

A LONGITUDINAL STUDY OF RELIGIOUS ATTITUDES AMONG BEREA COLLEGE STUDENTS*

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PROBLEM: The problem was to determine whether Berea College students show a measurable change in religious attitudes following a required Freshman course in Old Testament.

SUBJECTS: *Initial Study.* Thirty-seven students enrolled in the first semester of 1958-59 in the course "Literature and Religion of the Hebrews" constituted the original group tested.

Follow-Up Study. All but two of the twenty-eight students previously tested who were still attending Berea College during the second semester of 1959-60 cooperated in the second testing period.

SOCIAL COMPOSITION: This group included twenty-five freshmen and one junior, ranging in age from 17 to 24 years, the sexes being equally represented. All were American citizens, twenty-five being white and one negro. Church preference as reported represented several different denominations, including 12 Baptist, 1 Baptist or Union, 4 Methodist, 2 Union, 1 Catholic, 1 Church of Christ, 1 Presbyterian, 1 with no church preference, and 2 not given. The church preference of the parents included 26 Baptist, 6 Methodist, 3 Catholic, 3 Lutheran, 2 Union, 2 Church of Christ, 1 Christian Reform, 1

* This study was initiated by Pauline Rose, a junior majoring in the Department of Psychology who was enrolled in Berea College during the first semester of 1958-59. The follow-up correspondence was carried on and the tabulation of results for the two testing periods was done by Phylis Mise, a Senior assistant in the Department who was majoring in Psychology and was a member of Psi Chi, National Honorary Society in Psychology. The five seniors who worked on the additional tabulations and assisted in the interpretation of results the following year were also members of Psi Chi, and their cooperation in the study resulted from their decision to complete the longitudinal study as a research project of the Berea College Chapter. These five students were Charles Rubel, Fred Austin, Paul Jones, Clayton Rivers, and Sonja Wilson. The last four named, who were still in school, participated with the writer in a report of the study before a section of the Southeastern Psychological Association, meeting in Gatlinburg, Tennessee, in April, 1961. Credit should also be given to Allen Robinson, a senior majoring in Psychology and a member of Psi Chi the preceding year, who first proposed that our Psi Chi Chapter undertake a research project as a major part of our program activities. The writer was faculty adviser of the Berea College Chapter throughout the period studied.

Presbyterian, 5 with no church preference, and 3 not given. At the time of the second test, the church preference varied somewhat, including 8 Baptist, 3 Methodist, 6 Union or non-denominational, 1 Catholic, 1 Church of Christ, 1 Presbyterian, 4 with no church preference, and 2 not given. An analysis of church attendance at the first test period, as reported, showed 14 who were church members, 18 who attended church regularly and 7 who attended irregularly. At the second test period, the corresponding figures were 14 who were church members, 13 who attended church regularly, 4 who attended church irregularly, and 4 who never attended.

When analyzed for theological orientation, the information reported at the time of the first test showed 5 fundamentalists, 4 conservatives, 1 modernist, 8 fairly modern, and 1 skeptic, with 7 not specified. When the second test was given, the distribution was 3 fundamentalists, 4 conservatives, 2 modernists, 9 fairly modern, 1 skeptic, and 1 agnostic, with 6 not specified.

The extent to which the students had read and studied the Bible, as reported at the first test period, was as follows: 2 studied the Bible carefully, 2 never studied the Bible by themselves, 13 read the Bible regularly, 6 seldom read the Bible, and 3 never read the Bible by themselves. According to the report at the second test period, 8 studied the Bible carefully, 7 read the Bible regularly, 9 seldom read the Bible, and 2 never read the Bible by themselves.

The last part of the social composition of the group concerns the influences that have oriented the subjects toward religion.

At the time of the first test 12 reported that they had been influenced by home or parents, 8 by the church, 2 by Bible courses, 2 by Sunday School, 2 by experience (apparently of a personal religious nature), 7 by friends, 1 by a pastor, 1 by science, and 3 by school. At the time of the second test 8 reported that they had been influenced by home or parents, 9 by the church, 3 by the Bible, 7 by a college Bible class, 5 by other college classes, 2 by Sunday School, 10 by experience, 3 by friends, 2 by philosophy, 1 by chapel, 1 by study, and 1 by school. Thus the most influential factors seem to have been home or parents, church, the Bible or Bible classes, experience (presumably religious), and friends.

PROCEDURE: Three social attitude scales in the series edited by Thurstone, including two concerned with Attitude toward God (*The Reality of God and Influence on Conduct*), constructed by Chave and Thurstone, and a third, *Definitions of God*, constructed by Chave, were administered during a regular class session. A retesting three semesters later was accomplished by mail, with a 93 per cent return. Results are reported for the first two scales only.

DESCRIPTION OF TESTS: The first attitude scale, *The Reality of God*, consists of twenty statements concerning attitude toward God, scaled by the method of equal-appearing intervals. The *higher* scale values in this case are arbitrarily assigned to the statements favorable to the God concept. The statements are arranged in random order on the test, and the students are instructed to put a check if they agree with the state-

ment, a double check if they agree emphatically, and a cross if they disagree with the statement. The score assigned to a student was the median scale value of all the statements he had checked.

For scoring purposes both the individual scores and the average scores of the group are interpreted in terms of seven categories, described by the editor as follows: Strong atheistic attitude, Atheistic attitude, Disbelief in God, Neutral, hesitant, or agnostic attitude, Slightly favorable to the God concept, Belief in God, Strong religious attitude toward God.

The second attitude scale, Influence on Conduct, consists of twenty-two statements concerning attitude toward God, similarly scaled. In this case, however, the *lower* scale values are assigned to the statements favorable to the God concept. The statements are again arranged in random order, and the same instructions for marking are given to the subjects. The score assigned to a student was again the median scale value of all the statements he had checked. The categories used in interpretation differ slightly, however, and are as follows: Strong religious attitude toward God, Definite recognition of God affecting conduct, Slightly affected by idea of God, Noncommittal, neutral, or agnostic attitude, Disbelief but attitude not yet strongly set, Definite denial of God influencing conduct, Strong atheistic attitude.

RESULTS: The results for Berea College students are presented in the two tables which follow. Table I summarizes the findings for the scale concerned with Attitude toward God: The Reality of God; and Table II, for the scale concerned with Attitude toward God: Influence on Conduct. Both tables provide an analysis of results in terms of the subjects showing a change in the direction of agreement or disagreement with the individual statements from the first to the second testing, and in addition the degree and direction of change. For the purpose of studying the shift, the statements (originally arranged in random order) are rearranged according to their scale values from those most favorable to those least favorable to the God concept.

TABLE I.

The Measurement of Social Attitudes Edited by L. L. Thurstone The University of Chicago		RESULTS FOR BEREA COLLEGE STUDENTS TESTED DURING FIRST SEMESTER OF 1958 AND RETESTED DURING SECOND SEMESTER OF 1959-60 (N=26)					
ATTITUDE TOWARD GOD (The Reality of God) Scale No. 22, Form A		Number of Persons Changing in Direction		Degree and Direction of Change			
INSTRUCTIONS: 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		Of Agree- ment	Of Dis- agree- ment	Posi- tive	Nega- tive	Differ- ence	
Scale Value	Item No.						
FAVORABLE	10.4	10. My faith in God is complete for "though he slay me, yet will I trust him."	5	10	7.5	28	-20.5
	9.6	5. I am thrilled in contemplation of the divine Creator.	10	4	11	11	0
	9.5	19. God is the underlying reality of life.	6	8	8	15	-7
	8.8	16. I am quite convinced of the reality of God.	8	7	11	14	-3
	8.0	3. I trust in God to support the right and condemn the wrong.	4	9	8	27.5	-19.5
	7.6	11. My idea of God develops with experience.	9	4	12	6	+6
	7.1	15. I have a strong desire to believe in God.	2	7	2	14	-12
INTERMEDIATE	6.7	9. I believe in God but my idea of God is vague.	11	4	27	10	+17
	6.4	4. I think I believe in God, but really I haven't thought much about it.	3	3	8	8	0
	5.5	13. I haven't yet reached any definite opinion about the idea of God.	10	3	28	5	+23
	5.5	17. I do not know whether I ought to believe in God.	2	1	6	2	+4
	4.5	6. I am tolerant toward those who still believe in God.	6	9	14	20	-6
	4.4	12. Although I do not believe in God, I am open-minded about the mysteries of life.	2	2	3	6	-3
UNFAVORABLE	3.4	1. I do not believe in God and would be a coward if I pretended to do so.	1	0	1	0	+1
	3.1	18. The idea of God seems quite unnecessary.	2	0	6	0	+6
	2.4	20. God has no place in my thinking.	2	0	5	0	+5
	2.2	7. The idea of God is a hindrance to clear thinking.	2	1	4	3	+1
	1.5	8. It is stupid to insist that there is a God.	0	0	0	0	0
	1.2	2. It is absurd for any thinking man to use such a concept as God.	0	1	0	3	-3
	0.5	14. I hate the word God and everything associated with it.	0	0	0	0	0

Note: Permission to reproduce these scales has been granted by the University of Chicago Press. In the scales as originally published and as given to the Berea College students, the twenty statements in the Reality of God Scale and the twenty-two statements in the Influence on Conduct Scale were printed in random order, with no indication as to the scale value of any of the statements. In the tabulations of results the statements are arranged in each scale according to their scale values, and arbitrarily divided into three sections by lines drawn across the page. It is important to keep in mind that in the construction of the scales higher scale values happened to be assigned to the statements favorable to the God concept in the Reality Scale, whereas this order was reversed for the statements in the Conduct Scale.

TABLE II.

The Measurement of Social Attitudes Edited by L. L. Thurstone The University of Chicago		RESULTS FOR BEREA COLLEGE STUDENTS TESTED DURING FIRST SEMESTER OF 1958 AND RETESTED DURING SECOND SEMESTER OF 1959-60 (N=26)					
ATTITUDE TOWARD GOD (Influence on Conduct) Scale No. 22, Form C		Number of Persons Changing in Direction		Degree and Direction of Change			
INSTRUCTIONS: 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		Of Agree- ment	Of Dis- agree- ment	Posi- tive	Nega- tive	Differ- ence	
Scale Value	Item No.						
FAVORABLE	0.1	1. I pattern my life after Jesus Christ and yield my whole life to God.	2	10	2	24	-22
	0.5	9. I would not hesitate to die rather than deny my faith in God.	2	13	2	27	-25
	1.0	6. To me God is the constant inspiration and support of the best we try to achieve.	2	12	2	20	-18
	1.6	4. I never attempt any major activity without praying for guidance.	4	5	10	15	-5
	2.0	12. I feel a growing power to achieve my ideals as I reflect upon the way of God.	5	6	9	12	-3
	2.4	15. I need God as I struggle to realize my ideals.	2	9	2	18	-16
	3.1	18. I believe in God but I find that God helps me when I help myself.	4	10	4	22	-18
3.7	21. My loyalty to God is very dependent upon being with good religious persons.	2	7	3	23	-20	
INTERMEDIATE	4.2	17. I think it is necessary to believe in God but I do not devote a lot of time to religion.	5	6	12	13	-1
	4.4	13. I am afraid of losing my faith.	1	7	2	21	-19
	5.6	2. I am uncertain whether the idea of God influences my conduct or not.	4	7	13	20	-7
	5.8	11. I neither approve the idea of God by worship nor show disapproval of the idea by any careless word or act.	2	4	5	10	-5
	6.0	19. I am not opposed to the idea of God but personally do not find any values in it.	2	0	6	0	+6
	6.6	22. Whatever may be the truth about God I do not let the question prevent me from having a good time.	7	3	15	7	+8
UNFAVORABLE	7.1	8. I don't think the idea of God influences my daily living.	6	3	14	8	+6
	7.9	20. The idea of God is not necessary to me as I attempt to achieve the good life.	4	1	10	3	+7
	8.4	3. I get all kinds of good thrills out of life without assuming God.	4	4	9	11	-2
	8.8	10. I guide my conduct by the findings of good scientific men and not by the idea of God's will.	3	1	9	3	+6
	9.1	16. My rules of conduct are based upon experience and are quite unrelated to any ideas of God.	4	2	9	6	+3
	9.5	5. I am much happier since I gave up all pretense of believing in God.	1	1	2	3	-1
	10.3	14. I am an atheist and am delightfully free from what some regard as duty toward God.	0	1	0	3	-3
10.8	7. I am doing all I can to eradicate such religious rubbish as the idea of God.	1	2	3	6	-3	

In the case of both scales, in the first section of the table are listed the statements most favorable to the God concept, representing positive religious attitudes corresponding to the first two Chave-Thurstone categories, whereas in the last section of the table are listed the statements least favorable to the God concept, representing negative religious attitudes corresponding to the last two Chave-Thurstone categories, while in the middle section of the table are listed the intermediate statements, in general representing neutral, indifferent, vague, or doubtful attitudes toward the God concept, corresponding to the three middle Chave-Thurstone categories.

The two columns on the left give the scale values for each statement as determined by Chave and Thurstone, and the item numbers indicating the order of the statements on the scales as originally printed. The columns of results for Berea College students, given on the right, require some explanation. The figures reported are for number of persons changing in direction and for degree and direction of change from the first to the second testing. No account is taken in these results of persons who marked a given statement identically at the two test periods. Thus for the first statement, "My faith in God is complete for 'though he slay me, yet will I trust him,'" representing the highest level of favorable attitude toward the God concept, we find a shift in the direction of agreement with this statement on the part of 5 subjects and of disagreement on the part of 10 subjects. The other three columns on the right reporting degree and direction of change show 7.5 positive and 28 negative, with a resulting difference of -20.5 , in the direction of change unfavorable to the God concept.

The amount of change thus took into account not only the number of persons changing in direction but also the degree and direction of change, as determined by a scale set up by the writer to provide for all cases. Actually, since the students did not follow the simple instructions for marking the statements, but often indicated not only a higher degree of agreement or disagreement than called for by the instructions, and also used question marks in a number of instances, the determination of the amount of shift was a painstaking process, requiring as many gradations as were called for by the various degrees of shift found between the markings of the students at the first and second test periods. Two simple illustrations will suffice to illustrate the general principle if not the precise procedure. A change in marking a statement from \checkmark on the first test to $\checkmark\checkmark$ on the second test would represent a shift of plus one, from simple agreement to strong agreement; whereas a change in marking a statement from x on the first test to xxx on the second test would represent a shift of minus two, from simple disagreement to very strong disagreement. As already indicated, the scale that was utilized made provision for all degrees of difference in the markings at the two test periods.

It is apparent from these tabulations that there is a shift from agreement to disagreement on the part of the statements favorable to the God concept, not only in the actual instances of change but also in the degree and direction of change, in the case of both the Reality Scale and the Conduct Scale but especially marked in the latter instance; whereas a reverse tendency, from disagreement to agreement, much less marked,

may be noted in the last section of both tables on the part of the statements unfavorable to the God concept, accompanied by a predominantly favorable shift in the case of the intermediate statements for the Reality Scale and a corresponding predominantly unfavorable shift for the Conduct Scale.

Table III summarizes the findings for the two attitude scales, giving the limits of the categories arranged in order of favorableness to the God concept, together with the individual median scale values for the first and second test periods and other figures derived from the results for the two scales. The most important finding is the fact that, in spite of the unfavorable trend evidenced in the results just discussed, the individual median scale values for the great majority of students at both test periods fall in the two categories most favorable to the God concept, the figures being 24 out of 26 and 22 out of 26 at the two test periods for The Reality of God Scale, and 23 out of 26 and 22 out of 26 at the two test periods for the Influence on Conduct Scale. At the same time it is notable that the range of individual median scale values is considerably extended at the time of the retest, with 1 subject for the Reality Scale and 2 subjects for the Conduct Scale falling in one or the other of the two categories least favorable to the God concept, whereas no subjects were found in these categories at the first test period. The unfavorable direction of change from the religious viewpoint is further indicated by the figures giving the range and the central tendency for the median scale values, which in each case to some extent move away from the statements more favorable to the God concept. Another point of interest is the smaller number of statements checked at the second test period as compared with the first test period. Thus, although the average number of statements checked at the two test periods for both scales was either 7 or 8 (out of 20 statements in the Reality Scale and 22 statements in the Conduct Scale), the highest number of statements checked at the second test period on either scale was half the number of statements included in that scale.

The results have been further analyzed for significance with the following results:

1. In terms of their respective means at the two periods of testing.

Reality Scale

Group Means 8.01 and 7.65

This shows a shift from the category "Strong religious attitude toward God" to the category "Belief in God."

The application of the "t" test to the data discloses that the difference between the means is not statistically significant, even at the 10 per cent level.

Conduct Scale

Group Means 2.50 and 2.95

The category for both means is "Strong religious attitude toward God," the mean for the retest approaching the borderline of the next category.

Again the difference between the means was not found to be statistically significant.

2. In terms of a comparison of the observed frequencies with the expected frequencies.

Chi square values were calculated between the number of statements checked

TABLE III.

SCALE THE REALITY OF GOD	LIMITS OF CATEGORIES ARRANGED IN ORDER OF FAVORABLENESS TO GOD CONCEPT		INDIVIDUAL MEDIAN SCALE VALUES	
			<i>Test Period</i>	
			<i>I</i>	<i>II</i>
	8.0—11.0	Strong religious attitude toward God	16	14
	7.0—7.9	Belief in God	8	8
	6.0—6.9	Slightly favorable to the God concept	2	2
	5.0—5.9	Neutral, hesitant, or agnostic attitude	0	1
	4.0—4.9	Disbelief in God	0	0
	3.0—3.9	Atheistic attitude	0	0
	0—2.9	Strong atheistic attitude	0	1
		Total	26	26
	Range <i>I</i> 9.15—6.90	Group Mean <i>I</i> 8.01		
	<i>II</i> 8.8—2.65	<i>II</i> 7.65		
	Number of Statements Checked		<i>I</i>	<i>II</i>
	Range		5—14	2—10
	Median		8	7.5
	Mode		8	8
INFLUENCE ON CONDUCT			<i>Test Period</i>	
			<i>I</i>	<i>II</i>
	0—2.9	Strong religious attitude toward God	20	16
	3.0—3.9	Definite recognition of God affecting conduct	3	6
	4.0—4.9	Slightly affected by idea of God	1	0
	5.0—5.9	Noncommittal, neutral, or agnostic attitude	2	1
	6.0—6.9	Disbelief but attitude not yet strongly set	0	1
	7.0—7.9	Definite denial of God influencing conduct	0	2
	8.0—11.0	Strong atheistic attitude	0	0
		Total	26	26
	Range <i>I</i> 1.5—5.70	Group Mean <i>I</i> 2.50		
	<i>II</i> 1.3—7.75	<i>II</i> 2.95		
	Number of Statements Checked		<i>I</i>	<i>II</i>
	Range		6—20	4—11
	Median		7	7
	Mode		7	7

at the first test period and the number of statements checked at the second period, the checks indicating the number of statements with which the subject was in agreement at the two test periods. The three categories used for the rows were divisions of the data as indicated in Tables I and II, that is, Favorable, Intermediate, and Unfavorable attitudes toward the God concept. As in the case of the "t" test, the chi square test showed no statistically significant differences between the first and second test for either scale.

CONCLUSION: Even though the unfavorable trend noted in these results lacks conclusiveness when subjected to tests of statistical significance, the fact still remains that the data reported offer no indication that a required Freshman course in Old Testament resulted in more positive religious attitudes, as reflected in two tests of Attitude toward God, when the same students were retested three semesters later. The extent to which exposure to the content of the course is responsible for this finding cannot be determined from the data available.

In spite of this unfavorable finding from the standpoint of the avowed purpose of Berea College "to promote the cause of Christ," an analysis of the results as a whole shows the majority of our subjects, as judged by their median scores at the first and second testing, still adhering to the categories most favorable to the God concept on both scales at both periods of testing, as attested by an analysis by categories arranged in order of their favorableness to the God concept. Notwithstanding, although the small number of students represented in the study precludes generalization, it is difficult to avoid raising the question whether a required course in Bible at the Freshman level combined with other prescribed college courses, notably those in the sciences, may not be expected to result in a lower level of religious enthusiasm and commitment on the part of immature college students undergoing a period of rapidly increasing knowledge and experience, but presumably still lacking both in the wisdom and in the discernment needed to correlate and evaluate adequately their newly acquired knowledge and rapidly widening experience.

縱論貝利亞學院學生對宗教之態度

古 璞

此項研究的目的，在測定美國貝利亞大學（Berea College）學生在宗教態度上的改變。

三十七位大學一年級的學生，在修畢「舊約全書」必修課後，接受兩種德司頓—謝付測驗（Thurstone-Chave Scales），三個學期之後其中二十六位再次接受相同的測驗，在此二十六位學生中，僅有兩位就讀於他校。

由第二次測驗的二種德司頓測驗表上所得之結果，顯示學生們對上帝信賴的減退；雖然百分之八十之學生仍屬於信賴上帝的那類範圍之中，而且先後兩次測驗在統計意義上也看不出顯著的差別，然而由改變態度的人數，程度，及方向上却顯示出他們對上帝信賴的減退。

固然此種小型測驗並不足使人妄下定論，但測驗結果可以使人思索一個問題——是否應將「聖經」一科例入大學一年級的必修科中，尤其是對於攻讀理科的學生？所要考慮的乃是大學一年級的學生，是否仍太年輕以至無法將知識與經驗融滙貫通。