. By the use of the problem, three types of measurements could be obtained: (1) total time taken to solve the problem, (2) time taken to overcome the specific sets and (3) time taken to solve the problem after the sets were overcome.

One hundred and nine subjects were given a battery of tests including The California Psychological Inventory Rigidity Scale and the Dogmatism Scale. From this group sixty subjects were chosen on the basis of their scores on the dogmatism and rigidity tests. Thirty of the subjects were high in dogmatism and thirty were low; thirty of the subjects were high in rigidity and thirty were low. These sixty subjects were then given the Denny Doodlebug Problem.

The results indicated that the High and Low Rigid groups did and the High and Low Dogmatic groups did not differ significantly from each other on the time taken to overcome the first set, time taken to overcome the second set, time taken to overcome the third set and the number of sets overcome within the first fifteen minutes. Furthermore, the High and Low

Dogmatic groups did and the High and Low Rigid groups did not differ significantly on the time taken to solve the problem after the second set was overcome. The reasons why this measure of integration was considered to be the best possible measure were discussed. The measure of dogmatism was supported by the analysis of qualitative data.

All of the hypotheses were considered to be confirmed and in addition, the following conclusions were reached:

- (1) The research provides experimental confirmation of the theoretical distinctions drawn between dogmatism and rigidity.
- (2) The research provides evidence that personality factors, in this case dogmatism and rigidity, can be demonstrated at the cognitive level.

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APPENDIX A

THE CALIFORNIA PSYCHOLOGICAL INVENTORY RIGIDITY SCALE*

by

Dr. Harrison G. Gough and Dr. Nevitt Sanford

1. I wish people would be more definite about things.
2. I don't like to work on a problem unless there is the possibility of coming out with a clear-cut and unambiguous answer.
3. I am in favor of a very strict enforcement of all laws, no matter what the consequences.
4. For most questions there is just one right answer once a person is able to get all the facts.
5. The trouble with many people is that they don't take things seriously enough.
6. It bothers me when something unexpected interrupts my daily routine.
7. I often start things I never finish.
8. I set a high standard for myself and feel others should do the same.
9. People who seem unsure and uncertain about things make me feel uncomfortable.
10. Most of the arguments or quarrels I get into are over matters of principle.
11. I don't like things to be uncertain and unpredictable.
12. I think that I am stricter about right and wrong than most people.
13. It is annoying to listen to a lecturer who cannot seem to make up his mind as to what he really believes.
14. Once I have my mind made up I seldom change it.
15. I always see to it that my work is carefully planned and organized.

APPENDIX A (Continued)

16. Our thinking would be a lot better off if we would just forget about words like "probably", "approximately", and "perhaps".
17. I like to have a place for everything and everything in its place.
18. I never make judgments about people until I am sure of the facts.
19. I am known as a hard and steady worker.
20. I find that a well-ordered mode of life, with regular hours and an established routine, is congenial to my temperament.
21. A strong person will be able to make up his mind even on the most difficult questions.
22. It is hard for me to sympathize with a person who is always doubting and unsure about things.

* This is from an unpublished manuscript by Drs. Gough and Sanford.

APPENDIX B

"THE DOGMATISM SCALE"

by

Dr. Milton Rokeach

1. A man who does not believe in some great cause has not really lived.
2. I am afraid of people who want to find out what I'm really like, for fear they'd be disappointed in me.
3. My blood boils whenever a person stubbornly refuses to admit he's wrong.
4. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
5. It is when a person devotes himself to an ideal or cause that he becomes important.
6. Man on his own is a helpless and miserable creature.
7. I'd like it if I could find someone who would tell me how to solve my personal problems.
8. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
9. It is sometimes necessary to resort to force to advance an ideal one strongly believes in.
10. My hardest battles are with myself.
11. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
12. To one who really takes the trouble to understand the world he lives in, it's a relatively easy matter to predict future events.
13. In times like these, a person must be pretty selfish if he considers primarily his own personal happiness.
14. At times I think I am no good at all.

APPENDIX B (Continued)

15. To achieve the happiness of mankind in the future it is sometimes necessary to put up with injustices in the present.
16. Communism and Catholicism have nothing in common.
17. The present is all too often full of unhappiness. It is the future that counts.
18. All too many people are failures and it is the system which is responsible for this.
19. If a man is to accomplish his mission in life it is sometimes necessary to gamble 'all or nothing at all.'
20. A person who thinks primarily of his own happiness is beneath contempt.
21. If I had to choose between happiness and greatness, I'd choose greatness.
22. There is nothing new under the sun.
23. It is only natural for a person to have a guilty conscience.
24. I have often felt that strangers were looking at me critically.
25. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
26. If given the chance I would do something that would be of great benefit to the world.
27. It is by returning to our forgotten and glorious past that real social progress can be achieved.
28. While I don't like to admit this even to myself, I sometimes have the ambition to become a great man, like Einstein, or Beethoven, or Shakespeare.
29. I have often felt that people say insulting and vulgar things about me.
30. To compromise with our political opponents is to be guilty of appeasement.
31. It's all too true that most people just won't practice what they preach.

APPENDIX B (Continued)

- 32. Once I get wound up in a heated discussion I just can't stop.
- 33. I am sure I am being talked about.
- 34. The United States and Russia have just about nothing in common.
- 35. 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.
- 36. It is better to be a dead hero than a live coward.

APPENDIX C

Ja53

1.

PART I

Please fill in the following information. DO NOT SIGN YOUR NAME.

Date _____ Sex _____ Date of Birth _____

City and state of birth _____ Religion _____

Race or national extraction _____

What is your year in college? _____

What is your major or planned major? _____

What career are you planning for? _____

What is your all-college grade point average? _____

(Note: A=4, B=3, C=2, D=1, F=0)

With what political party are you affiliated or which political party do you favor? _____

With what political party are your parents affiliated or which political party do they favor? _____

What is the approximate population of your home town? _____

What is the approximate yearly income of your father? Circle one number.

1. \$1000-2000

6. \$6000-7000

2. \$2000-3000

7. \$7000-8000

3. \$3000-4000

8. \$8000-9000

4. \$4000-5000

9. \$9000-10,000

5. \$5000-6000

10. Over \$10,000

INSTRUCTIONS

2.

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 with some of the statements, disagreeing 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 way you do.

Mark each statement in the left margin according to how you feel in each case. Write in 1 if you disagree with the statement, 2 if you agree with the statement in part, and 3 if you agree with the statement. Please mark every one.

1: I DISAGREE WITH THE STATEMENT

2: I AGREE WITH THE STATEMENT IN PART

3: I AGREE WITH THE STATEMENT

- _____ 1. Only a misguided idealist would believe that the United States is an imperialistic war-monger.
- _____ 2. A person must be pretty stupid if he thinks that the United States is doing all it can to prevent a third World War.

- _____ 3. It is perfectly clear to any intelligent person that America's economic program to help backward countries is really the same old imperialism in a new disguise.
- _____ 4. Anyone who is really for democracy knows very well that the only way for America to head off revolution and civil war in backward countries is to send economic aid.

- _____ 5. There were two kinds of people who fought Truman's Fair Deal program: the selfish and the stupid.
- _____ 6. It's the people who have no initiative and no ambition who want a welfare state.

- _____ 7. Any person with even normal intelligence can plainly see that the real reason America is rearming is to stop aggression.
- _____ 8. Make no mistake about it! The real reason America is re-arming is to head off a depression.

1: I DISAGREE WITH THE STATEMENT

3.

2: I AGREE WITH THE STATEMENT IN PART

3: I AGREE WITH THE STATEMENT

- _____ 9. It's the people who foolishly believe everything they read in the papers who are convinced that Russia is pursuing a ruthless policy of imperialistic aggression.
- _____ 10. It's the fellow travellers and Reds who try to tell us that Russia is interested only in peace.

- _____ 11. Any person with even a brain in his head knows that it would be dangerous to allow the United States to be run by men like General MacArthur.
- _____ 12. It is perfectly clear to all thinking persons that General MacArthur is one of the truly great men of our times.

- _____ 13. A person must be pretty stupid if he still believes in differences between the races.
- _____ 14. It's usually the trouble-makers who keep yelling that all races deserve equal rights in everything.

- _____ 15. Anyone who really knows his history knows very well that human freedom and private enterprise go together.
- _____ 16. History clearly shows that it is the private enterprise system which is at the root of depressions and wars.

- _____ 17. It's the reactionaries who try to make us believe that labor has too much power.
- _____ 18. It's the agitators or labor racketeers who yell the loudest about labor's right to strike.

- _____ 19. History will show that Churchill's victory over the Labor Party in 1951 was a step backward for the British people.
- _____ 20. History will show that Churchill's victory over the Labor Party in 1951 was a step forward for the British people.

- _____ 21. It's simply incredible that anyone should believe that socialized medicine will actually help solve our health problems.
- _____ 22. It's the gullible people who have been taken in by the propaganda line of the A.M.A.(American Medical Association) who are against socialized medicine.

- _____ 23. It's perfectly clear to all thinking persons that America's increasing friendliness toward Franco Spain has harmed the cause of democracy.
- _____ 24. Even a person of just average intelligence knows very well that the United States, in order to defend itself against aggression, should welcome all help -- including Franco Spain.

1: I DISAGREE WITH THE STATEMENT

2: I AGREE WITH THE STATEMENT IN PART

3: I AGREE WITH THE STATEMENT

- ____ 25. You just can't help but feel sorry for the person who believes that the world could exist without a Creator.
- ____ 26. It's the people who can't stand on their own two feet who have to believe in some supernatural being.

- ____ 27. The plain unadulterated fact is this! Chiang Kai-Shek is and always was a corrupt politician who never really cared about the Chinese people.
- ____ 28. This much is certain! The only way to defeat tyranny in China is to support Chiang Kai-Shek.

- ____ 29. It is perfectly ridiculous to think that Eisenhower will really try to strengthen American democracy.
- ____ 30. A person must be pretty ignorant if he thinks that Eisenhower is going to let the "big boys" run this country.

- ____ 31. Anyone who really knows what's going on will have to admit that America's rearmament program is designed to increase profits.
- ____ 32. The American rearmament program is clear and positive proof that the United States is willing to sacrifice to preserve its freedom.

FURTHER INSTRUCTIONS

Mark each of the following statements according to how much you agree or disagree with it. Write in +1, +2, +3, or -1, -2, -3, depending on how you feel in each case. Please mark every one.

+1: I AGREE A LITTLE

-1: I DISAGREE A LITTLE

+2: I AGREE PRETTY MUCH

-2: I DISAGREE PRETTY MUCH

+3: I AGREE VERY MUCH

-3: I DISAGREE VERY MUCH

- ____ 33. Labor unions should become stronger and have more influence generally.
- ____ 34. Even though many atheists become religious when old or dying, this does not constitute proof for God's existence.
- ____ 35. Whether it's alright to manipulate people or not, it is certainly alright when it's for their own good.
- ____ 36. A man who does not believe in some great cause has not really lived.
- ____ 37. Obedience and respect for authority are the most important virtues children should learn.

+1: I AGREE A LITTLE

-1: I DISAGREE A LITTLE

+2: I AGREE PRETTY MUCH

-2: I DISAGREE PRETTY MUCH

+3: I AGREE VERY MUCH

-3: I DISAGREE VERY MUCH

- _____ 38. I work under a great deal of tension.
- _____ 39. I wish people would be more definite about things.
- _____ 40. A person should be free to believe in whatever he wishes, even tho
our country's enemies may believe in the same things.
- _____ 41. I am afraid of people who want to find out what I'm really like,
for fear they'd be disappointed in me.
- _____ 42. A person who has bad manners, habits, and breeding can hardly
expect to get along with decent people.
- _____ 43. Most government controls over business should be continued and even
strengthened.
- _____ 44. I have nightmares every few nights.
- _____ 45. If a man fails to practice what he preaches, there's something
wrong with what he preaches.
- _____ 46. In certain things Stalin is right.
- _____ 47. My blood boils whenever a person stubbornly refuses to admit
he's wrong.
- _____ 48. If people would talk less and work more, everybody would be
better off.
- _____ 49. My sleep is fitful and disturbed.
- _____ 50. I don't like to work on a problem unless there is the possibility
of coming out with a clear-cut and unambiguous answer.
- _____ 51. The worst crime a person could commit is to attack publicly the
people who believe in the same thing he does.
- _____ 52. If a man believes that being questioned about his beliefs is un-
American then, whether he is a communist or not, he is justified
in refusing to testify before Congress.
- _____ 53. Men like Henry Ford or J.P. Morgan, who overcame all competition
on the road to success, are models for all young people to admire
and imitate.
- _____ 54. The business man and the manufacturer are much more important to
society than the artist and the professor.
- _____ 55. The fact that God exists is proven by the fact that so many millions
of people believe in him.
- _____ 56. It is when a person devotes himself to an ideal or cause that he
becomes important.

+1: I AGREE A LITTLE -1: I DISAGREE A LITTLE
+2: I AGREE PRETTY MUCH -2: I DISAGREE PRETTY MUCH
+3: I AGREE VERY MUCH -3: I DISAGREE VERY MUCH

6.

- _____ 57. Science has its place, but there are many important things that can never possibly be understood by the human mind.
- _____ 58. Whether Russian scientists are free or not, they have advanced our knowledge of nature.
- _____ 59. I frequently notice my hand shakes when I try to do something.
- _____ 60. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
- _____ 61. Man on his own is a helpless and miserable creature.
- _____ 62. I frequently find myself worrying about something.
- _____ 63. In general, full economic security is bad; most men wouldn't work if they didn't need the money for eating and living.
- _____ 64. Even in war, if a person refuses to testify before a Senate committee on the grounds that it violates his personal integrity, he is to be admired.
- _____ 65. Do unto others as they do unto you.
- _____ 66. I'd like it if I could find someone who would tell me how to solve my personal problems.
- _____ 67. 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.
- _____ 68. I get anxious and upset when I have to make a short trip away from home.
- _____ 69. I am in favor of a very strict enforcement of all laws, no matter what the consequences.
- _____ 70. Whether you approve of Communism or not, you have to admit that Karl Marx has made an important contribution to our understanding of economics.
- _____ 71. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
- _____ 72. I am often afraid of the dark.
- _____ 73. America may not be perfect, but the American Way has brought us about as close as human beings can get to a perfect society.
- _____ 74. For most questions there is just one right answer once a person is able to get all the facts.

+1: I AGREE A LITTLE -1: I DISAGREE A LITTLE
+2: I AGREE PRETTY MUCH -2: I DISAGREE PRETTY MUCH
+3: I AGREE VERY MUCH -3: I DISAGREE VERY MUCH

7.

- _____ 75. Whether one approves of filibustering or not, it is alright if it's for a good cause.
- _____ 76. The US, the Vatican, and Russia have a number of things in common.
- _____ 77. It is sometimes necessary to resort to force to advance an ideal one strongly believes in.
- _____ 78. No sane, normal, decent person could ever think of hurting a close friend or relative.
- _____ 79. I have often been frightened in the middle of the night.
- _____ 80. The trouble with many people is that they don't take things seriously enough.
- _____ 81. My hardest battles are with myself.
- _____ 82. I admire the courage of those who risk contempt proceedings for refusing to testify before a Senate committee on the grounds that being questioned about one's beliefs is not justified.
- _____ 83. Nobody ever learned anything really important except through suffering.
- _____ 84. Several times a week I feel as if something dreadful is about to happen.
- _____ 85. The reason we should show consideration for others is that they will reciprocate and show consideration for us.
- _____ 86. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
- _____ 87. I am a high-strung person.
- _____ 88. There are, after all, some things about Russia which we might well try to imitate.
- _____ 89. What the youth needs is strict discipline, rugged determination, and the will to work and fight for family and country.
- _____ 90. It bothers me when something unexpected interrupts my daily routine.
- _____ 91. To one who really takes the trouble to understand the world he lives in, it's a relatively easy matter to predict future events.
- _____ 92. An insult to our honor should always be punished.
- _____ 93. I am troubled by discomfort in the pit of my stomach every few days or oftener.
- _____ 94. I set a high standard for myself and I feel others should do the same.

+1: I AGREE A LITTLE
+2: I AGREE PRETTY MUCH
+3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
-2: I DISAGREE PRETTY MUCH
-3: I DISAGREE VERY MUCH

- _____ 95. The fallacy in Hitler's theories is shown by the fact that, after all, he lost the war.
- _____ 96. In times like these, a person must be pretty selfish if he considers primarily his own personal happiness.
- _____ 97. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.
- _____ 98. I have periods of such great restlessness that I cannot sit long in a chair.
- _____ 99. People who seem unsure and uncertain about things make me feel uncomfortable.
- _____ 100. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

Date _____ Sex _____ Date of Birth _____
Race or national extraction _____ Religion _____
City and state of birth _____

PART II

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 way you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write in +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 PRETTY MUCH

-2: I DISAGREE PRETTY MUCH

+3: I AGREE VERY MUCH

-3: I DISAGREE VERY MUCH

_____ 101. At times I think I am no good at all.

_____ 102. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feeble-minded people.

_____ 103. I am easily embarrassed.

_____ 104. Most of the arguments or quarrels I get into are over matters of principle.

_____ 105. Appreciation of others is a healthy attitude, since it is the only way to have them appreciate you.

_____ 106. To achieve the happiness of mankind in the future it is sometimes necessary to put up with injustices in the present.

_____ 107. Homosexuals are hardly better than criminals and ought to be severely punished.

_____ 108. I feel anxiety about something or someone almost all the time.

+1: I AGREE A LITTLE
+2: I AGREE PRETTY MUCH
+3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
-2: I DISAGREE PRETTY MUCH
-3: I DISAGREE VERY MUCH

10.

- _____ 109. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.
- _____ 110. Zootsuiters prove that when people of their type have too much money and freedom, they just take advantage and cause trouble.
- _____ 111. Communism and Catholicism have nothing in common.
- _____ 112. Every person should have complete faith in some supernatural power whose decisions he obeys without question.
- _____ 113. The future is too uncertain for a person to make serious plans.
- _____ 114. I think that I am stricter about right and wrong than most people.
- _____ 115. What is wrong with socialization, as seen in England, is that it results in severe rationing.
- _____ 116. 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.
- _____ 117. The present is all too often full of unhappiness. It is the future that counts.
- _____ 118. Some people are born with an urge to jump from high places.
- _____ 119. I must admit that I have at times been worried beyond reason over something that really did not matter.
- _____ 120. It is annoying to listen to a lecturer who cannot seem to make up his mind as to what he really believes.
- _____ 121. All too many people are failures and it is the system which is responsible for this.
- _____ 122. One trouble with Jewish business men is that they stick together and prevent other people from having a fair chance in competition.
- _____ 123. People can be divided into two distinct classes: the weak and the strong.
- _____ 124. I sometimes feel that I am about to go to pieces.
- _____ 125. The reason you should not criticize others is that they will turn around and criticize you.
- _____ 126. If a man is to accomplish his mission in life it is sometimes necessary to gamble 'all or nothing at all'.
- _____ 127. I am easily awakened by noise.
- _____ 128. The worst danger to real Americanism during the last 50 years has come from foreign ideas and agitators.

+1: I AGREE A LITTLE
 +2: I AGREE PRETTY MUCH
 +3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
 -2: I DISAGREE PRETTY MUCH
 -3: I DISAGREE VERY MUCH

- _____ 129. I often start things I never finish.
- _____ 130. There seems to be a lump in my throat much of the time.
- _____ 131. A person who thinks primarily of his own happiness is beneath contempt.
- _____ 132. Some day it will probably be shown that astrology can explain a lot of things.
- _____ 133. I have diarrhea once a month or more.
- _____ 134. Once I have my mind made up I seldom change it.
- _____ 135. It's better not to talk about people behind their back, because sooner or later it gets back to them, and you get a reputation as a gossip.
- _____ 136. I can hardly imagine myself marrying a Jew.
- _____ 137. If I had to choose between happiness and greatness, I'd choose greatness.
- _____ 138. Wars and social troubles may someday be ended by an earthquake or flood that will destroy the whole world.
- _____ 139. I find it hard to keep my mind on a task or job.
- _____ 140. I always see to it that my work is carefully planned and organized.
- _____ 141. There is nothing new under the sun.
- _____ 142. It would be a mistake ever to have Negroes for foremen and leaders over Whites.
- _____ 143. No weakness or difficulty can hold us back if we have enough will power.
- _____ 144. I am worried about sex matters.
- _____ 145. Radio and TV programs should employ only loyal Americans, so as not to lose their audiences.
- _____ 146. It is only natural for a person to have a guilty conscience.
- _____ 147. Sometimes, when embarrassed, I break out in a sweat which annoys me greatly.
- _____ 148. There may be a few exceptions, but in general, Jews are pretty much alike.
- _____ 149. It is best to use some prewar authorities in Germany to keep order and prevent chaos.

+1: I AGREE A LITTLE
+2: I AGREE PRETTY MUCH
+3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
-2: I DISAGREE PRETTY MUCH
-3: I DISAGREE VERY MUCH

- _____ 150. Our thinking would be a lot better off if we would just forget about words like 'probably', 'approximately', and 'perhaps'.
- _____ 151. I have often felt that strangers were looking at me critically.
- _____ 152. Most people don't realize how much our lives are controlled by plots hatched in secret places.
- _____ 153. Life is a strain for me much of the time.
- _____ 154. I like to have a place for everything and everything in its place.
- _____ 155. The trouble with Communism is that, in all of human history, it has never worked.
- _____ 156. If Negroes live poorly, it's mainly because they are naturally lazy, ignorant and without self-control.
- _____ 157. To compromise with out political opponents is dangerous because it usually leads to the betrayal of our own side.
- _____ 158. Human nature being what it is, there will always be war and conflict.
- _____ 159. I cannot keep my mind on one thing.
- _____ 160. Taxation without representation is wrong, because sooner or later people rebel.
- _____ 161. If given the chance I would do something that would be of great benefit to the world.
- _____ 162. The trouble with letting Jews into a nice neighborhood is that they gradually give it a typical Jewish atmosphere.
- _____ 163. Almost every day something happens to frighten me.
- _____ 164. It is by returning to our forgotten and glorious past that real social progress can be achieved.
- _____ 165. Generosity is a healthy way of life, because he who casts his bread upon the waters shall have it returned ten-fold.
- _____ 166. While I don't like to admit this even to myself, I sometimes have the ambition to become a great man, like Einstein, or Beethoven, or Shakespeare.
- _____ 167. I feel uneasy indoors.
- _____ 168. Now that a new world organization is set up, America must be sure that she loses none of her independence and complete power as a sovereign nation.
- _____ 169. I am known as a hard and steady worker.

+1: I AGREE A LITTLE
+2: I AGREE PRETTY MUCH
+3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
-2: I DISAGREE PRETTY MUCH
-3: I DISAGREE VERY MUCH

13.

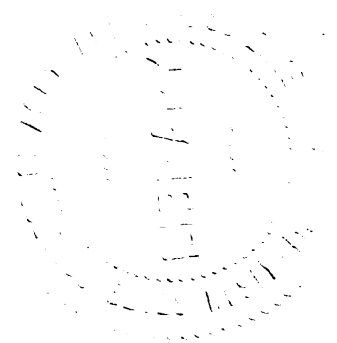
- _____ 170. The American economic and political system is preferable to the Russian, because the Soviet system means long hours at poor wages.
- _____ 171. I have often felt that people say insulting and vulgar things about me.
- _____ 172. Familiarity breeds contempt.
- _____ 173. I worry quite a bit over possible misfortunes.
- _____ 174. I find that a well-ordered mode of life, with regular hours and an established routine, is congenial to my temperament.
- _____ 175. The reason that criticism is a poor policy is that it prevents you from making and keeping friends.
- _____ 176. To compromise with our political opponents is to be guilty of appeasement.
- _____ 177. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.
- _____ 178. It makes me nervous to have to wait.
- _____ 179. A strong person will be able to make up his mind even on the most difficult questions.
- _____ 180. I am afraid of finding myself in a closet or a small closed place.
- _____ 181. It's all too true that most people just won't practice what they preach.
- _____ 182. Nowadays more and more people are prying into matters that should remain personal and private.
- _____ 183. It is hard for me to sympathize with a person who is always doubting and unsure about things.
- _____ 184. Once I get wound up in a heated discussion I just can't stop.
- _____ 185. Negroes deserve equal treatment, because there is as yet no scientific evidence showing that there is any real difference in body odors.
- _____ 186. I am sure I am being talked about.
- _____ 187. The wild sex-life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.
- _____ 188. I never make judgments about people until I am sure of the facts.
- _____ 189. The United States and Russia have just about nothing in common.

+1: I AGREE A LITTLE
+2: I AGREE PRETTY MUCH
+3: I AGREE VERY MUCH

-1: I DISAGREE A LITTLE
-2: I DISAGREE PRETTY MUCH
-3: I DISAGREE VERY MUCH

14.

- _____ 190. The reason it's better to let people make up their own minds is because they won't follow your advice anyway.
- _____ 191. 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.
- _____ 192. I don't like things to be uncertain and unpredictable.
- _____ 193. It is better to be a dead hero than a live coward.
- _____ 194. You should only criticize others when you are above reproach yourself.





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