

A COMPARATIVE MEASUREMENT OF CERTAIN SOCIAL  
ATTITUDES OF SOME NEGRO AND WHITE  
COLLEGE STUDENTS IN KANSAS

by

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## INTRODUCTION

Many comparisons have been made of the Negro and the white man. Whenever these comparisons have supported the claims of one race to superiority over the other, disputes have arisen and prejudices have been intensified.

It is probable that a society which includes the two races should give more attention to comparing attitudes of social significance, because social attitudes indicate predispositions to social action.

### Definition of Terminology

According to Thurstone and Chave (11), the concept 'attitude' denotes, "the sum-total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic." They suggest the use of 'opinions' as the means of measuring attitudes. 'Opinions', according to the same authors, are the verbal expression of attitude.

### PURPOSE

It is the purpose of this thesis to measure and compare six social attitudes of 100 white and 100 Negro college students in Kansas. Such a comparison should be valuable in indicating the unanimity or difference of opinion

that exists between two racial groups that must live together in social contact.

#### SCALES USED IN STUDY

L. L. Thurstone and his collaborators at the University of Chicago have produced the best devices available for the measurement of attitudes. Of 20 different attitudes that may be measured by their 'Attitude Scales' the following six shall be considered:

- Attitude Toward God
- Attitude Toward the Church
- Attitude Toward War
- Attitude Toward the Negro
- Attitude Toward Prohibition
- Attitude Toward Capital Punishment.

#### REASONS FOR STUDY

These particular social attitudes are significant to the people of Kansas. Some of the differences in the attitudes of Kansans are indicated by the state's retention of old laws that are not closely followed in actual practice.

In November, 1934, Kansas showed her objection to the repeal of prohibition by voting to retain its 'bone dry

law' of 1880. In spite of this opposition to intoxicants, the state has its liquor troubles.

Among the Statutes of Kansas (9) are unenforced and commonly violated laws prohibiting theatres and club rooms to be open on Sunday. It may be assumed that this law was passed to encourage church attendance by the removal of commercial competition. This indicates that there must be differences in attitude toward the church.

On three occasions, a portion of Kansas college students have expressed themselves as opposed to war. In 1932, a Student Disarmament Conference was held at Washburn College, Topeka, Kansas; at the Kansas State College of Agriculture and Applied Science at Manhattan, in 1934, a protest was lodged against compulsory military training; and there was a student strike for peace at the University of Kansas at Lawrence, in 1935.

The demand in Kansas for a more severe penalty for serious criminal offenses was met May 16, 1935 by the restoration of capital punishment. Re-enactment of this law repealed 28 years ago, came only after bitter fights through three sessions of the legislature (10).

Since Kansas played an important part in the abolition of slavery, it should be interesting to measure the attitude of white people toward the Negro and the attitude of the Negro toward himself, in Kansas, 70 years after the

Civil War. Thus may be obtained a measure of the ethnocentrism or race pride of the Kansas Negro and also a measure of the prejudice against the Negro in the state.

In this study the attitude toward God was included because of the importance of this attitude in shaping personality and influencing conduct. An additional reason for the consideration of the attitude toward God and the attitude toward the church is that the writer has often heard Negroes contend that they are more religious than white people. The results of this study may indicate the truth or falsity of that assertion.

#### HISTORY OF THE DEVELOPMENT OF ATTITUDE SCALES

Since psychophysical methods were used in the construction of 'Attitude Scales', a brief history of psychophysics should precede a history of the development of the scales. Psychophysics, a branch of psychology concerned with the functional relations between body and mind, began with the work of Weber. He conducted experiments to discover how accurately small differences between weights, line lengths, and degrees of brightness can be perceived. On the basis of his results, Weber formulated the following law: "The increase in any given stimulus that is correctly perceived in 75 per cent of the trials is a constant fraction of the size of the stimulus." (4).

Later Fechner, also working in the field of psychophysics, assumed that a large sensation may be thought of as a number of sensation units and that just noticeable differences between sensations are always equal and hence are suitable units for measuring sensation changes (4).<sup>2</sup> As a result of his experiment, Fechner reformulated Weber's Law as follows: "When stimuli increase by equal ratios the sensations aroused by them increase by equal increments or steps (4)."

Cattell (3) applied the psychophysical technique to the measurement of social values in constructing a psychological scale, the unit of measurement of which was the equally often noticed stimulus difference. He selected in rank order the 1000 most eminent men by the criterion of the average length of articles concerning them in six standard biographical dictionaries.

Allport and Hartman (2) constructed a scale for the measurement of attitudes toward seven public issues, such as the League of Nations and the Ku Klux Klan. Sixty students wrote their individual opinions on various phases of each of these questions and six judges ranked these opinions on a scale ranging between the positive and negative extremes of an issue. These scales were given to Syracuse University students. The distribution of the frequency with which opinions were held among the students

was considered to conform to a normal curve.

Thurstone and Chave (11), however, stated that Allport's diagrams of opinion were not frequency distributions but should have been considered as bar-diagrams in which was shown the frequency with which each of a number of statements was endorsed. To meet this objection, they refined the method of evaluating statements by employing the technique of psychophysics. Thurstone and Chave conceived of attitudes as represented by a linear scale along which they allocated opinions of people according to whether they were 'more' or 'less' inclined toward the issue under consideration.

The following paragraphs present in some detail, procedures in the development of the attitude scales employed in this study. Thurstone and Chave (11) began their experiment with a list of 130 statements about the church. Three hundred forty-one judges ranked these opinions into 11 classifications which represented an evenly graduated series of attitudes from extreme affirmation to extreme negation. Any judge who placed 30 or more of the 130 statements in one of the 11 piles was assumed to be inconsistent and his record was ignored. By this criterion 41 of the 341 judges were eliminated.

The scale value of a statement was determined graphically. On the vertical line of the graph were represented



the accumulative proportions of judgments and on the baseline were arranged the 11 classifications used in the original sorting. The scale value of a particular statement was determined by the point on the cumulative frequency curve which represented 50 per cent of the judgments, i.e., 50 per cent of the statements were above and 50 per cent were below this point on the curve.

The quartiles, or quarter divisions of a distribution showed the dispersion of opinions of the middle half of a given group about the central tendency of a given attitude and also furnished a measure of the amount and direction of skewness. Statements which the judges placed over a wide range of the scale, as measured by quartile points of the distribution, were considered ambiguous. These statements were eliminated from the final scales.

A criterion of irrelevance also figured in limiting the length of the scales. This criterion was the consistency with which subjects endorsed statements close together on the scale. Those commonly endorsed by people of divergent views are irrelevant and were excluded. Application of the criteria of ambiguity and irrelevance reduced the final scale for attitude toward the church to 45 statements.

The consistency with which a given device measures the variable for which it is designed is called its

'reliability.' Correlation of the two halves of the scale for Attitude Toward the Church and use of the Spearman-Brown formula to determine the reliability of the entire scale, yielded a highly satisfactory reliability coefficient of .92. Murphy and Murphy (8), in their "Experimental Social Psychology" make the following comment on the scales: "The whole merit of the scale is that it presents in quantitative form a consensus of opinion in which arguable points automatically separate themselves from non-arguable points and the sole authority is the degree of evidentness to a large number of people."

#### CONCERNING SUBJECTS

Three state educational institutions are represented by the subjects of this experiment. The 100 white subjects were students at the Kansas State College of Agriculture and Applied Science at Manhattan, Kansas. Because 100 Negro subjects could not be obtained at any one Kansas college, 22 were procured at Kansas State College of Agriculture and Applied Science, 50 from the University of Kansas at Lawrence, and 28 from the Kansas State Teachers College of Pittsburg, Kansas. Subjects were of various ages of both sexes, and were largely undergraduate students.

## PROCEDURE

mimeographed copies of the six attitude scales were given to the subjects. Endorsements might be made anonymously by those who did not care to sign their names. Agreement with a statement was indicated by a check (✓) and disagreement was indicated by a cross (+). Doubt about any of the statements except those concerning God and those concerning the church was indicated by a question mark (?). Only statements with which one agreed were checked on the scale for attitude toward the church. A subject double checked (✓✓) statements about attitude toward God with which he strongly agreed; on the same scale the single check was used to indicate mild agreement.

Scoring of the papers was simple. On five of the scales a subject's score was the median scale-value of all of the statements he endorsed. Double checked endorsements took precedence over single checked endorsements, though, on the scale for attitude toward God. On the scale for attitude toward the church, the mean of all of his endorsements represented a subject's score.

## STATISTICAL TREATMENT OF DATA

The 1200 scores which constitute the data of this thesis were analyzed statistically. First the data were

classified into frequency distribution tables. A frequency distribution shows in order the number of endorsements of opinion along the scale of a given attitude.

A measure of central tendency is desirable because it shows the typical attitude of each group. Calculation of the mean of a distribution was made by the formula:

$$M = A + \left( \frac{\sum f d}{N} \right) h$$

where  $M$  equals the mean,  $A$  equals the assumed mean taken at the point of zero deviation,  $\sum f d$  equals the summation of frequencies times the deviation from the assumed mean in units of class intervals, and  $h$  equals the width of the interval used in the classification (5).

The standard deviations of the distributions were calculated to measure the dispersion of attitudes about the mean. The formula for standard deviation of a distribution is as follows:

$$S. D. = \left( \sqrt{\frac{\sum f d^2}{N} - \left( \frac{\sum f d}{N} \right)^2} \right) h$$

$\sum f d^2$  equals the summation of the frequencies times the squared deviations,  $N$  equals the number of cases,  $\sum f d$  equals the summation of the frequencies times the deviations, and  $h$ , the width of the class interval (5).

The probable errors of the means of the distributions were calculated to determine the extent to which additional samples of 100 students of a given race on a given attitude would vary from the mean obtained. The formula for probable error of the mean of a distribution is:

$$P. E._M = .6745 \frac{\sigma X}{N}$$

in which  $\sigma X$  represents the standard deviation of the distribution and  $N$ , the number of cases in the sample (5).

In order to determine whether or not there were significant differences between the means of the scores for the two races on a given attitude scale, it was necessary to calculate the probable error of the difference between these means. This calculation was made according to the formula:

$$P. E._{M_1 - M_2} = \left( P. E._{M_1} \right)^2 + \left( P. E._{M_2} \right)^2$$

$P. E._{M_1}$  equals the probable error of the mean of the distribution of scores for Negroes, and  $P. E._{M_2}$ , the probable error of the mean of the distribution of scores for white students (5). There were six of these probable errors of differences, one for the two races on each of the scales.

The difference between the means of distributions divided by the probable error of the difference between

these means gives the critical ratio (5). These critical ratios enable clear-cut statements to be made as to the reliability of any differences between attitudes found in the two races.

It is evident that a comparison of the central tendencies as expressed in the means of the distributions demands computation of the standard deviation, probable error of the mean, and probable error of the difference between the means of the two races on each of the six attitudes so as to arrive at the critical ratios. The conclusions of this thesis were drawn from results obtained by application of the above statistical formulae to the scores obtained.

## RESULTS

The results are shown in the following table.

Results of a statistical analysis comparing six social attitudes of  
 some Negro and white college students in Kansas.

(Attitudes were measured by Thurstone's 'Attitude Scales')

Attitude toward	Negro	White	Mean of distrib- ution	Standard deviation	Probable error of mean	Probable error of difference between means	Critical ratio
God	Negro	7.53	1.51	.102	.142	1.48	
	White	7.32	1.47	.099			
The church	Negro	3.26	1.32	.089	.129	0.23	
	White	3.23	1.38	.093			
War	Negro	4.51	1.49	.101	.116	10.25	
	White	3.32	0.86	.058			
The Negro	Negro	7.67	1.04	.070	.081	4.72	
	White	7.24	0.86	.058			
Prohibition	Negro	5.23	1.29	.087	.128	4.98	
	White	5.86	1.39	.094			
Capital punishment	Negro	5.11	1.75	.118	.161	6.08	
	White	6.09	2.01	.136			

## CONCLUSIONS

The data of this thesis were collected from scores obtained by the acceptance of certain statements by 200 subjects. The conclusions drawn are subject to the important reservation that the endorsement of a statement by a subject is no guarantee that the endorser's subsequent conduct will agree with the attitude expressed. He may be lying or he may be influenced by the opinions of others.

Interpretation of the results obtained by the statistical analysis of the data suggests the following conclusions:

1. Negro college students and white college students both believe in God, but neither racial group is significantly more favorable to the God concept than the other.
2. Both races are favorable with some reservations toward the church. The difference is insignificant.
3. Although both racial groups of college students are moderately opposed to war, Negro college students are significantly more favorable to war than white college students.
4. Both groups are liberal in attitude toward the Negro. However, Negro college students are significantly more favorable in attitude toward the Negro than are white college students.



5. The attitude of both groups toward prohibition is neutral or indifferent. However, white college students are significantly more favorable in attitude toward prohibition.

6. White college students are mildly in favor of capital punishment, whereas Negro college students are neutral or indifferent in attitude toward capital punishment. The difference is highly significant.

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