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The effects of readership selectivity on the reading of controversial material dealing with the reader's personal prejudices : a test of the theory of cognitive dissonance

John Marshall Tucker

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THE EFFECTS OF READERSHIP SELECTIVITY ON THE
READING OF CONTROVERSIAL MATERIAL DEALING
WITH THE READER'S PERSONAL PREJUDICES:
A TEST OF THE THEORY OF COGNITIVE DISSONANCE

A Thesis

Submitted to the Graduate Faculty
of the University of Richmond
in Candidacy
for the Degree of

Master of Arts in Psychology

by

John Marshall Tucker

August, 1967

THE EFFECTS OF READERSHIP SELECTIVITY ON THE
READING OF CONTROVERSIAL MATERIAL DEALING
WITH THE READER'S PERSONAL PREJUDICES:
A TEST OF THE THEORY OF COGNITIVE DISSONANCE

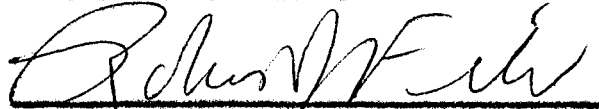
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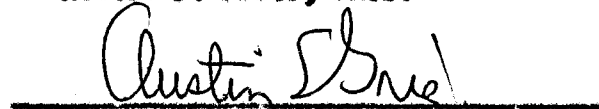
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PREFACE

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CHAPTER I
INTRODUCTION

In order to understand the nature of this thesis, a general introductory discussion of cognitive dissonance theory based on Leon Festinger's book, A Theory of Cognitive Dissonance, published in 1957, is in order.

Dissonance theory was the outgrowth of an attempt to integrate theoretically a large amount of research literature dealing originally with the area of "communication and social influence." As this theoretically integrating process developed, it was found that other seemingly different areas of data could also be included.

The underlying idea behind the theory is the notion that the human organism attempts "to establish internal harmony, consistency, or congruity among his opinions, attitudes, knowledge, and values." This idea was formulated into the concepts of dissonance, consonance, and dissonance reduction. The terms "dissonance" and "consonance" pertain to relations which are said to exist between pairs of cognitive "elements" or cognitions (i.e., the things that a person knows about himself and his environment). A dissonant relation may be said to exist when cognitive elements are inconsistent with or in contradiction to each other. A consonant relationship exists when these cognitive elements are in agreement with each other. With these definitions established, Festinger has made two basic hypotheses for dissonance theory. The first hypothesis states that the existence of dissonance

is psychologically uncomfortable and motivates the individual to try to reduce the dissonance and achieve consonance. The second hypothesis states that when dissonance is present, in addition to trying to reduce that dissonance, the individual will actively avoid any information or situations which would be likely to increase the dissonance.

Thus, as Festinger states it, the core of dissonance theory holds that:

1. There may exist dissonant or "non-fitting" relations among cognitive elements.
2. The existence of dissonance produces pressures to reduce the dissonance and to avoid increases in dissonance.
3. Manifestations of the operation of these pressures to reduce the dissonance include behavior changes, changes of cognition, and circumspect exposure to new information and new opinions.

It may be helpful here to cover the situations Festinger presents which imply the existence of cognitive dissonance. Dissonance usually exists after a decision has been made between two alternatives; after overt behavior at variance with private opinion is solicited by offering rewards or threatening punishment; with forced or accidental exposure to new information which creates cognitive elements that are disharmonious with existing cognitions; after open expression of disagreement in a group which produces cognitive dissonance in the group members; and when an event produces a uniform reaction in everyone because it is so compelling as to produce identical dissonance in many people because, for example, it invalidates beyond question some widely held belief.

Since the presentation of the theory of cognitive dissonance by Festinger in 1957, it has received much controversial attention. The theory has become quite popular because of its apparent simplicity and adaptability to many situations. However, critical reviews of the evolved research exemplified by that of Chapanis, Natalia, and Alphonse (1964) find the evidence supporting cognitive dissonance theory as applied to complex social events to be inconclusive. Their major criticisms are that the experimental manipulations are usually so complex and that the crucial variables so confounded that no really valid conclusions can be derived from the data; and that a number of fundamental methodological inadequacies exist in the analysis of results which invalidate the findings. They also state that the majority of cognitive dissonance formulations are concerned with what happens after a person makes a decision.

The purpose of this thesis is to test the theory of cognitive dissonance as it relates to a reader's selectivity in reading controversial material involving his personal prejudices or attitudes. Festinger states that forced or accidental exposure to new information which tends to increase dissonance will frequently result in misinterpretation and misperception of the new information by the individual thus exposed in an effort to avoid a dissonance increase. Therefore, cognitive dissonance theory would predict that a person's prejudiced attitude would negatively effect his reading comprehension on material which was disharmonious with his attitude. The dissonance situation examined here is forced or accidental exposure to new information which creates cognitive elements that are dissonant with existing

cognitions. When one is involuntarily exposed to information that will increase dissonance, in addition to the usual procedures whereby an individual may reduce dissonance, Festinger states that other quick defensive processes which prevent the new cognition from ever becoming firmly established are set up. Misinterpretation, misperception and inattention to dissonant material while reading are three such defenses which could occur during the reading of dissonant material; and 'selective forgetting' should be evidenced on a comprehension test of that material. The process of selective forgetting of cognitive elements as an effective means of dissonance reduction was stated by Festinger to have been insufficiently explored. With a recent review of the research in this area the prior statement remains true, thus giving additional purpose to this thesis.

Before proceeding to the actual design of this thesis, a review of applicable research will be presented.

CHAPTER II

REVIEW OF APPLICABLE RESEARCH

The investigation of the learning and forgetting of controversial material by Levine and Murphy (1943) is the first reference study of historical interest to this thesis. Based on the results of prior investigations by such researcher's as Watson and Hartmann (1939), Clark (1940), Edwards (1941), and Wallen (1942), Levine and Murphy realized that the functions of learning and perception were not determined by just cognitive functions alone, i.e., reaction to a learning or perceiving situation involves the complete individual with his own values, desires, needs and own frame of reference. Thus, the phenomenon of selective perception and recall had been indicated by these prior studies; "an individual notes and remembers material which supports his social attitudes better than material which conflicts with these attitudes." Levine and Murphy were interested in extending the study of the learning and forgetting processes and in developing appropriate learning and forgetting curves. They found, in essence, that material which is harmonious to either pro-communists or anti-communists is learned more rapidly and forgotten more slowly than material which runs counter to the attitudinal bias of the subject. Levine and Murphy most clearly demonstrated this selective learning effect. However, it must be mentioned here that after critically examining these studies; they were found to be rather unsophisticated

and poorly controlled by today's standards. Therefore, their results cannot be considered conclusively demonstrated.

Alper and Korchin (1952) further investigated the area of study done by Clark (1940) which was exploring the recall differences between females and males on controversial material supposedly relevant to attitudes which one would identify with because of his sex. They found differences between the male and female recall scores.

Then Taft (1954) examined the "selective recall and memory distortion of favorable and unfavorable material." He found that in learning an orally delivered piece of material, negro delinquents, for whom the material had been designed to induce ego involvement, had superior immediate recall to white delinquents on both favorable and unfavorable items. The negro delinquents had an even more superior delayed recall, but only on the favorable items. The white delinquents were found to distort more items.

With the growing empirical support of the assumption that individuals learn better and more easily that material which is congenial with their own beliefs and attitudes, Jones and Aneshansel (1956) investigated conditions under which material that was uncongenial or "contravaluent" to an individual's attitudes might be learned successfully. They found "that pro-segregationists will learn anti-segregation statements better than anti-segregationists when a subsequent debate is anticipated. Without such an anticipation, however, the customary finding holds--i.e. the anti-segregationists make better progress than pro-segregationists in learning the congenial material."

In further investigating the conditions under which learning and

retention are not autistic, Jones and Kohler (1958) studied "the effects of plausibility on the learning of controversial statements." The Assumption being tested here is that a person will not identify with a ridiculous, extreme argument in the direction of his own belief, while he would be likely to learn such a "ludicrous overstatement" of the differing position because "one's own self-righteousness is enhanced by indications of the implausibility of the opposition; therefore, such indications will be retained and cherished as self-supportive." They found that individuals learned plausible congenial statements and implausible uncongenial statements better than they learned plausible uncongenial and implausible congenial statements. The authors state that even though the learning of a controversial statement cannot be predicted solely from the direction of the argument, their results still support the basic assumption that cognitive processes operate so as to promote the constancy of attitude and belief.

Kleck and Wheaton (1967) were interested in studying the area of how individual differences affect the dissonance reduction processes. They chose to examine the applicable personality dimension of open-and closed-mindedness as measured by Rokeach's Dogmatism Scale (Form E) as a logical first step. In testing a two week recall on consistent and inconsistent information, they found that dogmatic subjects showed less recall of inconsistent information than did open-minded subjects. They state however, that using the type of recall data collected, it was not possible to say at what point this deficit for recall of inconsistent information had taken place. They suggest that the decreased recall could be a function of inattention to dissonant information while

reading, instead of a memory loss experienced over time since general memory ability and intellectual functioning per se were controlled and the total number of items recalled did not differ. They state that this question needs to be explored further.

Therefore, while the research literature provides evidence of selective learning, much of this evidence has been inconclusively demonstrated; and there are no examples of readership selectivity as demonstrated by measuring the amount of (immediate) reading comprehension.

CHAPTER III

DESIGN AND PROCEDURE

As an opening statement it should be said that the experiment had two phases: the first phase was an attitudinal survey; and the second phase was the testing situation.

I. THE FIRST PHASE: ATTITUDINAL SURVEY

Subjects. The subjects were male and female college students enrolled in introductory and educational psychology courses during the 1967 summer session at the University of Richmond. Eighty subjects (ranging from those just entering into their first year of college to students who had graduated from college) were administered three forms of the Thurstone Attitude Scales. The three attitudinal areas were related to belief in the reality of God, Negroes, and attitude towards the Bible. Three attitudinal areas were surveyed in order to help conceal the measurement of the actual attitudinal area to be used during the testing phase of the experiment, and to increase the probability of finding an adequate distribution of scores for the selection of three criteria groups of 15 or more subjects each. The three criteria groups being a pro-prejudiced group and an anti-prejudiced group to be used as subjects during the testing phase, and a neutral group to be used as a control in selecting equated test questions.

In order to further disassociate the attitudinal survey phase from the testing phase of the experiment, a fellow graduate student administered the attitude scales one week prior to the actual testing day. The survey was introduced to the subjects as his project. Directions were then given to the subjects which lead them to believe that the graduate student was interested in surveying contemporary college student attitudes on the various controversial issues (see Appendix A).

Attitudinal area used. The Thurstone scale on Attitude Toward God produced an adequate distribution of scores and an appropriate number of subjects in the three criteria groups. Median scale scores ranged from a low of 1.5 to a high of 9.9. The overall mean of the scores for this group was 7.5 (see Table I) indicating that the sample was more favorable to the reality of God concept.

Selection of controversial material. Two articles dealing with opposing conceptions of God were obtained from material used in an Unitarian series of discussion programs dealing with controversial religious issues. Five competent judges familiar with dissonance theory judged the material to be obviously disharmonious, equal in affective tone, and likely to produce dissonance. The pro-material dealt with God as an Infinite, Loving, All-wise, All-powerful, Living Person without human form and was approximately 463 words in length. The anti-material dealt with God as an idea which has been an enemy of man and was approximately 523 words in length.

II. THE SECOND PHASE: DESIGN AND ADMINISTRATION OF THE READING TEST

One week after the attitudinal survey was completed, the examiner administered a reading test to the four psychology classes which contained the subjects to be measured. Seventy of the original eighty subjects completed this stage. The test format was basically designed after a regular reading test such as the Iowa Silent Reading Tests (Part A and B). The test was composed of two reading selections using the controversial articles mentioned above as the reading material. After each reading selection, multiple-choice type comprehension questions were asked. The pro-material had 14 questions; the anti-material had 16 questions. Each comprehension question offered a correct answer and three alternative answers. Three competent judges familiar with test construction had rated six alternative answers in order to obtain the best three alternative answers to be offered with each comprehension question. The comprehension questions and answers were randomly ordered (see Appendix D).

Subjects were told that the test was to see how rapidly and well they could read the material. In front of the class, a large clock with hour, minute, and second hands was set for twelve o'clock. Subjects were directed to record their cumulative time after completing each phase of the test (see Appendix C). Thus, the test was administered as an independent reading test; and subjects recorded their own reading times, in order that no specific time limit would corrupt the comprehension scores obtained.

The order of presentation of the material was controlled by estimating the number of criteria subjects contained in each class from the attitudinal survey frequency data, and reversing the order of presentation to each class in order that half of each of the three criteria groups would get a counterbalanced order. Controlling for the order of presentation excluded any "warm-up" reading effect.

The combined factors of losses due to absences and the counterbalancing order of presentation procedures yielded a neutral group matched for order of presentation, age, and year in school of 20 subjects (12 females; 8 males) with a mean scale score of 7.2. This group was used to equate the comprehension questions of the two parts of the reading test for number and item difficulty (see Table III). This process yielded ten matched comprehension questions for each reading selection. Question numbers 2, 4, 10, and 12 were omitted from the pro-selection; questions 3, 4, 8, 9, 13, and 16 were eliminated from the anti-material.

Selection of subjects used in the pro-prejudiced and anti-prejudiced groups. There were thirty subjects selected from the opposite ends of the attitudinal survey distribution who met certain selection criteria: (1) completion of both phases of the experiment; (2) scores falling within the upper or lower 25 percent of the distribution (scores falling 8.8 and above would be in the upper 25 percent of the distribution and scores falling 6.7 or below would be within the lower 25 percent of the distribution); (3) the order of presentation for the group remaining counterbalanced; and (4) the group remaining basically equated to the other group for age and year in college.

Fifteen subjects (9 males and 6 females) were found which met these criteria for the anti-prejudiced group (hereafter called "antis"). Order of presentation for this group was: 8 received pro-material first and 7 received the anti-material first. The "anti" group attitude scale scores ranged from 1.5 to 6.5 with a mean score of 4.9 (see Table II). The 4.9 attitude score falls within the "Disbelief in God" classification given in the "Instructions for Using the Scale" (see Appendix B).

There were 15 subjects (5 males and 10 females) who met the criteria for the pro-prejudiced group (hereafter called "pros"). Order of presentation for this group was: 8 received the pro-material first and 7 received the anti-material first. The "pro" group attitude scale scores ranged from 8.8 to 9.9 with a mean score of 9.9 (see Table III). The 9.2 attitude score falls within the "Strong religious attitude toward God" classification (see Appendix B).

III. STATEMENT OF SPECIFIC HYPOTHESES

Assuming that warm-up effect and material differences have been controlled, dissonance theory would predict that:

1. The pro-prejudiced group would comprehend the pro-material better than they comprehend the anti-material.
2. Similarly, the anti-prejudiced group would comprehend the anti-material better than they comprehend the pro-material.

Assuming that the two groups are equal as to abilities and that the materials have been equated, dissonance theory would further predict that:

3. The pro-prejudiced group would comprehend the pro-material better than the anti-prejudiced group would comprehend the pro-material.

4. Similarly, the anti-prejudiced group would comprehend the anti-material better than the pro-prejudiced group comprehend the anti-material.

CHAPTER IV

RESULTS

The following data analysis is based on the comprehension test scores of the "pro" and "anti" subjects. Each subject had a possible score of 10 correct on each of the two reading selections. Test score results are based on the number of correct answers each subject had on each of the two types of reading material. The .05 level of significance was used to analyze the results.

An analysis of variance was conducted on the comprehension scores of the "pros" and the "antis" on the pro-material and the anti-material (see Table IV). There were no significant main effects. There was a significant interaction between attitude and kind of material ($F = 9.69, p < .01$). Tests on the simple main effects discovered that there was a significant difference between the comprehension scores of the pros on the two types of material ($F = 6.72, p < .05$). Therefore, the first hypothesis is confirmed in that the "pros" comprehended the consonance material better than they comprehended the dissonant material. The differences between the comprehension scores of the "antis" on the two types of material did not quite reach the level of significance, but were in the expected direction ($F = 3.25, p < .10$). Thus, the second hypothesis is not statistically confirmed. However, the "pros" significantly comprehended the pro-material better than the "antis" comprehended the pro-material ($F = 4.24, p < .05$). Thus, the third hypothesis is confirmed. The

"antis" did not significantly comprehend the anti-material better than the "pros" did, but these results were also in the expected direction ($F = 3.83$, $p < .10$). Therefore, the fourth hypothesis was not statistically confirmed under the .05 level of confidence which had been set.

CHAPTER V
DISCUSSION

In view of the fact that two of the hypotheses were confirmed and that the other two hypotheses approached significance, the results support dissonance theory as it relates to readership selectivity in reading controversial material involving the reader's personal prejudices or attitudes. Festinger stated that forced or accidental exposure to new information which tends to increase dissonance will frequently result in misinterpretation and misperception of the new information by the individual thus exposed in an effort to avoid a dissonance increase. The dissonance situation which was examined here was forced or accidental exposure to new information which creates cognitive elements that are dissonant with existing cognitions.

Existing cognitions is defined in this thesis as the individual's attitude toward the reality of God as measured by the Thurstone Scale. The material dealing with the two conceptions of God was judged to be obviously disharmonous. Therefore, an individual with a strong religious belief would find the information contained in the disharmonous material dissonance producing by definition. The same would hold true for a disbeliever. Subjects are seen to have been forced or accidentally exposed to this information for the reason that they were required to take part in the experiment during class. Their

teachers had allowed the examiner to use class time for the experiment; and they were given the material without choice. It can only be assumed that some of the material be considered "new." There was no test of this assumption.

A discussion of the pertinent variables controlled is now in order.

The difference in comprehension scores cannot be attributed to comprehension ability of one group over the other. There were no differences in the total number of items comprehended by each group. The superiority of comprehension by the "pros" on the pro-material is balanced by an inferiority of comprehension on the anti-material; and the superiority of comprehension by the "antis" on the anti-material is balanced by an inferiority of comprehension on the pro-material. Therefore, it is unlikely that decreased comprehension for dissonant material is due to differences in general reading ability or to intellectual functioning per se since subjects were used as their own controls and there were no differences between the total number of questions comprehended.

The comprehension score differences cannot be attributed to differences between the comprehension difficulty of the two types of material. The first control made for this variable was in using the neutral group as a means of equating the comprehension questions. The fact that there were no total comprehension differences between the two types of material supports the conclusion that the two types of material were equated for comprehension difficulty.

The conclusion that "warm-up" effect and order of presentation did not affect the comprehension score differences during analysis is based on the fact that the order of presentation was balanced in the distribution of tests for each group. Nevertheless, an inspection of reading times was done to see if these effects had occurred. There were no differences between the total reading times for the two groups between the two types of material; nor, for the two groups over the material. The reading time analysis was not reported in Chapter IV because the validity of the measurement is questionable for three reasons: (1) there is inaccuracy involved in the subjects biased recording of his own time; (2) the accuracy of the clock in use is questionable; and, (3) a few subjects recorded their times incorrectly. It can only be said then, that there was a trend for readers to 'slow down' on the section which they read last and that this trend appeared counterbalanced by the order of presentation.

The groups were basically balanced for the variables of age and year in school. By serving as their own controls in the repeated measures factorial design used for the analysis, it is unlikely that these variables caused the significant comprehension differences in this thesis. But, in view of the support given to dissonance theory by this thesis as related to the readership selectivity, it would be interesting to see if these variables could produce differences.

The variable of sex was not balanced between the groups. The "pros" consisted of 10 females and 5 males while the "antis" consisted of 6 females and 9 males. It is possible that sex could be a factor influencing some of the differences between the comprehension scores.

This factor might explain why the "pros" (majority being females) significantly comprehended more of the pro-material than the "antis" (majority being males) did. Yet, the "pros" did not comprehend the "anti" material significantly less. But, again the results are in the expected direction. The "pros" do, of course, show a significant comprehension difference between the two types of material. Perhaps, the sex factor might explain why the "antis" did not reach significance among their comprehension score differences between the two types of material. The assumption to be further investigated here is that females show the dissonance reduction effect (which was clearly demonstrated) more than males do.

A better explanation for the "antis" comprehension differences not reaching significance between the two types of material and the "antis" not quite comprehending the anti-material better than the "pros" did might be that the "antis" were not as extreme disbelievers as the "pros" were believers. Both groups were in the criterion extremes of the distribution measured by the Thurstone Attitude Scale on the Reality of God, but the "antis" mean scale score fell into the classification of disbelievers in God, while the "pros" mean scale score fell into the strong religious believers in God classification. The extremeness of belief might possibly be a variable which is required to significantly demonstrate the readership selectivity being measured here.

It is possible that both sex and extremeness of belief are variables which influence the amount of comprehension differences which can be significantly demonstrated.

Due to the differences which were significant, the results of this thesis also pertain to the question posed by Kleck and Weston (1967) of whether inattention to dissonant information while reading dissonant material rather than a memory loss experienced over time could cause a deficit in testing the recall of dissonant material two weeks after the material was read. Since individuals tend to misinterpret, misperceive, and/or are inattentive to dissonant information while reading, it is possible that this would be the factor influencing a delayed deficit on recalling dissonant material as compared to recalling consonant material.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Subjects who were strong believers in the reality of God and those who disbelieved in God were tested in respect to their reading comprehension on dissonant and on consonant controversial material involving the concept of God. It was found that the strong believers comprehended the consonant material better than they comprehended the dissonant producing material. They also comprehended this consonant material better than the disbelievers comprehended it (this material was dissonant producing to the disbelievers). The disbelievers had a tendency to comprehend the material which was consonant to their attitude better than they did the dissonant producing material. They also showed a tendency to comprehend their consonant material better than the strong believers did. But, these last two results were not statistically significant at the .05 level of significance.

These results were interpreted as supporting cognitive dissonance theory as it relates to a reader's selectivity in reading controversial material involving his own personal prejudices or attitudes. When forced or accidentally exposed to new information which increases dissonance, the individual thus exposed will misperceive, misinterpret, or be inattentive to that new information in an effort to avoid a dissonance increase.

TABLES

TABLE I

FREQUENCY DATA FOR THE ORIGINAL 80 SUBJECTS
ON THE ATTITUDE TOWARD GOD SCALE

<u>Lower 25 Percent</u>	<u>Middle Range</u>		<u>Upper 25 Percent</u>
1.5	6.9	7.9	8.8
4.2	7.1	7.9	8.8
4.4	7.1	7.9	8.8
4.4	7.1	7.9	8.8
4.4	7.1	8.0	8.8
4.5	7.1	8.0	9.2
4.5	7.1	8.0	9.2
5.5	7.3	8.2	9.2
5.5	7.3	8.2	9.2
5.5	7.4	8.2	9.2
5.5	7.6	8.2	9.2
5.5	7.6	8.4	9.2
5.7	7.6	8.4	9.2
6.0	7.6	8.4	9.2
6.1	7.6	8.4	9.5
6.4	7.6	8.4	9.5
6.5	7.6	8.8	9.5
6.6	7.8	8.8	9.6
6.7	7.8	8.8	9.9

TABLE II

FREQUENCY DATA FOR CRITERIA GROUPS ON THE
ATTITUDE TOWARD GOD SCALE

Pro-Group	Anti-Group
8.8	1.5
8.8	4.2
8.8	4.4
8.8	4.4
9.2	4.4
9.2	4.5
9.2	4.5
9.2	5.5
9.2	5.5
9.2	5.5
9.5	5.5
9.5	5.5
9.5	6.0
9.6	6.1
9.9	6.5

TABLE III

TEST ITEM DIFFICULTY COMPARISON BASED ON NEUTRAL GROUP SCORES

Pro-Material Test		Number equated to from Anti-Material Test	Anti-Material Test	
Question Number	Number of Wrong out of 20		Question Number	Number of Wrong out of 20
1	10	14	1	6
2 omitted	3		2	7
3	8	15	3 omitted	0
4 omitted	15		4 omitted	12
5	2	5	5	2
6	6	1	6	9
7	13	12	7	1
8	9	10	8 omitted	5
9	7	2	9 omitted	5
10 omitted	3		10	9
11	9	6	11	9
12 omitted	4		12	13
13	1	7	13 omitted	7
14	9	11	14	10
			15	8
			16 omitted	5

TABLE IV

ANALYSIS OF VARIANCE ON COMPREHENSION OF THE "PROS" AND
THE "ANTIS" ON THE PRO-MATERIAL AND THE ANTI-MATERIAL

AB Summary Table

		MATERIAL			
		pro	anti		
		b ₁	b ₂		
ATTITUDE	pro a ₁	106	83	189	A ₁
	anti a ₂	86	102	188	A ₂
		192	185	377	
		B ₁	B ₂		

ANALYSIS OF VARIANCE OF COMPREHENSION SCORES

Source of Variation	SS	df	MS	F
<u>Between subjects</u>	<u>102.68</u>	<u>29</u>		
A (attitude)	.01	1	.01	
Subj w. groups	102.67	28	3.66	
<u>Within subjects</u>	<u>99.50</u>	<u>30</u>		
B (material)	.81	1	.81	
AB	25.36	1	25.36	9.69**
B x subj w. groups	73.33	28	2.62	
<u>Total</u>		<u>59</u>		

**p < .01

Critical values: F_{.95} (1,28) = 4.20
F_{.99} (1,28) = 7.64

TABLE V

SIMPLE MAIN EFFECTS FOR FACTORS A AND B

 Simple main effects for factor A:

$$\text{at level } b_1: \quad \frac{13.33}{3.114} = 4.25^*$$

$$\text{at level } b_2: \quad \frac{12.04}{3.114} = 3.83$$

Simple main effects for factor B:

$$\text{at level } a_1: \quad \frac{17.63}{2.62} = 6.72^*$$

$$\text{at level } a_2: \quad \frac{8.54}{2.62} = 3.25$$

$$*p < .05$$

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APPENDIXES

APPENDIX A

ORAL DIRECTIONS GIVEN WITH THE
ADMINISTRATION OF THE ATTITUDE SCALES

"We are making a survey about current college student attitudes on various controversial subjects. We are interested in how college students truely feel about such issues as the existence of God and the Negro. In order for us to obtain a correct measure of these attitudes, it is necessary that each one of you express your true personal attitude and not an attitude that you think you are expected to express. Therefore, let me say that no judgement will be made as to whether your attitude is right or wrong...(Pause)... and let me insure you that all information you give will be kept strictly confidential."

HAND OUT THE ATTITUDE SCALES

"Please read the directions for each attitude scale as these directions differ slightly for each of them. There is no time limit, but it shouldn't take you very long to complete them. Please write your name, age, sex and year in college in the spaces provided under personal facts. Then start."

APPENDIX B**THE THURSTONE ATTITUDE TOWARD GOD SCALE
WITH INSTRUCTIONS FOR USING THE SCALE**

ATTITUDE TOWARD GOD
(THE REALITY OF GOD)

Scale No. 22, Form A

Prepared by
E. J. Chave and L. L. Thurstone
The University of Chicago

Write your name here _____

Personal facts _____

This is a study of attitudes toward God. On the reverse side you will find twenty statements expressing different attitudes toward God.

Put a check (✓) if you AGREE with the statement.

Put a double check (✓ ✓) if you STRONGLY AGREE with the statement.

Put a cross (✕) if you DISAGREE with the statement.

If you cannot decide about a statement you may mark it with a question mark.

This is not an examination. People differ in their opinions about what is right and wrong in this issue.

Please indicate YOUR OWN ATTITUDE by a check or double check when you agree and by a cross when you disagree.

PUT A CHECK (✓) IF YOU AGREE WITH THE STATEMENT
PUT A DOUBLE CHECK (✓✓) IF YOU AGREE EMPHATICALLY
PUT A CROSS (X) IF YOU DISAGREE WITH THE STATEMENT

- () 1. I do not believe in God and would be a coward if I pretended to do so.
- () 2. It is absurd for any thinking man to use such a concept as God.
- () 3. I trust in God to support the right and condemn the wrong.
- () 4. I think I believe in God, but really I haven't thought much about it.
- () 5. I am thrilled in contemplation of the divine Creator.
- () 6. I am tolerant toward those who still believe in God.
- () 7. The idea of God is a hindrance to clear thinking.
- () 8. It is stupid to insist that there is a God.
- () 9. I believe in God but my idea of God is vague.
- () 10. My faith in God is complete for "though he slay me, yet will I trust him."
- () 11. My idea of God develops with experience.
- () 12. Although I do not believe in God, I am open-minded about the mysteries of life.
- () 13. I haven't yet reached any definite opinion about the idea of God.
- () 14. I hate the word God and everything associated with it.
- () 15. I have a strong desire to believe in God.
- () 16. I am quite convinced of the reality of God.
- () 17. I do not know whether I ought to believe in God.
- () 18. The idea of God seems quite unnecessary.
- () 19. God is the underlying reality of life.
- () 20. God has no place in my thinking.

INSTRUCTIONS FOR USING THE SCALE ATTITUDE TOWARD GOD (The Reality of God)

SCALE NO. 22, FORMS A AND B

These instructions are for use with the "Scale of Attitude toward God" which was constructed by E. J. Chave and L. L. Thurstone.

How to Use the Scale

This scale is not an examination in any sense. It is therefore allowable to fill in the blanks without supervision. In most cases, the scale will be given to a group of subjects and the directions apply to that situation.

Distribute the blanks, one to each person. The subjects may or may not be asked to fill in their names. The three blank lines on the title-page may be used for any information the investigator may want, such as age, sex, nationality, and education.

If a sentence has been altered it will be ignored in scoring the results. This fact should be explained to the subjects. If any alteration were made in a statement, the indorsement would not be comparable with those of other people and consequently it would have no value.

There should be no discussion about these statements before the blanks are filled in. After the forms have been filled in, there is, of course, no harm in discussing the opinions at length. At that time the statements may be discussed at will. But one should be careful that each subject has the opportunity to read and indorse these opinions uninfluenced by previous discussion about this particular list of opinions.

There is no time limit on this scale because it is in no sense a speed performance. Allow each subject as much time as he likes. Ten or fifteen minutes is usually ample time.

How to Score the Papers

The twenty statements are printed in random order. The number preceding each statement has no significance except to identify it.

No opinion is to be regarded as right or wrong. The purpose of the scale is to describe people's attitudes toward God without any implication that one attitude is more correct than another. It is therefore of no significance that higher scale values happen to be assigned to the statements favorable to the God concept. The reverse arrangement might as well have been chosen.

The scale value of each of the twenty statements in Forms A and B are tabulated below:

FORM A

Statement	1	2	3	4	5	6	7	8	9	10
Value	3.4	1.2	8.0	6.4	9.6	4.5	2.2	1.5	6.7	10.4
Statement	11	12	13	14	15	16	17	18	19	20
Value	7.6	4.4	5.5	0.5	7.1	8.8	5.5	3.1	9.5	2.4

Statement	1	2	3	4	5	6	7	8	9	10
Value	2.9	5.5	8.3	4.5	1.9	4.4	3.4	7.2	9.8	7.6

Statement	11	12	13	14	15	16	17	18	19	20
Value	3.6	5.5	8.8	6.9	1.4	6.5	10.5	1.1	9.5	2.3

A person's score is the median scale value of all the statements he has double checked. If he has not double checked any statement, then his score is the median scale value of all the statements that he has checked. For example, suppose that a person has no double checks but that he indorses statements 4, 6, 9, 11, 15, and 17 of Form A. The corresponding scale values are 6.4, 4.5, 6.7, 7.6, 7.1, and 5.5. The median scale value is half-way between 6.4 and 6.7, which is 6.6. This score should be recorded on the first page of the blank. If an odd number of statements is indorsed, the person's score is the scale value of the middle statement on the line.

Forms A and B

The two forms, A and B, of the scale will give comparable scores. If an experimenter wants to study the effect of some kind of instruction or propaganda he may use one form at the beginning of the experiment and the other at the end and thus measure the effect of the interposed material. The scale could be used to test students at the beginning of their Freshman year and later at various times throughout their college course to see what change, if any, occurs in the attitude of college students toward God. Both forms may be used at one time if a larger set of questions is desired.

Distribution of Attitude in a Group

It is frequently desired to compare several groups with reference to their attitudes on a particular issue. In order to make such a comparison, it is necessary to determine the mean attitude of each group. This is simply the arithmetic mean (the ordinary average) of all the scores in each group. The scores may also be plotted in the form of frequency distributions and these may be compared as to central tendency and dispersion by the usual statistical methods.

Interpretation of the Scores

The following table enables one to interpret the individual scores as well as the average score of a group of individuals:

- 0- 2.9—Strong atheistic attitude
- 3.0- 3.9—Atheistic attitude
- 4.0- 4.9—Disbelief in God
- 5.0- 5.9—Neutral, hesitant, or agnostic attitude
- 6.0- 6.9—Slightly favorable to the God concept
- 7.0- 7.9—Belief in God
- 8.0-11.0—Strong religious attitude toward God

The interpretation of a particular score can also be made by reading several of the statements in the two forms with values nearly equal to the score to be interpreted.

APPENDIX C

ORAL DIRECTIONS GIVEN WITH THE
ADMINISTRATION OF THE READING TEST

"This is a test to see how rapidly and well you can read this material. Please do not start reading until you are told to do so. This test is divided into two reading selections (this was demonstrated by holding the test up in front of the subjects and indicating where the two parts were). Each reading selection is followed by some questions on that selection. After you have finished reading the first reading look at the clock and record the number of minutes and seconds indicated on the clock. Record this time in the space provided at the bottom of the page (demonstrated). Then go right on and answer the questions on the next page. You are not to look back at the reading selections once you have finished reading them. Once you have finished answering the questions on the first reading selection record the time indicated on the clock at the space provided at the end of the questions. This is the cumulative time indicated on the clock (Example shown on blackboard). Then go right on and read the second reading selection. Follow these same directions for this second section of the test. Directions for answering the questions are given to you in the test. (Time recording example on blackboard reviewed). Are there any questions?...Turn your test over and put your full name on the top right hand corner...begin reading."

APPENDIX D

THE READING TEST

THE LIVING GOD

God is a just Father, who will render to every man according to his works; a merciful Judge, to whom we may go confidently seeking a pardon, and to whom we may pray in our necessities with an infallible certainty of gracious answering; a tender Providence who feeds the birds of the air, clothes the lilies of the field, and protects with a special care the souls of all His children; an Infinite, All-Wise Goodness, to whom we may joyfully submit without any loss of our essential independence, and whom we willingly obey, striving with His grace to do His will on earth as it is done in Heaven; an Omnipotent, Eternal Power, who knows all things real or possible in an eternal Now, and to whom our weak minds may gladly pay reverence and obedience; a loving Person, who first showed His love for us in creation, revealed it more perfectly in deigning to become man for our sakes, and who will reward us finally, if we are true to Him in the face-to-face union of the Beatific Vision.

Yet, some ask, can we speak of God as a person? And in what sense can we use the term? I answer that, so far as religious uses are concerned, it is useless to talk of a God who is not in some sense a person. Necessity, Fate, does not make a God; not power, nor intelligence alone ... These may suggest the origin or express the moral order of the universe; but they do not constitute a person whom one can pray to ...

The God of religion must be a person. Include in that idea intelligent will, providential care, and a moral government of the Universe. The God of our devotion must be a person; but devotion does not require that we invest that person with a human form. God must be conceived as Father, in order that we may get the nearest access to Him and the best enjoyment of His idea. The love of God must be conceived as paternal, in order that we may conceive of God's loving at all ... The God of religion must be infinitely human, without man's infirmities and bounds; personal without individuality; the Father without paternal doting; the moral Ruler without vindictiveness.

All that is essential in our idea of God we get, not from understanding, but from the heart; and all that is essential in it is secured to us by the heart's perpetual needs. Philosophy may assail the conception, and science may disown the idea; but they furnish nothing that can fill its place. The pure in heart will still see God. The pure in heart is a little child that knows its Father and will hear of no substitute.

In terms of the article you have just read, read the following questions and circle the correct answer. Do not look back at the reading selection. Note the time shown on the clock when you have finished the questions.

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1. God will reward us finally if we are true to Him, in the face-to-face union of the: (a) Bountiful Vision, (b) Beautiful Vision, (c) Beatific Union, (d) Beatific Vision.
2. The God of religion must be: (a) mystical. (b) a person. (b) real to all mankind. (d) understood through religion. OMITTED
3. The conception of God is that he is: (a) personal with individuality. (b) a person without human form. (c) finitely human. (d) the first cause.
4. God is thought to . . . : (a) be living. (b) be dead. (c) be a living force. (d) exist only in the minds of men. OMITTED
5. The pure in heart is conceived as: (a) a little child that knows its Father. (b) meek and mild and will inherit the earth. (c) a flawless person. (d) a lamb of God.
6. We obtain all that is essential in our idea of God: (a) from devoted understanding. (b) not from understanding, but from the heart. (c) through His word. (d) by divine revelation.
7. We must conceive of God's love as paternal because: (a) God is our Father. (b) that is the kind of love He gives. (c) this is the only way that we may conceive of God's loving at all. (d) He is all wise and has revealed Himself to us as such.
8. Ideas included in the concept of the God of religion are: (a) A merciful Judge, providential care and immoral governor. (b) intelligent will, providential care and moral government of the universe. (c) mystical creator, providential care and moral judge. (d) providential care, moral government of universe and vindictive judge.
9. Necessity, Fate, Power, nor Intelligence alone do not make a God because: (a) they imply only human understanding. (b) they do not express the moral order of the universe. (c) God cannot be conceived. (d) they do not constitute a person whom we can pray to.
10. God is represented as a tender Providence who... clothes the _____ of the fields. (a) poppies (b) lillies (c) violets (d) birds. OMITTED
11. God first showed His love for us: (a) in creation. (b) in revealing His word and His world to man. (c) by creating man in his own image. (d) by allowing man to have free-will.
12. In order that we may conceive of God's loving at all: (a) we must respect His wishes. (b) we must deny philosophy and science. (c) the love of God must be conceived of as paternal. (d) it must be formed through our natural reverence. OMITTED

13. God is represented as a just Father and a merciful Judge. This implies that: (a) He is pleased with those who believe in Him. (b) He is Infinite, Loving, All Wise, All Powerful. (c) He is impersonal to those who betray Him. (d) this paternal philosophy is for our own sakes.
14. Philosophy assails the conception of God and science disowns the idea: (a) because it is without physical basis. (b) but they offer nothing that can take its place. (c) because He lies outside of their domain. (d) because He has no empirical basis.

(Record the time indicated on the clock)

Time: min. _____ sec. _____

Faced with the facts of the world of nature, one finds the affirmation that God is a conscious person more and more difficult. We need not feel ourselves compelled to make it. It is an inheritance from the childhood of our race. To speak of God as he, or him, is to attribute to God sex, and is to speak in the language of poetry and of whimsical fancy.

When a man has modified his idea of God, he is tempted to retain the term assigning to a new significance. There is some reason in the contention that we should eliminate the word God from our vocabulary, rather than keep it and give it a new meaning. If that in which we believe is impersonal, unconscious, indifferent force, or energy, why call it by a name that denotes the direct opposite, a personal conscious being with all the human qualities? Intellectual honesty would seem to demand that we shall not say black when we mean white. Unless, therefore, a thoroughgoing naturalistic thinker gives some hint as to what he means by the word "God", he should use some other phrase that would clearly state his meaning.

The idea of God is a non-essential in human life. It was introduced as a short-cut explanation of the universe. Then it was made the summation and projection of all of man's moral ideas. That in which he found himself defective he fancied to be realized in his deity. Thus it came about that an idea which belonged in the field of pure speculation took on what seemed an ethical quality. Belief in the idea of God became a virtue, and a rejection of it the token of a vicious life.

The idea of God is, however, as little necessary in ethics as it is in chemistry. Morality is in fact given a better basis in consideration for human well being than in regard for the hypothetical demands of a suppositious deity.

Nor is the idea essential to religion, when religion is defined in the biological sense. Indeed, some of the world's greatest religious teachers, such as Gautama and Confucious, ignored or eliminated it.

And the idea of God is not essential either to individual or social happiness. If it has brought inspiration and comfort, it has also been one of the most dangerously devisive and anti-social notions cherished by mankind. The idea of God has led men to murder one another by multitudes. It has caused children to be roasted in the iron arms of Moloch. It has put thousands of human victims under the sacrificial knife. It has caused religious wars. It has driven countless good men and women into the unnatural asceticisms and wasted lives of the convent and the abbey. It taxes the economic resources of every nation. Mosques and monasteries and cathedrals are the pathetic monuments of god-ridden humanity, built with the sweaty pennies of the poor, wrested from them by promises or reward, appeals of fear, and the pathetic human tendency to sacrifice. The idea of God has been the enemy of Man.

Reading Time: _____ min. _____ sec.

In terms of the article you have just read, read the following questions and circle the correct answer. Do not look back at the reading selection. Note the time shown on the clock when you have finished the questions.

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1. The idea of God is non-essential to religion, when religion is defined: (a) in terms of its evolutionary development. (b) philosophically. (c) objectively. (d) in the biological sense.
2. The idea of God was introduced as a short-cut explanation of: (a) ancient myths. (b) the universe. (c) the creation. (d) miracles.
3. The idea of God has caused children to be: (a) roasted in the iron pots of Mencius. (b) roasted in the iron arms of Moloch. (c) crippled from true spiritual growth. (d) the children of truth. OMITTED
4. Unless a thoroughly naturalistic thinker gives some hint as to what he means by the word "God," he should: (a) omit the word from his vocabulary. (b) use the words "ethereal mystery." (c) deny the existence of "God" in favor of more empirical explanations of phenomena. (d) use some other phrase that would clearly state his meaning. OMITTED
5. The idea of God: (a) is essential to all phases of life. (b) has warped the minds of mankind. (c) has been an enemy of man. (d) is a device for controlling the superstitious masses.
6. Faced with the facts of the world of nature, one finds the affirmation that God is a conscious person: (a) utterly ridiculous. (b) more fact than fiction. (c) imbued with mythological fantasies. (d) more and more difficult.
7. Some of the world's greatest religious teachers, such as _____ ignored or eliminated the idea of God. (a) Confucious and Gandhi. (b) Gautama and Confucious. (c) Gautama and Buddha. (d) Buddha and Lao Tzu.
8. Man created the idea of God to explain the unknown and become what he himself lacked. The idea of God is found to be: (a) valid as an explanation. (b) non-essential to human life. (c) essential to human life. (d) only explaining nature. OMITTED
9. The God idea is a hindrance to individual and/or social happiness because: (a) it is one of the most dangerously devisive and anti-social notions cherished by mankind. (b) it has been exploited by the theistic authorities. (c) it brings control over mankind's selfish impulses. (d) that which is "naturally" fun to man is not always morally right. OMITTED
10. A better basis for fostering human well-being is seen in: (a) morality. (b) science. (c) philosophy. (d) the State (society).

11. Disbelief in God became: (a) a triumphant virtue. (b) a token of a vicious life. (c) a sign of the beginning of the fall of the God idea. (d) the hypothetical concern of a suppositious deity. 45
12. The idea of God is seen as non-essential in: (a) human life, politics, ethics and war. (b) religion, morality and sacrifice. (c) politics, chemistry, biology and religion. (d) human life, ethics, religion, individual or social happiness.
13. The affirmation that God is a conscious person is: (a) believed to have developed through experience by mankind. (b) an inheritance from the childhood of our race. (c) understandable in terms of the facts of nature. (d) a hold-over from primitive totem-worship. OMITTED
14. The idea of God is as little necessary in ethics as it is in: (a) philosophy. (b) biology. (c) chemistry. (d) art.
15. The term God should: (a) be eliminated from our vocabulary. (b) be kept in our vocabulary but given new meaning. (c) be equated with a personal, conscious force or energy. (d) be understood solely in terms of all the harm it has caused mankind.
16. It is stated that mosques, monasteries and cathedrals; (a) are more the monuments to man's self-adoration than monuments to God. (b) have long been the centers of anti-humanism. (c) should be converted into schools and hospitals. (d) are the pathetic monuments of God-ridden humanity. OMITTED

(Record the time indicated on the clock)

Time: min. _____ sec. _____

VITA

John Marshall Tucker was born in Port Jervis, New York on April 17, 1943. He received his secondary school education at Columbia High School in Maplewood, New Jersey. In 1961 he entered Roanoke College, Salem, Virginia. He majored in Economics and Business Administration and in Psychology at Roanoke College and received his B. A. degree in June, 1965. Mr. Tucker entered the graduate school program in psychology at the University of Richmond in September, 1965 and, upon completion of the requirements, will receive his M. A. degree in August, 1967. He has worked as a reading and study skills specialist in the Center for Psychological Services at the University of Richmond and taught Remedial English at the University College. He will start as an instructor in psychology at Frederick College, Portsmouth, Virginia in September, 1967.