

THE VALIDATION OF ITEMS FOR AN ATTITUDE SCALE
ON DEMOCRACY

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ON DEMOCRACY

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CHAPTER 1

THE PROBLEM

Introduction.--This study is based upon the assumption that man by his opinions expresses his attitude.

The method used is essentially that used by L. L. Thurstone and E. J. Chave in the measurement of attitude toward the church.¹

Man might make a false statement regarding his true opinion, but his actions may also be a distortion of his attitude. This is typified by the politician who extends friendship and hospitality in overt action while hiding an attitude that he expresses more truthfully to an intimate friend; thus, neither his opinions nor his overt actions constitute in any sense an infallible guide to the subjective inclinations and preferences that constitute his real attitude. We must remain content therefore to use opinions or other forms of action as indices of attitude only. There is a discrepancy, some error of measurement as it were, between the opinion or overt action that is used as an index and the attitude that we infer from such an index. Thurstone says,

But this discrepancy between the index and "truth" is universal. When you want to know the temperature of your room, you look at the thermometer and use its reading as an index of temperature just as though there was a single temperature reading which is the "correct" one for the room. If it is desired to ascertain the volume of a glass paper weight, the volume is postulated as an attribute of the piece of glass, even though volume is an abstraction. The volume is measured indirectly by noting the deminsions of the glass or by immersing it in water to see how much water it displaces. These two procedures give two indices which might not agree exactly. In almost every situation involving measurement there is postulated an abstract continuum such as volume or temperature, and the allocation of the thing measured to that continuum is accomplished usually by indirect means through one or more indices. Truth is inferred only from the relative consistency of the several indices, since it is never directly known. We are dealing with the same type of situation in attempting to measure attitude. We must postulate an attitude

¹ L. L. Thurstone, and E. J. Chave, The Measurement of Attitude. p. 1-96, 1928.

variable which is like practically all other measurable attributes in the nature of an abstract continuum, and we must find one or more indices which will satisfy us to the extent that they are internally consistent.²

Of the value of attitude measurement, S. H. Britt has this to say,

Actually a great deal of significant work is being done in the field of attitude measurement. Polls of opinion by the American Institute of Public Opinion, Fortune magazine, and the Psychological Corporation have been well executed and have had great practical value. The Psychological Corporation in particular has reduced many a problem in business and industry to a scientific study of attitudes, always with due caution against sweeping generalizations. Carefully controlled attitude studies are often helpful in giving approximations of attitudes which could not otherwise be found.³....

The writer chose Thurstone's procedure because it was less fatiguing to the judges and because the statistical work was not nearly so prohibitive, at least, as compared to other familiar studies.

Previous Studies of Similar Problems.—Cattell is considered by Thurstone and Chave to have pioneered in this work and to have been the first man to apply psychophysical methods to the measurement of social values. He measured the estimated degrees of eminence of scientific men.⁴

Cattell's students applied the same methods with variations and short cuts to the measurement of other social values, examples of which are the experiments of Wells in measuring literary merit and the experiments of Thorndike in measuring the estimated excellence of hand-writings and of children's drawings.⁵

Other studies made by Thurstone were those on attitude toward Patriotism, Law, Communism, Treatment of Criminals, Prohibition, Evolution, Birth Control, the Negro, and the Church.⁶

² L. L. Thurstone, "Attitude Can be Measured," The American Journal of Sociology, 33: 532-533, 1928.

³ S. H. Britt, Social Psychology of Modern Life, p. 120, 1941.

⁴ L. L. Thurstone, and E. J. Chave, op. cit., p. xii. 1928.

⁵ L. L. Thurstone, and E. J. Chave, op. cit., p. 2. 1928.

⁶ L. L. Thurstone, Tests on Attitudes.

About 1928 F. K. Shuttleworth adapted a test devised by Dr. Hornell Hart in developing a new method of measuring character traits.

Shuttleworth says this of his questionnaire method,

....This new method would seem applicable to the measurement of any of the attitudes and interests that make up character.⁷

S. H. Britt sees a value in attitude measurement and describes the following works.⁸

Chassell made a rather elaborate study of overt behavior. He secured data on 300 adults concerning their present personality traits and attitudes, their earlier religious and social activities and also the personalities of their fathers, mothers, brothers, and sisters. By means of a statistical analysis, Chassell demonstrated that there was such a high degree of relation between a subject's present sex adjustment and the incidence of parental threats and punishments for sex activities in childhood, as to indicate a causal relation between the two.

Lois B. Murphy determined sympathy scores for large numbers of children. The type of measurement used was highly reliable, and the interesting thing is that the sympathy scores of the children varied decidedly in terms of the child's present situation, for example whether the child was in a situation in which he felt himself reasonably secure.

Schanck investigated the attitudes of the members of the Baptist Church and the Methodist Church toward different methods of Baptism, in a relatively small community. He made contrasts of their attitudes when they were quired as church members and when they were asked what their private feelings were.

⁷ F. K. Shuttleworth, "A New Method of Measuring Character Traits," *School and Society*, 19:682, 1924.

⁸ S. H. Britt, *op. cit.*, p. 108-119, 1941.

Meltzer made a study concerning the experiences of anger of college students.

E. S. Robinson made a study during the latter part of the Hoover administration in which questionnaires were sent to several thousands of voters, and on which the subjects were asked to mark certain items as true, probably true, undecided, probably false or false. Following this these voters listened to various radio speeches by prominent individuals on topics touched on in the questionnaire. The voters again filled out the questionnaire and the results were tabulated. Robinson found that there were actually very few people who changed their attitudes as represented by their verbal opinions from the true to the false side of the ledger, or even from probably true to probably false. However, there were numerous changes from probably true to true and from probably false to false. Robinson concluded that people had heard a phrase which gave authority to a particular predilection, and, as a result, their uncertainty was changed to certainty.

An experiment by Annis and Meier was devoted to the attitude of 75 university students toward the Honorable W. Morris Hughes, Prime Minister of Australia for several years. A preliminary test showed that he was unfamiliar to them. Half of them then read planted literature in favor of Hughes, the remaining half read literature which was unfavorable. The results showed that their attitudes changed from no attitude to one of like or dislike, according to the propaganda that they had been reading.

Peterson and Thurstone conducted one on the effect of motion pictures on children. In this case they were first measured for their attitude and then shown the pictures. Two examples were attitudes toward the Negro and the Chinese. For those on the Negro the picture

"The Birth of a Nation" was shown. After seeing it their attitude changed to one of disfavor toward the Negro and as later tests showed it remained so for five months. By showing to those taking the one on the Chinese the picture, "The Son of the Gods," a favorable attitude toward them was built up. With other pictures, attitudes toward the Germans, leniency toward criminals, pacifism, and gambling were changed to favor except for gambling which was brought into disfavor.

E. L. Thorndike investigated a question of values, reporting his findings in his Presidential Address to the American Association for Advancement of Science. This study was that of the questionnaire method. His effort was designed to show why we spend what we do for certain things.

An interesting attempt to portray men on the basis of highly generalized attitudes or values was made by E. Spranger. In his work emphasizing the neglected cultural aspects of personality Spranger listed the six types of interests as being the theoretical, the economic, the aesthetic, the social, the political, and the religious. These six sets of values refer not to types of men but to general attitudes which may be found in varying degrees in different people. G. W. Allport and P. E. Vernon sensed the importance of these values in the personality of the individual, and in a study entitled, "Study of Values," they devised a test to measure these values. The Study of Values is not very diagnostic for the individual personality but it can be used for obtaining generalizations about groups. The validity of this test has been shown by the fact that it differentiates students according to occupational interests. ⁹

Origin of Present Study.—While making a study of Thurstone's procedure in preparing items for measuring attitude toward the church, the

⁹ Daniel Katz, and Richard L. Schanck, *Social Psychology*, p. 445-447. 1938.

writer became deeply interested in knowing what people really thought of democracy and decided to use the same procedure to prepare items which could be used to make an attitude test on democracy.

It is hoped from this and similar studies that responsible leaders may be given the tools with which to measure the trend, whether right or wrong, of the people of this nation toward government and to throw some light upon their task of formulating objectives for civic education and the development of social attitudes in people.

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CHAPTER II

Theory of Attitude Measurement

The Possibility of Measuring Attitude.—According to Einstein's theory of relativity, all things are relative. If this be true it is just as legitimate to measure the attitudes of man as it is to use some other relative term to describe his age or weight.

Man's attitude is a complex affair that no single numerical index can describe, but so is the measurement of a piano. For a lengthy description of each, several indices are used.

In attacking the procedure of Thurstone, H. M. Johnson reasons thus:

If a is greater than b and b is greater than c, then a is greater than c.... The preceding procedure is correct, but if we were to subject say 100,000 persons to the so called National Intelligence Test, count the conventional answers that each individual returns, and then ascertain that 70% of the population answered fewer of these questions conventionally than John Walker answered conventionally, and that 35% of the same population answered fewer of these questions conventionally than did William Carpenter, then we might assign to Walker the number 70 and to Carpenter the number 35 to denote their respective centile ratings in the population of tested individuals. But then these numbers would be ordinal numbers, and it would be absurd to say that because Walker's place in the series is denoted by a number which is twice as great as the number which denotes Carpenter's place, Walker has twice as much national intelligence which these individuals may be thought of as possessing.¹

But it seems as though H. M. Johnson forgets that these tests are so designed as to give only relative results and the degree of agreement or disagreement is only for the time being and only for items in the test, otherwise there would be no hope in helping humanity to a better world, a more pleasing and enduring atmosphere in which to live.

The median of attitude is detected in a more or less general

¹ H. M. Johnson, "Pseudo-Mathematics in the Mental and Social Sciences" The American Journal of Psychology. 48:342-351. 1936.

manner and is relative as are all things, therefore, this gives us the starting point which Johnson says we need when he makes this statement,

In brief no property of any attitude can be measured unless the attitude can first be detected.²

In the measurement of attitude the writer wishes to state, what he considers the meaning of certain words to be.

The concept of "attitude" being the sum total of a man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic. It is admittedly a subjective and personal affair.

The concept of opinion will mean a verbal expression of attitude. If a man said that we made a mistake in entering the war against Germany, that statement would be called his opinion. The term opinion will be restricted to verbal expression. But it is an expression of what? It expresses an attitude supposedly. There should be no difficulty in understanding this use of the two terms. The verbal expression is the opinion. The writer's interpretation of such an expressed opinion would be that the man's attitude is pro-German. An opinion symbolizes an attitude.

The writer wishes to measure attitudes and is not interested in opinions for the letters, words, or immediate meaning of the statement merely as it is, but is, in this study, interested in the man's attitude toward democratic government, his conception of what the term democracy, for the present really means to him.

As pointed out in the introduction the man may distort his real attitude. There is an old proverb which is something of this nature,

² H. M. Johnson, op. cit., p. 350, 1936.

"We are known by our deeds," but our actions as shown every day are distortions. We extend overt actions of hospitality to our boresome neighbors, only to keep from hurting their feelings, while we express our dislikes of them to a more intimate one. The writer feels justified in using opinions as an index of attitude. The writer is aware of the fact that there is some discrepancy between the opinion or overt action that is used as an index and the attitude that is inferred from this index.

In this study the writer does not imply that people will act in accordance with the opinions expressed by them, but believes that it will be interesting and helpful to know what they are trying to make other forms of humanity believe their attitude to be on the subject.

It is assumed that an attitude scale is used only in situations in which one may reasonably expect the subjects to tell the truth about their convictions.

The Attitude Variable.---In the beginning of the measurement of attitude an attitude variable should be stated and the measurement limited to that. The writer believes the best method of explaining an attitude variable as conceived by him would be to give an example of it. For instance in the question of governmental control of wheat acreage, let our variable be from complete lack of governmental control to complete dominance by the government. We would of course have a neutral zone.

In this same question we might have a statement thus, governmental control of wheat has increased the peanut acreage. This statement is irrelevant in that it does not belong to the attitude variable, since it does not concern governmental control, but it is a statement of attitude. The writer believes that the ambiguity of such statements will eliminate them.

The attitude variable should be such that it can be stated in terms of more or less, for example, when we compare the attitudes of people by saying one is more communistic, pacifistic or realistic than another.

Figure 1 represents an attitude variable, extremely undemocratic to extremely democratic, with a neutral zone. A person who talks undemocratically will be located to the left of the neutral zone, say at d, while one talking democratically will be located to the right, say

| | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---------|---|---|----------------------|---|---|---|---|---|---|
| I | c | I | I | I | d | I | I | f | I | I | b | I | I | a | I |
| Extremely undemocratic | | | | | | Neutral | | | Extremely democratic | | | | | | |

Figure 1.

at a. It is possible to conceive of a frequency distribution to represent the distribution of attitude in a specified group on the subject of democracy.

There is some ambiguity in using the term attitude in the plural. An attitude is represented as a point on the attitude continuum. Consequently there is an infinite number of attitudes that might be represented along the attitude scales. In practice however we do not differentiate so finely. In fact, an attitude, practically speaking is represented by a certain narrow range or vicinity on the scale. When a frequency distribution is drawn for any continuous variable, such as stature, we classify the variable for descriptive purposes into steps, or class-intervals. The attitude variable can also be divided into class-intervals and the frequency counted in each class-interval. When the writer speaks of an attitude, he shall refer to a point, or restricted range, on the attitude continuum. Several attitudes will be considered not as a set of discrete entities but as a series of class-intervals along the attitude scale.

A Frequency Distribution of Attitudes.—On the scale in figure one as you see diagrammatically a person with sympathies pointing at a would be extremely democratic, one at b democratic but not nearly so much as at a, while c would be extremely undemocratic, and d only slightly so.

Next you see a person might be willing to indorse several opinions within a certain range of the scale. It is conceivable that a democratic person would be willing to indorse statements from f to b and would consider those from b to a extremely democratic and reject all from f to c which are undemocratic. You see then his attitude would be represented by the mean or average range that he indorses, unless he cares to select a single opinion which most nearly represents his opinion.

A Unit of Measurement for Attitudes.—The only way to identify the different attitudes (points on the line) is to use a set of opinions as landmarks as it were for the different steps or parts of the scale. The final scale consists of a series of statements of opinions, each of which is allocated to a particular point on the base line. Starting with 62 statements the writer expects to end up with approximately 20 statements or opinions which are fairly evenly distributed on the scale.

In order to determine how far apart the statements should be on the final scale, a series of opinions was given to a group of over a hundred people. They were asked to arrange them in order from the most democratic to the most undemocratic. The writer did not ask them for their opinions. That is another matter entirely.

The point, on a linear scale at which fifty per cent of the judges believe a statement should be located to the left of and fifty per cent believe it should be located to the right of, is designated as the scale value of the statement. This value is assigned to the statement

and is used in scoring the paper of the individual taking the test. The final score, being the mean scale value of all indorsed statements, shows the comparison of the individual's opinion with that of other individuals taking the same test.

The practical outcome of this procedure is a series of statements of opinions allocated along the base line of Figure 1 ranging from extremely democratic to extremely undemocratic.

CHAPTER III

Construction of Attitude Scale

Collections of Opinions for the Scale.—The writer formulated 62 statements of opinion on democracy. These statements were believed to be expressive of attitudes covering all possible gradations of the scale.

In making this list of statements the following practical criteria were applied: 1. The statements were made as brief as possible to keep from fatiguing the judges. 2. An effort was made to so construct the statements that they could be indorsed or rejected as a whole in accordance with their agreement or disagreement with the attitude of the judges. 3. The acceptance or rejection of the statement must be such that it indicates something of the reader's attitude about the issue. 4. Double-barreled statements were avoided as much as possible. 5. A large majority of the statements must really belong on the attitude variable that is to be measured. Of course if a small number of irrelevant statements should be left in the series the ambiguity will eliminate them.

Thirty one statements were contained in each of two forms A and B respectively at the beginning of this experiment. The numbering of the statements was quite arbitrary and served only as a means of identification.

LIST OF OPINIONS ABOUT DEMOCRACY

Form A

1. There are times when it is justifiable for the government to tell us what and how much to plant.
2. Any other form of government will produce men who are more hardy and capable and know their business better than will a government based on democratic principles.
3. People are more nearly equal, happier, more helpful, and less tax-burdened in a paternalistic form of government.

4. During times of utmost gravity, when men are betraying their brothers and fellow countrymen, national regimentation of youth is justifiable.
5. Jehovah's Witnesses should be allowed to voice their feelings publicly.
6. No Catholic should ever become president of the United States.
7. All people should be forced to salute the flag.
8. When a government is honestly trying to get itself solidly established, it has good justification for using some violence and repression if these seem necessary.
9. A negro has just as much right to hold a public office as has a member of any other race.
10. We should accept the will of the majority as the true and rightful solution to questions of public concern.
11. There are moments during periods of great uncertainty when we should let skilled persons tell us what to eat and drink and wear in order to make our nation stronger, greater, and less susceptible to invasion.
12. There should be governmental control of labor during times of war.
13. Every pupil should be made to repeat the Lord's Prayer at the beginning of school.
14. All of the Japanese should be run out of California and back to their native land.
15. The fish and game in the nation belong to us; we have a right to catch and kill them whenever we want to.
16. Teachers should be allowed to teach what they believe is the truth.
17. In order to help keep us from being swindled, the government should control prices.
18. In order to insure proper nutrition and prevent famine, the governing body of our nation should allow all individuals the same amount of food and buy up the rest to save for emergencies.
19. Every male citizen should be forced to give one year of his life in service for the state whether he wants to or not.
20. The determination of policies and laws of our government should be entrusted to a specially trained personnel.
21. All individuals should have equal voice in determining the policies of the government.
22. Social positions should depend upon professional status.

23. All individuals should have equal social status regardless of economic, cultural, or intellectual qualifications, and regardless of race or nationality.
24. All should share equally in the products of labor and industry.
25. Social positions should depend upon religious status.
26. The natural resources of a country belong to all the citizens alike.
27. In order to unify and strengthen the policies of our nation, only native born Americans should be allowed to hold public offices and to follow a profession.
28. Any individual has the right to amass as much wealth as his ingenuity will permit.
29. In view of fifth column activity, our libraries and document rooms should be limited to only known citizens.
30. Anyone who believes in the nationalization of land has the right to advocate it publicly.
31. All children between ages of 6 and 16 should be sent to Sunday School so as to make our nation stronger and more philanthropic.

Form B

1. The president should be allowed to do as he wishes in order to make our nation stronger.
2. The people should be permitted to read all the propaganda put out by such foreign organizations as the Nazis, Fascists, and Communists.
3. The government should allow no one to amass a fortune exceeding \$10,000.
4. All public school pupils are capable and should help to determine the studies and activities which constitute their school experiences.
5. Social positions should depend upon racial status.
6. The army should take over private enterprise when it deems it necessary.
7. The writ of search causes us to lose a great deal of valuable evidence in our fight against crime; therefore, it should be abandoned and a system of common sense on the part of our officers substituted.
8. Our defense work would be better if the president did as he pleased.
9. Democracy is too timid, especially for the present crisis.
10. If everything was governmentally controlled we would all get a square deal.
11. Members of the German American Bund and similar organizations should not be permitted to don their uniforms and parade the streets.

12. There are times when the execution of radicals and enemies of the state is justifiable in the interest of unity and peace.
13. The principles of democracy are the finest ever produced.
14. Social positions should depend upon nationality status.
15. Persons working very peacefully against the government should not be prosecuted.
16. It is a waste of time and money to give some of our worst criminals a chance to escape through influence of skilled criminal lawyers during trial by jury.
17. There are certain books published which our government should not permit adults to read.
18. During times of great stress, we should have a strong man to guide us out of the crisis.
19. In this great land in which we live, we should do as our state would have us do.
20. An acknowledged person working against our beloved flag and our free country should be shot upon the spot to assure us that he does not escape through our crooked prosecutors, lawyers, and prison officials.
21. Proposing of ideas by our inexperienced and often incapable laymen should be stopped, especially during these hard times.
22. During times of international crisis, the government should control the radio to keep individuals working against our government from poisoning the minds of our people.
23. Illiterate negroes should have the same rights to the polls as our competent citizens enjoy.
24. In the interest of unity and peace, no political parties should be allowed.
25. As long as a person is law abiding, he should be permitted to advocate overthrow of the government.
26. If our government were controlled by a wise and economical leader, the periods of retarded economical progress would become much shorter.
27. If all profits were taken out of business we should have less class hatred.
28. Anyone should have the right to tell the people all the good qualities of the Nazis and Facists.

29. Our government should take control of industry during our present crisis in the interest of national defense.
30. Individuals with an intelligence below the average should not be permitted to run for public office.
31. If the government should tell us which occupation to enter, we would be more likely to find ourselves doing work which we thoroughly enjoy and know to be of genuine public service.

As the reader has probably noticed, some of the statements are ambiguous. Having an objective criterion for measuring the degree of ambiguity, the writer has felt justified in leaving these statements to be eliminated by the judges.

The Choice of Judges.---For judges the writer chose social studies people, social studies in this case including teachers of government, philosophy, education, English, history, and American Democracy as well as sociologists proper. Judges of this type were used because the very nature of their work, according to the writer's opinion, places them in a better position than that of other types of teachers to know the pros and cons of democracy.

The Sorting Procedure.---The subjects were asked to sort the sixty-two statements in forms A and B in accordance to the degree with which they were democratic or undemocratic. They were given eleven possible categories in which to place these statements, ranging from A, extremely democratic to K, extremely undemocratic with F, the neutral position in the middle.

The subjects were given the following detailed instructions:

1. The accompanying statements in Forms A and B are items for an attitude scale for measuring democracy. You will note that there are 62 items in the two forms.

2. You will also find 11 narrow strips of paper labelled A, B, C, D, E, F, G, H, I, J, K, respectively, and below each letter, FORM A and FORM B.

3. Arrange these slips alphabetically with A on the left and K on the right, then read the items in Form A. After reading over the items without any evaluation, begin with item 1. If you believe this statement represents the highest democratic ideal or attitude, place 1 on slip A. If it represents the most undemocratic, place 1 on slip F, under Form A. On the slips between these positions, place the statements in accordance with the degree that the statement is democratic or undemocratic. Use the same method for Form B, but be sure to place the numbers under Form B on the slip.

4. You will have eleven piles arranged in the order of value-estimate from A, the highest, to K, the lowest. Do not try to get the same number in each pile. They are not evenly distributed.

5. It will probably take you thirty minutes to do this and your conscientious help will certainly be appreciated.

6. When you are through with the rating, please return the material to your instructor, or to W. Thomas Wright, 202 Morrill Hall.

7. Just below Slip A, put your name, field of study, teaching experience, and College classification.

The returns from the first 100 subjects were tabulated to show where each individual placed each of the 62 statements. The summation of this data was assembled into Table I. For identification purposes the first column contains the code number of the statement. The second column contains the scale-value of each statement. Within column number three is found the statement's Q-value, which is its measure of ambiguity. The scale-value and the Q-value will be explained later on in the chapter. The interpretation for the remaining part of this table, taking statement No. I for example, is as follows. Eighteen per cent of the 100 subjects placed statement No. I in the first pile. This is indicated by the entry of 0.18 under pile A. Twenty two per cent placed it in A or B; thirty percent in A, B, or C; thirty five per cent in D or to the left of D; forty four per cent in E or to the left of E;

eighty two per cent in F or to the left of F; eighty nine per cent in G or to the left of G; ninety one per cent in H or to the left of H; ninety two per cent in I or to the left of I; ninety four per cent in J or to the left of J, while all placed it in K or to the left of K.

The Consistency of the Individual Subject.—No individual's paper was thrown out because the writer thought he placed too many of the statements in one pile, for the writer believed that there was a possibility that an individual might be very conscientious and sincere in his conception of democracy and still place many of the statements in one or two piles.

Two papers were thrown out because the subjects used tabulation marks instead of numbers thereby making their conceptions unintelligible.

The Scale Values.—The scale values of the statements were determined graphically. Two of the graphs are reproduced to illustrate this procedure. Statement No. 25 under Form A is reproduced in Fig. 2 to show a statement of low ambiguity. This statement reads as follows: "Social positions should depend upon religious status." Practically all the subjects classified this statement in the last two categories on the undemocratic end of the scale. The curve crosses the 50% line at the interpolated scale value of 11.1, which is assigned as the scale value for this statement. The scale value is such that half the judges classified this statement as more favorable to democracy than the position 11.1, while half of them placed the statement as less favorable to democracy than this position in the series of eleven categories.

The ambiguity of a statement is measured by the distance between the twenty-fifth and the seventy-fifth percentile and is designated as the Q value in Table I.

TABLE I

| State--Scale--: | | Accumulative Proportions | | | | | | | | | | | |
|-----------------|-------|--------------------------|------|------|------|------|------|------|------|------|------|-------|------|
| ment | Value | Q | A | B | C | D | E | F | G | H | I | J | K |
| Form A: | : | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 6-7 | 7-8 | 8-9 | 9-10 | 10-11 | |
| 1 | : 5.2 | :3.5 | :.18 | :.22 | :.30 | :.35 | :.44 | :.82 | :.89 | :.91 | :.92 | :.94 | :1.0 |
| 2 | :10.5 | :2.0 | :.02 | :.03 | :.03 | :.06 | :.06 | :.09 | :.10 | :.11 | :.22 | :.38 | :1.0 |
| 3 | : 8.3 | :2.0 | :.01 | :.02 | :.02 | :.03 | :.06 | :.10 | :.17 | :.41 | :.68 | :.85 | :1.0 |
| 4 | : 7.1 | :5.5 | :.12 | :.23 | :.28 | :.32 | :.33 | :.38 | :.49 | :.62 | :.75 | :.92 | :1.0 |
| 5 | : 0.6 | :5.0 | :.52 | :.57 | :.62 | :.66 | :.70 | :.74 | :.79 | :.80 | :.83 | :.93 | :1.0 |
| 6 | : 9.1 | :1.5 | :.04 | :.04 | :.07 | :.08 | :.12 | :.18 | :.19 | :.22 | :.26 | :.38 | :1.0 |
| 7 | : 8.5 | :3.5 | :.13 | :.18 | :.19 | :.21 | :.25 | :.28 | :.31 | :.36 | :.75 | :.82 | :1.0 |
| 8 | : 5.6 | :4.8 | :.08 | :.18 | :.26 | :.32 | :.33 | :.40 | :.56 | :.78 | :.88 | :.94 | :1.0 |
| 9 | : 0.8 | :2.3 | :.62 | :.68 | :.76 | :.80 | :.86 | :.90 | :.93 | :.93 | :.96 | :.96 | :1.0 |
| 10 | : 1.2 | :1.9 | :.33 | :.44 | :.67 | :.85 | :.89 | :.94 | :.97 | :.98 | :.98 | :.99 | :1.0 |
| 11 | : 5.6 | :6.5 | :.18 | :.25 | :.37 | :.44 | :.46 | :.53 | :.58 | :.88 | :.95 | :.97 | :1.0 |
| 12 | : 3.2 | :3.5 | :.17 | :.28 | :.46 | :.56 | :.71 | :.75 | :.77 | :.79 | :.88 | :.95 | :1.0 |
| 13 | : 8.5 | :3.0 | :.0 | :.0 | :.01 | :.02 | :0.3 | :.14 | :.29 | :.34 | :.64 | :.78 | :1.0 |
| 14 | :11.0 | :2.0 | :.02 | :.03 | :.05 | :.07 | :.09 | :.12 | :.15 | :.20 | :.26 | :.29 | :1.0 |
| 15 | :10.2 | :3.8 | :.03 | :.09 | :.10 | :.12 | :.15 | :.20 | :.27 | :.37 | :.38 | :.42 | :1.0 |
| 16 | : 2.3 | :5.0 | :.44 | :.48 | :.58 | :.65 | :.70 | :.76 | :.82 | :.87 | :.88 | :.95 | :1.0 |
| 17 | : 7.6 | :4.1 | :.04 | :.07 | :.15 | :.21 | :.29 | :.35 | :.44 | :.53 | :.91 | :.97 | :1.0 |
| 18 | : 8.4 | :2.5 | :.00 | :.02 | :.04 | :.08 | :.13 | :.20 | :.26 | :.44 | :.68 | :.85 | :1.0 |
| 19 | :10.2 | :3.9 | :.07 | :.10 | :.11 | :.11 | :.12 | :.19 | :.26 | :.28 | :.32 | :.49 | :1.0 |
| 20 | : 7.6 | :5.1 | :.09 | :.15 | :.23 | :.27 | :.34 | :.38 | :.43 | :.59 | :.90 | :.94 | :1.0 |
| 21 | : 1.8 | :1.8 | :.21 | :.57 | :.78 | :.84 | :.85 | :.89 | :.90 | :.90 | :.93 | :.95 | :1.0 |
| 22 | : 7.2 | :3.4 | :.02 | :.05 | :.07 | :.10 | :.14 | :.23 | :.50 | :.58 | :.69 | :.77 | :1.0 |
| 23 | : 2.6 | :7.2 | :.31 | :.44 | :.51 | :.54 | :.57 | :.66 | :.71 | :.71 | :.82 | :.85 | :1.0 |
| 24 | : 3.0 | :6.1 | :.10 | :.19 | :.50 | :.53 | :.58 | :.64 | :.69 | :.70 | :.76 | :.80 | :1.0 |
| 25 | :11.1 | :1.5 | :.0 | :.0 | :.01 | :.01 | :.01 | :.02 | :.03 | :.06 | :.12 | :.27 | :1.0 |
| 26 | : 3.0 | :3.0 | :.20 | :.26 | :.50 | :.71 | :.78 | :.86 | :.89 | :.90 | :.91 | :.93 | :1.0 |
| 27 | : 8.2 | :2.8 | :.03 | :.04 | :.08 | :.16 | :.19 | :.25 | :.30 | :.42 | :.78 | :.93 | :1.0 |
| 28 | : 2.0 | :2.8 | :.14 | :.50 | :.68 | :.75 | :.77 | :.77 | :.80 | :.87 | :.89 | :.92 | :1.0 |
| 29 | : 7.1 | :2.7 | :.04 | :.07 | :.17 | :.19 | :.22 | :.27 | :.42 | :.72 | :.81 | :.87 | :1.0 |
| 30 | : 0.6 | :2.6 | :.56 | :.65 | :.74 | :.77 | :.80 | :.87 | :.90 | :.94 | :.96 | :.97 | :1.0 |
| 31 | : 8.6 | :4.1 | :.03 | :.03 | :.10 | :.12 | :.20 | :.30 | :.34 | :.41 | :.51 | :.89 | :1.0 |
| Form B: | : | : | : | : | : | : | : | : | : | : | : | : | : |
| 1 | : 7.9 | :3.1 | :.04 | :.04 | :.07 | :.11 | :.13 | :.20 | :.26 | :.54 | :.64 | :.69 | :1.0 |
| 2 | : 2.6 | :5.2 | :.40 | :.47 | :.55 | :.67 | :.71 | :.82 | :.82 | :.83 | :.86 | :.89 | :1.0 |
| 3 | : 8.3 | :2.8 | :.01 | :.01 | :.05 | :.06 | :.07 | :.07 | :.18 | :.48 | :.57 | :.66 | :1.0 |
| 4 | : 2.9 | :3.3 | :.15 | :.29 | :.52 | :.65 | :.67 | :.75 | :.85 | :.88 | :.92 | :.93 | :1.0 |
| 5 | : 8.5 | :1.7 | :.01 | :.01 | :.02 | :.02 | :.06 | :.09 | :.23 | :.46 | :.78 | :.92 | :1.0 |
| 6 | : 8.2 | :4.4 | :.05 | :.10 | :.17 | :.21 | :.24 | :.29 | :.34 | :.43 | :.69 | :.86 | :1.0 |
| 7 | : 9.1 | :4.8 | :.02 | :.05 | :.12 | :.12 | :.16 | :.31 | :.34 | :.42 | :.75 | :.87 | :1.0 |
| 8 | : 7.7 | :2.6 | :.01 | :.01 | :.06 | :.08 | :.14 | :.25 | :.37 | :.53 | :.76 | :.94 | :1.0 |
| 9 | :10.1 | :3.3 | :.03 | :.06 | :.09 | :.15 | :.18 | :.30 | :.33 | :.47 | :.80 | :.89 | :1.0 |
| 10 | : 6.8 | :3.9 | :.02 | :.03 | :.04 | :.07 | :.13 | :.33 | :.55 | :.58 | :.69 | :.82 | :1.0 |
| 11 | : 7.8 | :2.7 | :.02 | :.03 | :.03 | :.06 | :.11 | :.13 | :.33 | :.51 | :.67 | :.82 | :1.0 |
| 12 | : 6.4 | :4.3 | :.13 | :.22 | :.23 | :.27 | :.32 | :.37 | :.64 | :.76 | :.81 | :.88 | :1.0 |
| 13 | : 0.5 | :2.0 | :.63 | :.74 | :.81 | :.85 | :.87 | :.97 | :.98 | :.99 | :.99 | :1.0 | :1.0 |
| 14 | : 8.7 | :2.1 | :.01 | :.01 | :.03 | :.04 | :.08 | :.11 | :.12 | :.26 | :.56 | :.72 | :1.0 |

TABLE I- Continued

| Statement | Scale Value | Accumulative Proportions | | | | | | | | | | | |
|-----------|-------------|--------------------------|------|------|------|------|------|------|------|------|-------|--------|------|
| | | Q | A | B | C | D | E | F | G | H | I | J | K |
| Form B: | | :0-1 | :1-2 | :2-3 | :3-4 | :4-5 | :5-6 | :6-7 | :7-8 | :8-9 | :9-10 | :10-11 | |
| 15 | : 4.0 | :6.7 | :.08 | :.21 | :.39 | :.50 | :.54 | :.60 | :.60 | :.63 | :.67 | :.75 | :1.0 |
| 16 | : 7.7 | :4.5 | :.10 | :.19 | :.23 | :.25 | :.27 | :.34 | :.38 | :.56 | :.84 | :.90 | :1.0 |
| 17 | : 9.2 | :2.5 | :.05 | :.07 | :.09 | :.14 | :.16 | :.23 | :.24 | :.31 | :.39 | :.76 | :1.0 |
| 18 | : 4.5 | :3.2 | :.15 | :.26 | :.32 | :.37 | :.68 | :.88 | :.92 | :.95 | :.96 | :.99 | :1.0 |
| 19 | : 6.5 | :2.8 | :.04 | :.12 | :.18 | :.22 | :.24 | :.42 | :.52 | :.79 | :.86 | :.94 | :1.0 |
| 20 | : 9.9 | :1.7 | :.03 | :.07 | :.09 | :.10 | :.14 | :.18 | :.20 | :.23 | :.26 | :.60 | :1.0 |
| 21 | :10.2 | :3.5 | :.01 | :.06 | :.07 | :.10 | :.14 | :.19 | :.21 | :.27 | :.33 | :.42 | :1.0 |
| 22 | : 8.4 | :2.4 | :.04 | :.08 | :.12 | :.17 | :.18 | :.23 | :.30 | :.47 | :.76 | :.84 | :1.0 |
| 23 | : 4.4 | :6.2 | :.08 | :.09 | :.15 | :.43 | :.57 | :.58 | :.64 | :.68 | :.72 | :.82 | :1.0 |
| 24 | :10.2 | :1.9 | :.02 | :.03 | :.06 | :.08 | :.12 | :.12 | :.15 | :.21 | :.29 | :.44 | :1.0 |
| 25 | : 3.7 | :2.2 | :.06 | :.09 | :.32 | :.59 | :.77 | :.83 | :.84 | :.86 | :.87 | :.89 | :1.0 |
| 26 | : 5.7 | :3.3 | :.04 | :.09 | :.12 | :.17 | :.23 | :.58 | :.74 | :.79 | :.86 | :.94 | :1.0 |
| 27 | : 6.8 | :3.0 | :.01 | :.04 | :.07 | :.12 | :.14 | :.30 | :.58 | :.72 | :.81 | :.88 | :1.0 |
| 28 | : 3.6 | :3.4 | :.13 | :.20 | :.27 | :.59 | :.75 | :.81 | :.83 | :.86 | :.89 | :.92 | :1.0 |
| 29 | : 2.9 | :2.4 | :.06 | :.21 | :.55 | :.71 | :.81 | :.85 | :.89 | :.94 | :.97 | :.97 | :1.0 |
| 30 | : 8.3 | :3.0 | :.02 | :.07 | :.11 | :.14 | :.17 | :.23 | :.26 | :.41 | :.63 | :.95 | :1.0 |
| 31 | : 8.5 | :2.9 | :.00 | :.01 | :.03 | :.04 | :.05 | :.11 | :.16 | :.45 | :.58 | :.66 | :1.0 |
| | : | : | : | : | : | : | : | : | : | : | : | : | : |

A small vertical arrowhead indicates the scale value, while two small vertical lines indicate the twenty-fifth and the seventy-fifth quartile points on the curve. In Fig. 2 the two vertical marks are located at 9.8 and approximately at 11.3. The distance between these two marks is used as a measure of the ambiguity of the statement. For this statement the Q-value or ambiguity is 1.5 or the difference between 11.3 and 9.8. As the reader can see if a statement is very ambiguous the judges will place it over a wide range on the scale and consequently it will have a high ambiguity.

Statement No. 16 in Form B, "It is a waste of time and money to give some of our worst criminals a chance to escape through influence of skilled criminal lawyers during trial by jury," is a statement which was not so easily determined by the judges. It crossed the twenty-fifth percentile line at 40 and the seventy-fifth percentile 8.5 giving it a

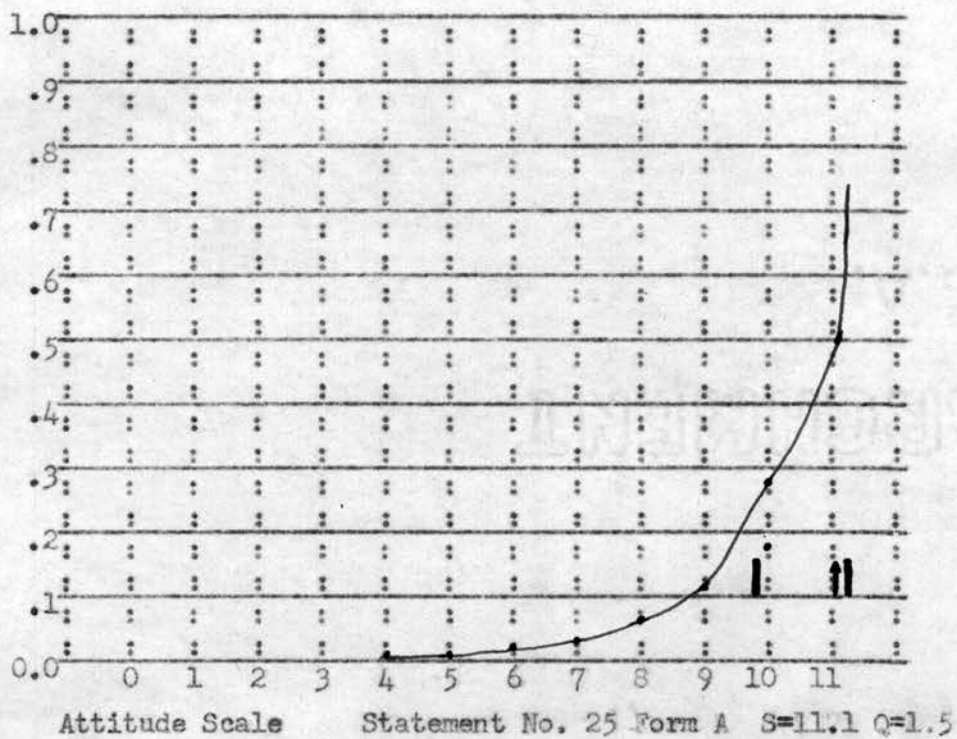


Fig. 2.

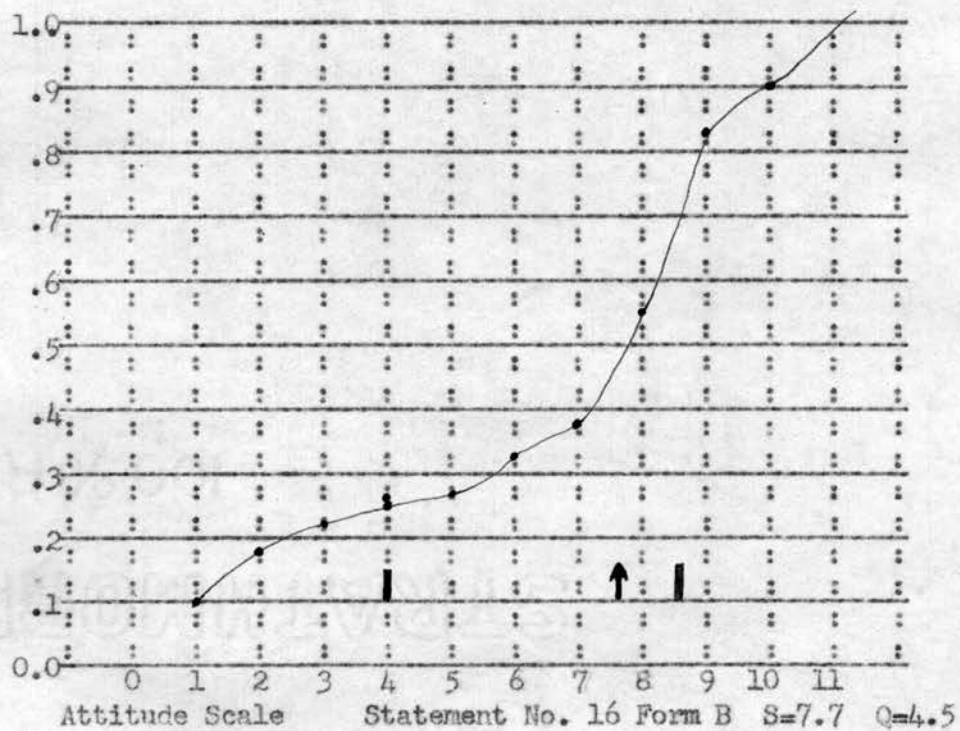


Fig. 3

Q-value of 4.5 which is highly ambiguous. It crossed the fiftieth percentile at 7.7 thus it's scale value became 7.7. It is reproduced graphically in Fig. 3.

The Resulting Attitude Scale.—After the scale and Q, or ambiguity, values of the statements were determined, the writer decided to use only two or three statements from each category having the lowest ambiguity. Twenty-five statements were chosen for the final attitude scale. Their scale values ranged from 0.5, the extremely democratic statement, to 11.1, the extremely undemocratic statement, with 5.5 being the neutral zone.

The statements, with their original identification number and scale values are reproduced below.

| Original Ident. No. | Scale Value | |
|---------------------|-------------|---|
| 27 B | 6.8 | 1. If all profits were taken out of business we should have less class hatred. |
| 26 A | 3.0 | 2. The natural resources of a country belong to all the citizens alike. |
| 26 B | 5.7 | 3. If our government were controlled by a wise and economical leader, the periods of retarded economical progress would become much shorter. |
| 13 B | 0.5 | 4. The principles of democracy are the finest ever produced. |
| 6 A | 9.1 | 5. No Catholic should ever become president of the United States. |
| 19 B | 6.5 | 6. In this great land in which we live, we should do as our state would have us do. |
| 25 A | 11.1 | 7. Social positions should depend upon religious status. |
| 25 B | 3.7 | 8. As long as a person is law abiding, he should be permitted to advocate overthrow of the government. |
| 20 B | 9.9 | 9. An acknowledged person working against our beloved flag and our free country should be shot upon the spot to assure us that he does not escape through our crooked prosecutors, lawyers, and prison officials. |

| Original Ident. No. | Scale Value | |
|---------------------|-------------|--|
| 1 A | 5.2 | 10. There are times when it is justifiable for the government to tell us what and how much to plant. |
| 29 A | 7.1 | 11. In view of fifth column activity, our libraries and document rooms should be limited to only known citizens. |
| 14 B | 8.7 | 12. Social positions should depend upon nationality status. |
| 3 A | 8.3 | 13. People are more nearly equal, happier, more helpful, and less tax-burdened in a paternalistic form of government. |
| 18 E | 4.5 | 14. During times of great stress, we should have a strong man to guide us out of the crisis. |
| 11 B | 7.8 | 15. Members of the German American Bund and similar organizations should not be permitted to don their uniforms and parade the streets. |
| 28 A | 2.0 | 16. Any individual has the right to amass as much wealth as his ingenuity will permit. |
| 9 A | 0.8 | 17. A negro has just as much right to hold a public office as has a member of any other race. |
| 2 A | 10.5 | 18. Any other form of government will produce men who are more hardy and capable and know their business better than will a government based on democratic principles. |
| 29 B | 2.9 | 19. Our government should take control of industry during our present crisis in the interest of national defense. |
| 14 A | 11 | 20. All of the Japanese should be run out of California and back to their native land. |
| 5 B | 8.5 | 21. Social positions should depend upon racial status. |
| 21 A | 1.8 | 22. All individuals should have equal voice in determining the policies of the government. |
| 8 A | 7.7 | 23.. Our defense work would be better if the president did as he pleased. |
| 10 A | 1.2 | 24. We should accept the will of the majority as the true and rightful solution to questions of public concern. |
| 24 B | 10.2 | 25. In the interest of unity and peace, no political parties should be allowed. |

Method of Scoring.—The subject is given the attitude scale with the following directions,

This is an experimental study of the distribution of attitude toward democracy. Read these statements on democracy and check only those that express your own sentiment, thus, (✓). Let your own experience be the determining factor in your indorsements.

The total scale value of checked statements is obtained and divided by the total number of statements checked to secure the mean scale value, which is designated as the individuals score.

Reliability of the Scale.—In order to test the reliability of the experimental attitude scale, the writer divided it into two forms, A and B, assigning alternate items to them. Because there was an odd number of questions, the usual procedure of assigning alternate items to the two forms A and B was slightly modified, since in that procedure one form would have a higher mean scale value than the other. The writer picked one item which did not match up well with the others and did not count it for or against any individual. By leaving this item out, the total scale value for the forms became 70.0 and 70.2 for forms A and B respectively. The writer thinks the items to be matched sufficiently.

This left twenty four items, which the writer paired according to scale value, making them the same as near as possible.

The correlation between Forms A and B, by means of the Spearman-Brown Prophecy Formula, is .43 with a probable error of 0.058.

This correlation shows that the test, under the present procedure, is not statistically reliable.

The returns from the first one hundred people were used in obtaining the above correlations.

CHAPTER IV

Summary.—The final attitude scale on democracy is composed of the following twenty-five items:

1. If all profits were taken out of business we should have less class hatred.
2. The natural resources of a country belong to all the citizens alike.
3. If our government were controlled by a wise and economical leader, the periods of retarded economical progress would become much shorter.
4. The principles of democracy are the finest ever produced.
5. No Catholic should ever become president of the United States.
6. In this great land in which we live, we should do as our state would have us do.
7. Social positions should depend upon religious status.
8. As long as a person is law abiding, he should be permitted to advocate overthrow of the government.
9. An acknowledged person working against our beloved flag and our free country should be shot upon the spot to assure us that he does not escape through our crooked prosecutors, lawyers, and prison officials.
10. There are times when it is justifiable for the government to tell us what and how much to plant.
11. In view of fifth column activity, our libraries and document rooms should be limited to only known citizens.
12. Social positions should depend upon nationality status.
13. People are more nearly equal, happier, more helpful, and less tax-burdened in a paternalistic form of government.
14. During times of great stress, we should have a strong man to guide us out of the crisis.
15. Members of the German American Bund and similar organizations should not be permitted to don their uniforms and parade the streets.
16. Any individual has the right to amass as much wealth as his ingenuity will permit.
17. A negro has just as much right to hold a public office as has a member of any other race.

18. Any other form of government will produce men who are more hardy and capable and know their business better than will a government based on democratic principles.
19. Our government should take control of industry during our present crisis in the interest of national defense.
20. All of the Japanese should be run out of California and back to their native land.
21. Social positions should depend upon racial status.
22. All individuals should have equal voice in determining the policies of the government.
23. Our defense work would be better if the president did as he pleased.
24. We should accept the will of the majority as the true and rightful solution to questions of public concern.
25. In the interest of unity and peace, no political parties should be allowed.

The items were taken from Forms A and B. Only those of the lowest ambiguity were used.

Social studies people were used as authorities.

On this scale a score of 0.0 is considered to be extremely democratic, one of 11.0 is considered extremely undemocratic, while one of 5.5 is considered to be a neutral position on the issue.

The mean score for the 100 people taking this test was 3.9, which, as the reader observes, is slightly democratic.

The reliability of the scale was determined by the split half or two form method. Twelve pairs of items were used in this case.

The correlation between the two forms, as found by the Spearman-Brown Prophecy Formula, was 0.43 with a probable error of 0.58.

Due to the small number of cases and to the short distance between scale values, the writer feels that a higher correlation would be difficult to obtain on a test of this type.

The writer plans to continue the study.

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