A Likert-type scale measuring attitudes toward the handicapped was developed and used to investigate intercorrelations between these attitudes and three other socio-political attitudes, namely ethnocentrism, radical-conservatism, and authoritarianism. The reliability was assessed by the split-half correlation coefficient as corrected by the Spearman-Brown prohopy formula. The construct validity was established by comparing the scale's relationship to other scales. Furthermore, it was shown that the intercorrelations between the attitudes under investigation were significant, suggesting that the negative attitudes toward the handicapped—ethnocentrism, radical-conservatism, and authoritarianism—belong to a common attitude syndrome.
The Development of a Likert-type Scale Measuring Attitudes Toward the Handicapped

by

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Typed by Donna Lee Norvell-Race for __Foroozandeh Gharai__
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In the past ten years, the integration of handicapped people into society has been given a great deal of attention in the United States. Of particular relevance to the handicapped are problems related to equal rights, jobs, education, recreation and housing. Handicapped people, by virtue of their impairments, have special difficulties in these areas. For example, in the past most buildings were not accessible to the handicapped. Some change is evident as public institutions are now required under penalty of law to provide equal building access to the disabled. These legal improvements correspond in many ways to improvements made by other minorities or handicapped people. For example, quota systems for the purpose of enhancing woman and minority status is now part of the ongoing process in public institutions.

Being handicapped, however, is in the eye of the beholder and the environment is determined as well as inherent. Society also has an important role in deciding what is normal or handicapped. A person could be considered handicapped in one environment and be considered normal in another situation. Abnormalities are relative; relative to the norm of society and to each other. When the norm changes, what is considered handicapped also changes.

In understanding society's attitude toward the handicapped, a study of attitudes toward other minorities is valuable because it would appear
that the handicapped and other minorities (e.g., racial or ethnic) have perceived and actual disadvantages in common.

Discrimination in both cases is produced by social prejudice. Handicapped people are victims of the same social attitude which attributes inferiority to minority groups. Society assumes, for example, that the handicapped person is incapable of employment and consequently inhibits the individual from achieving meaningful goals in society.

The handicapped, then, like blacks and low income persons, may suffer from the same prejudice. Society's attitude toward the handicapped as is true with racial minorities, for example, is reflected in lack of employment opportunity. The handicapped, culturally deprived, and racial minorities all experience varying forms of discrimination. The discriminatory practices in employment are rooted in the world of education (Sherif & Cantril, 1946).

The early school years deprive many handicapped, blacks and other minorities of effective scholastic training and, consequently, prevent them from achieving their potential. Some research suggests that "the finding of significant differences in effective social level between whites and negroes is only functionally valid. It need not have a uniform and unmodifiable casual background....The rate differentials between whites and blacks demonstrated how strong the effect of social deprivation may be on retardation measures" (Rosenberg, 1956). In other words, lower scores of black people are at least partially a reflection of lack of opportunities and an unequal treatment.

Despite the variety of handicaps, it is believed that people respond in a consistent fashion to the concept "handicapped" as they do
to other minority groups, e.g., blacks, jews,... The handicapped and minorities suffer from similar negative stereotypes. Katz (1980) in discussing the vicious cycles theory of discrimination noted that the root cause of minority inadequacy is prior discriminatory institutional practices. Handicapped, blacks and other groups are all ill-prepared for competitive jobs and effective coping in society. This discrimination generates inadequacy which, in turn, supports similar stereotypes, especially by those in our society who are prone to categorical social judgment.

In fact, handicapped people are identified as individuals ill-prepared physically and mentally for jobs. Consequently, they receive lower opportunities for training, education and job preparation. Likewise, blacks and Puerto Rican youth are at a particular disadvantage. Society, in response, has developed special vocational training programs. The New York Times (1968) noted about the vocational training act that "the principal gainers will be the Negro and Puerto Rican youth who have been at a particular disadvantage through the combined impact of racial discrimination and inadequate skill" (p. 9).

A major concern of this study, then, is the predicted relationship between attitudes toward the handicapped and other minorities (e.g., blacks). However, it is very likely that attitudes towards the handicapped and other minorities are partially determined by other socio-political attitudes, including conservatism-radicalism and authoritarianism. Conservatism encompasses harsh and judgmental social attitudes which may be reflected in condescending views toward the handicapped. Likewise, numerous studies have documented the relationship between
authoritarianism and negative attitudes toward minorities (e.g., Kirscht and Dillehey, 1967). The basis of this research suggests a theoretical relationship between conservatism-radicalism, authoritarianism, and attitudes toward minorities.

Statement of the Problem

A review of published material indicates that there are presently few measures of attitudes of non-handicapped toward the handicapped. Measures which existed relied on survey questions or modifications of other attitude scales. Consequently, it was difficult to assess reliability and validity of these measures. With the integration of handicapped people in society, the development of an attitude scale has both practical and theoretical usage. The success of relevant legislation with special interest groups depends on social support which can be assessed by an attitude scale. Also, the development of a scale has theoretical importance, since it can be used to compare attitudes toward the handicapped with attitudes toward other minorities, or to ethnocentrism. Both of these issues—the applied and theoretical—depend on the development of a reliable and valid scale measuring attitudes of non-handicapped toward the handicapped. A second, but related purpose was to test several hypotheses regarding the relationship between attitudes toward the handicapped and attitudes toward another minority. Further, the study provided an opportunity to test predicted relationships between several socio-political measures (i.e., conservatism-radicalism, authoritarianism, and attitudes toward blacks).
The Significance of the Study

The educational integration of the handicapped results in problems of adjustment for both handicapped and non-handicapped people. An important factor in the adjustment of non-handicapped students and teachers is their attitude toward handicapped people. Whether handicapped people are accepted in society depends to a large extent on the attitude of non-handicapped people. Through attitude measurement it is not only possible to examine the components of the non-handicapped's attitudes but also the percentage level of support, e.g., the percentage agreement with positive items. This knowledge is important information in the area of social legislation. Certainly the success of any legislation with respect to the handicapped depends to some extent on the attitudes of non-handicapped, e.g., college student attitudes may have practical applications as noted above. Moreover, the study of attitudes toward the handicapped adds to society's knowledge of the behavior of non-handicapped people.

Purpose of the Study

The purpose of the study was to develop a reliable and valid Likert scale which measured attitudes toward handicapped people. As part of a validity phase, the following hypotheses were tested.

Hypotheses

1. There is a significant relationship between the attitudes toward
handicapped people and attitudes toward other minority groups (e.g., blacks).

2. There is a significant relationship between Conservatism-radicalism, Authoritarianism (F scale) and attitudes toward handicapped.

Limitation

The major limitation of this study, as it is with all psychological studies, is the complexity of the human mind. The scores obtained are considered valid if the subjects responded truthfully, and not to some extraneous influence.

Delimitation

The study was limited to undergraduate students at Oregon State University enrolled in an introductory psychology course during winter and spring terms, 1980.

Definition of Terms

In order to attain precision and clarity of meaning in the investigation, the following terms were defined:

ATTITUDE: The multiple definitions generated by the literature suggest common components in relation to an attitude object, i.e., positive or negative affective feelings, supportive belief structures, and corresponding behavior patterns.
AUTHORITARIANISM: This concept emerged out of the work by Adorno and coworkers in the early 1950's, and define a syndrome of traits which tap fascist proclivities, i.e., personality characteristics which make a person susceptible to an extremely rightist political program. The elements of the authoritarian mind include anti-semitism, ethnocentrism, concern for status, and intolerance for ambiguity.

CONSERVATISM-RADICALISM: A socio-political dimension which reflected punitive attitudes in the areas of the welfare-state, nationalism, religion, and racial tolerance.

HANDICAPPED: The guide to Public Law 94-142 defined handicapped children as "Those children evaluated as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, deaf-blind, multi-handicapped, or as having specific learning disabilities, who, because of those impairments, need special education and related services" (p. 2). In other words, a handicapped person is someone with a particular mental, physical, or sensory impairment which incapacitates him in some way.

RELIABILITY: This concept refers to test consistency. There are several types of reliability. In split-half reliability the coefficient measures internal test homogeneity. In test retest reliability, the coefficient measures reliability, over time. The measure is administered to the same subjects at two separate times. A reliability coefficient of .80 or higher is considered acceptable.
UNIDIMENSIONALITY: This concept refers to the internal homogeneity of scales, where all the items scale on one single dimension from very negative to very positive toward the attitude object.

VALIDITY: Refers to whether the scale measures what it purports to measure. Construct validity is determined by the scale's relationship to other scales.
CHAPTER II
REVIEW OF LITERATURE

This chapter provides an overview of the literature on attitude research, relevant to the study of attitudes toward the handicapped. Definitions of attitudes provide the framework for the attitudinal focus of this study. Since attitudes possess a central position in social psychology, many investigators have struggled with defining essential components of their concept and their interrelationship.

A second major purpose of this chapter is to evaluate the current state of studies on handicapped, and, in particular, attitudes towards the handicapped.

Finally, an outline is presented defining the general variables thought important in predicting attitudes toward the handicapped. Among these variables forming a theoretical framework are the following: authoritarianism, radical-conservatism, and attitudes toward other minorities.

Current State of Studies of Attitude

Research shows the importance of attitudes of non-handicapped toward handicapped people. Murphy (1895) reported that these attitudes are related to the emotional and social adjustment of handicapped people. Rosenberg (1956) suggested "perhaps no single concept within the whole realm of social psychology occupies a more nearly central position than
that of attitudes" (p. 368). This statement indicates the important
position which the concept of attitude plays in sociology and psychology.

Thurstone (1931) describes attitudes and feelings as a prejudice,
bias, fear, threat, about any specific topic. Opinions, on the other
hand, are verbal expressions of attitudes or symbols of attitudes.
Social psychology define attitudes as "a tendency toward a particular re-
sponse in a particular situation" (Thurstone, 1931).

For Likert (1932), attitudes contain two components: first, an
attitude produces a tendency toward overt action; secondly, they are
verbal expressions. There is a logical consistency between attitudinal
components which are grouped in patterns. The attitude universe in turn
contains a series of verbal propositions dealing with specific social
issues.

Allport (1935) suggested that "an attitude is a mental and neutral
state of readiness, organized through experience, exerting a directive
or dynamic influence upon the individual's response to all objects and
situations with which it is related." In other words, attitudes are
directive responses or reactions to stimuli.

According to Muzafer Sherif (1961), the first stage of attitudes
is the stimulus situation. The stimulus can be prejudiced, or a value
judgment of any kind. When these expressions also contain a like or
dislike dimension this is the base of social attitudes. The individual
learns attitudes through contact with the environment, social objects
or being exposed to some value existing in his family or school. Other
factors involved in forming attitudes include the individual's relation-
ships and status to other individuals. In general, attitudes are either
negative or positive toward a stimulus object.

The term "stereotype" is related to attitudes but conceptually distinct. Sherif (1947) describes this conceptual distinction as follows: "the word stereotype is applied to an intense and rigid attitude, while the word prejudice applies to an attitude still more rigid and intense and one generally based on false information" (p. 78). Leopold (1935) described the word "stereotype" as a "fixed impression which conforms very little to the facts it pretends to represent, and results from defining first and observing second" (p. 23). Racial attitudes, for example, are based on existing stereotypes. The image that prejudiced people hold of the group they are prejudiced against is called a stereotype (Leopold and Lippman, 1935).

The terms prejudice and discrimination are similar, but not the same. Prejudice is a negative attitude toward an entire category of people and involves attitudes, thoughts and beliefs, but not action. Discrimination is a behavioral exclusion of all members of a group from certain rights, opportunities, or privileges (Kirscht and Dillehey, 1967).

In 1895, Baldwin suggested that the concept or attitude is basic to the understanding of emotional expression. Later in 1947, Doob, and in 1930 Mead, defined the role of attitudes. From the attitudes which a group has in common, it is possible to judge some of their background, values, culture, and social norms. Bogardus (1931) defined an attitude as "a tendency to act toward or against some environmental factor" (p. 12). This statement suggests that attitudes are not an innate state of readiness, but are reactions of the individual toward an object's value, or environment.
According to Suchman (1959), "there is a U-shaped relationship found between attributes of intensity and of content" (p. 721). He pointed out that the more extreme attitudes (either positive or negative) are held with much intensity, whereas the more neutral position with less intensity. Attitudes are partially modified by reacting to other people's attitudes. Many attitudes have an irrational base not necessarily subject to rational appeal.

Research by Rosenberg (1960) and Fishbein (1967) showed that the individual's attitudes toward a specific object is a function of his belief. In differentiating the behavioral component of the structure of attitudes, Fishbein explained five basic behavioral types: marital intentions, admirations, social distance, friendship and subordination-superordination. Triandis (1971) believes that attitudes are highly dependent on friendship and admiration, moderately correlated with subordination and social distance and least correlated with marital intentions. "The attitude is primarily a way of being set toward or against certain things (Murphy and Murphy, 1931).

Most definitions discussed above agree that attitudes are defined as a state of readiness, and constitute behavior reinforced by beliefs. In other words, attitudes are feelings toward specific objects reinforced by beliefs about and actual behavior toward objects.
The Concept of Authoritarianism

According to Adorno (1950) "authoritarianism represents an attempt to link deep-seated personality dispositions with the socially significant forms of belief and social behavior involved in adhering to a rigid and dogmatic ideology and in discrimination against out-groups" (p. 272). Rigidity in thinking is an important aspect of authoritarianism, specifically as inflexibility in the individual's values, norms, beliefs, and behavior.

Right-wing authoritarianism is ultimately fascist in character. It is the result of individual psychodynamic problems suffered by large groups of political actors. Fascism is the product of a "sick society," in which minorities and the status deprived are oppressed, especially during periods of intense socio-economic competition. Fascism produces racial hatred. The fascist mentality can be summarized as preoccupation with status and power where the most enduring characteristic is a rejection of outgroups.

Edwards (1957) described the fascist personality as a preference for ruling by force and dictatorship, persecution of minorities, militarism, curtailment of personal freedom, both religious and civil. In that type of society, negative beliefs about oneself, or others in positions of authority, are repressed and projected toward minority groups.
Attitudes Toward Minorities and Handicapped

In 1974, George Peabody conducted a study to investigate people with disabilities. He used a self-esteem instrument as the basis for making the Spatial Paralogic Attitude Inventory (SPAI). The sample consisted of multiple sclerosis patients, 160 community members, and 26 undergraduates working with disabled. He found that subjects with multiple sclerosis rated disabilities more positive than they did the control group on the scale (SPAI).

Adorno (1950), Frenkel-Brunswik (1955) and Sanford (1945) pointed to a strong relationship between attitudes directed toward various minorities. They also suggested that the source of prejudice is rooted more in the organism than in the external and objective conditions. Thus, it appears that attitudes toward all minorities follow the same consistent pattern. Other researchers also indicate that intolerance toward one minority group is usually accompanied by intolerance toward other minority groups. Frenkel (1945) and Sanford (1945) showed a correlation of .75 between anti-semetic sentiment and rejection of other minorities. Hurley (1969) also suggested that attitudes toward the handicapped are similar to attitudes expressed toward ethnic minorities. The handicapped person is a representative of a minority group, and would therefore be rejected by ethnocentric people.

As suggested in the introduction, authoritarianism, economic conservatism, and anti-black attitudes are predictive of attitudes toward
minorities in general and specifically the handicapped. The scales employed in this study are defined as follows:

**Description of Scales**

A. **F. Scale.** The F scale was made to tap fascistic proclivities. A fascist personality makes a person susceptible to an extremely right or conservative political program. The F scale is designed to measure this personality structure. Christie (1954) studied the F scale. His findings indicate a negative relationship between the F scale and the level of education or socio-economic status. Christie concluded that "Recent research clearly indicates that F scale is highly correlated (negatively) with measures of education and social status. Thus, it is excellent for the study of those who are . . . high in status and are involved in the power processes of society" (p. 27).

B. **The Economic Conservatism Scale.** Rundquist and Sletto (1936) developed a twenty-two item scale using a Likert procedure. The scale measured attitudes toward the control of economic institutions by government, labor and management. One hundred sixty-two items were given to graduate students in psychology and advanced students in sociology. Items were eliminated if they were unreliable over a one-week interval. New items were added to those selected items increasing the total item pool to 212. These items were administered to 184 juniors in sociology classes. Through item analysis,
22 items were chosen on the basis of their ability to discriminate between the upper and lower quartiles of the total score distribution. For reliability the authors report split-half coefficients (corrected) of .85 and .82 (samples of 500 males and 500 females). They also reported test-retest reliability coefficients (sample of 70 males and 70 females) of .86 and .82. The authors reported that the scale correlated positively with several measures of personal adjustment, which confer upon it a degree of construct validity.

C. The Anti-Black Scale. This was a 16-item, Likert-type instrument constructed by Steckler (1957). All of the included items sample heavily the cultural stereotype of blacks in the United States. Steckler (1957) reported a split-half reliability of .84 for the scale. For validity, the anti-black scale correlated .24 with an anti-white scale. It also correlated .40 and .57 with the California E and F scales, respectively.

Summary

This chapter constituted a review of the major content areas relevant to the study of attitudes toward the handicapped. A theoretical base for understanding these attitudes was sought in formulating definition of social attitudes. Next the chapter reviews the current status of studies on the handicapped, followed by a discussion on the limited studies in the field of attitudes toward the handicapped. A logical conclusion, which followed this review, was the obvious need for a standardized measure (Likert) of attitudes toward the handicapped. In
particular, the research literature suggested the relationship of authoritarianism, attitudes toward other minority groups, to attitudes toward the handicapped.
CHAPTER III

SCALE METHODOLOGY AND ITEM SELECTION

This chapter includes a description of the procedures used in the development of a Likert-type scale measuring attitudes toward the handicapped. The procedure calls for two studies: the item selection; and investigating the reliability and validity of the final scale. In this chapter the item selection will be discussed.

Attitudes have been scaled for 55 years, beginning with the historical work of Bogardus (1925). In 1929, Murphy established five major "attitude areas": international relations, race relations, economic conflicts, political conflicts, and religion. In 1937, Thurstone developed a scale methodology which asked subjects to objectively assess the direction and intensity of a statement on an 11-point scale. From these data, the investigator calculated the scale value of each statement (the median of responses) and the level of agreement among judges (Q-value). This process of scale development is very laborious since it requires the development of scale values and Q-values for each of up to 200 statements. This led to the development of Likert scale (Likert, 1943) and its subsequent modification. The choice of the Likert approach is based on the criteria of efficiency and because it produces coefficients of reliability and validity similar to more complex methods (Edwards, 1957). The Likert scale is an unidimensional scale and measures attitudes along a single dimension from very positive toward the attitude object to very negative.
The instrument designed for this investigation was a Likert scale to measure attitudes toward the handicapped. The following procedure is the standard technique employed in Likert-type scales (Edwards, 1957). The first step in the construction of an attitude scale is the collection of a large number of statements about the attitude object (attitudes toward the handicapped). Items are developed from a variety of sources, including articles about handicapped people, and research on the handicapped (see Appendix B). Thurstone and Chave (1929), Likert (1932), and Edwards (1957) are in general agreement about the criteria to be applied to attitude statements. Edwards (pp. 13-14) listed the criteria as follows:

1. Avoid statements that refer to the past rather than to the present.
2. Avoid statements that may be interpreted in more than one way.
3. Avoid statements that are factual or capable of being interpreted as factual.
4. Avoid statements that are irrelevant to the psychological object under consideration.
5. Avoid statements that are likely to be endorsed by almost everyone or by almost no one.
6. Select statements that are believed to cover the entire range of the effective scale of interest.
7. Keep the language of the statements simple, clear, and direct.
8. Statements should be short, rarely exceeding 20 words.
9. Each statement should contain only one complete thought.
10. Statements containing universals such as all, always, none and never often introduce ambiguity and should be avoided.
11. Words such as only, just, merely, and others of similar nature should be used with care and moderation in writing statements.
12. Whenever possible, statements should be in the form of simple sentences rather than in the form of compound or complex sentences.
13. Avoid the use of words that may not be understood by those who are to be given the completed scale.
14. Avoid the use of double negatives. (p. 9).

Subjects. A total sample of one hundred and ten participated. The
subjects (introductory psychology students at Oregon State University during Winter, 1980) volunteered for the project and, in return, were given points toward their grade. The sixty-three males ranged in age from 18-23, with a mean age = 20.5 years. The fifty-eight females had an age range from 18-24, and a mean age = 21.0.

Procedure. Using Edwards' criteria, 78 statements were collected and edited. The item pool was then administered with Likert-type instructions and response categories from Strongly Agree (1), Agree (2), Uncertain (3), Disagree (4), and Strongly Disagree (5).

The instructions asked the subject to respond to each statement with their personal opinion. Each subject was informed that there were no right or wrong answers. Anonymity was promised in the verbal instructions. The subjects responded by circling the response category which corresponded to the direction and intensity of their attitudes. Items were keyed in either the negative or positive direction (toward the attitude object). After the completion of the survey, all the negative item weights were reversed, e.g., if a subject circled (1) a weight of 5 was assigned to that item. This was done so all the items would be keyed in the same direction and so the summated total score would reflect one overall attitude. The criterion of internal consistency was employed as a method of analysis. In this approach, the scores of two extreme groups are compared (subtracted) on each and every item. The 15 subjects who had the most positive attitude (calculated by summing for all items) were compared with those who had the least positive attitude. Subtracting the score of the "low" group from that of the "high"
group yielded a D (or difference) score for each item. The larger the "D" score the better its predictive value.

Results. Subsequently, the twenty items with the largest "D" scores were selected for the scale. These items and their corresponding "D" scores are shown in Table 1.

The following chapter reports the reliability and validity study.
<table>
<thead>
<tr>
<th>Statements</th>
<th>&quot;D&quot; Score</th>
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<tbody>
<tr>
<td>I respect handicapped people.</td>
<td>19</td>
</tr>
<tr>
<td>Handicapped people are a source of inspiration to me.</td>
<td>20</td>
</tr>
<tr>
<td>Handicapped adults should not be allowed to adopt a normal child.</td>
<td>28</td>
</tr>
<tr>
<td>I would invite handicapped people to parties in my home.</td>
<td>22</td>
</tr>
<tr>
<td>I feel comfortable around handicapped people.</td>
<td>25</td>
</tr>
<tr>
<td>Handicapped adults should be allowed to adopt handicapped children.</td>
<td>27</td>
</tr>
<tr>
<td>I find handicapped people unattractive.</td>
<td>23</td>
</tr>
<tr>
<td>Handicapped people scare me.</td>
<td>27</td>
</tr>
<tr>
<td>I would not be comfortable working with someone who is handicapped.</td>
<td>20</td>
</tr>
<tr>
<td>I would be embarrassed to have a child who was handicapped.</td>
<td>22</td>
</tr>
<tr>
<td>I would not invite a handicapped person to a concert.</td>
<td>25</td>
</tr>
<tr>
<td>Handicapped people are a great burden on society.</td>
<td>28</td>
</tr>
<tr>
<td>Handicapped elementary students retard the progress of normal elementary students.</td>
<td>28</td>
</tr>
<tr>
<td>Handicapped people cannot accept responsibility for themselves.</td>
<td>20</td>
</tr>
<tr>
<td>I would rather die than be handicapped for life.</td>
<td>20</td>
</tr>
<tr>
<td>I would marry someone who is handicapped.</td>
<td>21</td>
</tr>
<tr>
<td>Handicapped people could not be good parents.</td>
<td>20</td>
</tr>
<tr>
<td>I would accept a date with a handicapped person.</td>
<td>30</td>
</tr>
<tr>
<td>In terms of social relationships, handicapped people are just like everyone else.</td>
<td>23</td>
</tr>
<tr>
<td>Handicapped people are not as emotionally stable as non-handicapped people.</td>
<td>23</td>
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CHAPTER IV

THE RELIABILITY AND VALIDITY STUDY

The second study sought to investigate scale reliability and validity. The selected items plus other scales thought to be theoretically related were administered to another sample of undergraduate students at Oregon State University (see Appendix C). A split-half correlation coefficient was determined by correlating the sum of the odd items with the sum of the even items. This internal reliability coefficient was corrected by the Spearman-Brown prophesy formula to obtain a true estimate of reliability.

Subjects. A total of one hundred and five subjects were recruited for the study during Spring term, 1980 at Oregon State University. The subjects volunteered in introductory psychology classes for the project, and in return were given points toward their grade. Sixty males, ranging in age from 18-24 ($\bar{X} = 21.0$) and fifty-five females, ranging in age from 18-24 ($\bar{X} = 21.5$) participated in this phase of study.

Procedure for Reliability. The reliability of a test is related to test length. In the split-half only half of the items are used (odd versus even) which consequently require a correction to obtain an estimate of the true reliability (Spearman-Brown prophesy formula).

Results. The reliability of the scale measuring attitudes toward the handicapped (ATH) was measured using the split-half correlation coefficient. This reliability coefficient measures the internal consistency of the scale, i.e., relative homogeneity of the instrument. The split-half reliability coefficient was determined to be .73. When
corrected by the Spearman-Brown prophesy formula the results yielded a coefficient of .84.

Validity. The purpose of the validity study was to find the relationship between the scale being researched to other scales thought theoretically related (construct validity). As discussed in the introduction and review of literature, it was believed that economic conservatism, fascism, and negative attitudes towards blacks are related to attitudes toward the handicapped (ATH). It was reasoned that attitudes toward the handicapped belonged to a syndrome of attitudes. Fascism as expressed by the F-scale of conservatism, as measured by the Radicalism-Conservatism scale, are concepts which previous research related to rejection of minorities (e.g., Shaw and Wright, 1973). Table 2 shows the result of correlational analysis.

<p>| TABLE 2 |</p>
<table>
<thead>
<tr>
<th>Pearson Product Moment Correlations Between ATH and Other Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservatism-radicalism</td>
</tr>
<tr>
<td>Authoritarianism (F-scale)</td>
</tr>
<tr>
<td>Attitudes toward blacks</td>
</tr>
</tbody>
</table>

p ≤ .01

The above table supports the construct validity of the ATH scale. The correlations are all significant and moderate in size, and in the predicted direction. Specifically, negative attitudes toward the handicapped are related to conservatism, authoritarianism, and negative attitudes toward blacks.
Consequently, the results clearly indicated moderate to strong construct validity for the ATH scale. Conservative and authoritarian subjects are more negative toward handicapped as they are indeed toward other minorities group. Of special interest was the strong correlation between attitudes toward handicapped and toward blacks. This correlation supported the assertion that attitudes toward handicapped and attitudes toward other minority groups belong to the same syndrome of attitudes as suggested in the hypothesis. To further ascertain the relationship between this syndrome of traits the following analysis was completed. In Table 3 is reported the correlation between the three survey scales.

**TABLE 3**

Pearson Product Moment Correlations Between Survey Scales

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservatism-radicalism/authoritarianism</td>
<td>.34</td>
</tr>
<tr>
<td>Conservatism-radicalism/attitudes toward blacks</td>
<td>.44</td>
</tr>
<tr>
<td>Authoritarianism/attitude toward blacks</td>
<td>.42</td>
</tr>
</tbody>
</table>

p ≤ .01

As might be expected, the three scales intercorrelate significantly. It can be concluded that conservatism, authoritarianism, and negative attitudes toward blacks belong to a common attitude syndrome. This result suggested the presence of an overall prejudice factor where the rejection of minorities appears to be caused by similar personality and attitudinal factors. Any strategy for changing attitudes must examine the demographic, socio-economic framework for this syndrome of attitudes.
Summary and Conclusions

Since college students represent a select group of the population in any community, and therefore are not to be considered representative of the total population, the findings of this study were necessarily limited by relevant differences.

It is evident that some subjects exhibit stereotypic behavior in responding to the AHT scale. Stereotypes are affected to some degree by personal contacts. If personal contacts are based on inequality, the resultant stereotype reflects this qualities.

Allport (1954) demonstrated the importance of the quality of contact in improving relations between groups. Stereotypes is a synthesis of several influences including social pressure and personal contact. In the first study, 110 subjects responded to an item pool of 78 questions about handicapped people. The item selection study employing the method of item analysis (extreme group) yielded a twenty-item scale (ATH). In the validity study, 105 subjects responded to a questionnaire consisting the attitudes toward handicapped, (ATH) scale, the F scale, Conservatism-radicalism measure and attitudes toward blacks. The results show that people who are negative toward the handicapped have also negative attitudes toward blacks, as well as high scores on conservatism and authoritarianism.

Future research could be directed toward studying the affect of demographic factors including age and sex differences. Presently, education develops a more tolerant perspective on life. It would be of interest to compare subjects, who completed grade school with those who have completed high school and college degrees. Such a study would
provide a test of the effect of education on attitudes toward the handicapped.

Another possible study would be to examine the effect of contact with handicapped persons (i.e., those who are related or close friends of the handicapped versus persons having little, if any, contact). Since socio-economic differences (e.g., differences in level of income) have shown to be a factor in attitudes toward other minorities, it would be of interest to examine the relationship of this factor to attitudes toward the handicapped. More broadly, there is a need to assess the role of demographic variables in future attitudinal research.

The ATH scale developed in this study can also be used to assess teachers' attitudes toward their handicapped students. Along this line of thinking, the scale is a potential screening device for administrators and others working with handicapped people, especially if disguised in a larger pool of statements.

In this future research, the ATH scale will play an important role. It is a satisfactory instrument for this purpose as evidenced by its high reliability and promising construct validity.
REFERENCES


Chave, Ernest John, and Louis Leon Thurstone. Series of Attitude Scales.


Stagner, R. Studies of aggressive social attitudes. II. Changes from Peace to War. J. Soc. Psychol., 1944, 20, 121-128.


Thurstone, L. L. Attitudes can be measured. Amer. J. Social., 1927, 1928, 33, 529-554.


OREGON STATE UNIVERSITY

Committee for Protection of Human Subjects

Summary of Review

TITLE: The Development of a Likert-type Scale Measuring Attitudes Toward the Handicapped

PROGRAM DIRECTOR: John M. Dunn (F. Gharai)

RECOMMENDATION:

___ Approval

___ Provisional Approval

___ Disapproval

___ No Action

REMARKS:

Date: February 20, 1980

cc: Committee Chairman

mep

Signature:

Rod. V. Frakes
Associate Dean of Research
Phone: 754-3439

Redacted for Privacy
DIRECTIONS: Listed below are a number of statements collected from a variety of sources. There are no right or wrong answers. You will probably agree with some items and disagree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then indicate the extent to which you agree or disagree by circling the corresponding alternatives to the left of each item. The number of alternatives and their meanings are:

| If you disagree strongly | Circle 1 |
| If you disagree           | Circle 2 |
| If you have no opinion    | Circle 3 |
| If you agree              | Circle 4 |
| If you agree strongly     | Circle 5 |

First impressions are usually best in such matters. Please read each statement carefully. Decide if you agree or disagree and the strength of your opinion. Then circle the appropriate alternative to the left. Work as rapidly as you can. Give your opinion on every statement. If you find that the numbers to be used in answering do not adequately indicate your own opinion, use the one which is closest to the way you feel. Circle only one alternative for each item.

1 2 3 4 5 (1) I respect handicapped people.
1 2 3 4 5 (2) Handicapped people are a source of inspiration to me.
1 2 3 4 5 (3) Handicapped adults should not be allowed to adopt a normal child.
1 2 3 4 5 (4) I would invite handicapped people to parties in my home.
1 2 3 4 5 (5) I feel comfortable around handicapped people.
1 2 3 4 5 (6) Handicapped adults should only be allowed to adopt handicapped children.
1 2 3 4 5 (7) I find handicapped people unattractive.
1 2 3 4 5 (8) Handicapped people scare me.
1 2 3 4 5 (9) I would be embarrassed to have a child who was handicapped.
1 2 3 4 5 (10) I would not be comfortable working with someone who is handicapped.
1 2 3 4 5 (11) I would not invite a handicapped person to a concert.
1 2 3 4 5 (12) Handicapped people are a great burden on society.
1 2 3 4 5 (13) Handicapped people could not be good parents.
1 2 3 4 5 (14) Handicapped elementary students retard the progress of normal elementary students.
1 2 3 4 5 (15) I would rather die than be handicapped for life.
1 2 3 4 5 (16) I would marry someone who is handicapped.
1 2 3 4 5 (17) Handicapped people are not as emotionally stable as non-handicapped people.
1 2 3 4 5 (18) I would accept a date with a handicapped person.
1 2 3 4 5 (19) In terms of social relationships, handicapped people are just like everyone else.
1 2 3 4 5 (20) Handicapped people cannot accept responsibility for themselves.
1 2 3 4 5 (21) Human nature being what it is, there must always be war and conflict.
1 2 3 4 5 (22) What young people need most of all is strict discipline by their parents.
1 2 3 4 5 (23) A few strong leaders could make this country better than all the laws and talk.
1 2 3 4 5 (24) Most people who don't get ahead just do not have enough will power.
1 2 3 4 5 (25) Women should say out of politics.
1 2 3 4 5 (26) People sometimes say that an insult to your honor should not be forgotten. Do you agree or disagree with that?
1 2 3 4 5 (27) People can be trusted.
1 2 3 4 5 (28) One main trouble today is that people talk too much and work too little.
1 2 3 4 5 (29) Sex criminals deserve more than prison; they should be whipped publicly or worse.
1 2 3 4 5 (30) It is only natural and right that women should have less freedom than men.
1 2 3 4 5 (31) The government should take over all industries.
1 2 3 4 5 (32) Labor should have much more voice in deciding government policies.
1 2 3 4 5 (33) Legislatures are too ready to pass laws to curb business freedom.
1 2 3 4 5 (34) For men to do their best, there must be the possibility of unlimited profit.
1 2 3 4 5 (35) Poverty is chiefly a result of injustice in the distribution of wealth.

1 2 3 4 5 (36) The government should not attempt to limit profits.

1 2 3 4 5 (37) The more a man learns about our economic system, the less willing he is to see changes.

1 2 3 4 5 (38) The government ought to guarantee a living to those who can't find work.

1 2 3 4 5 (39) Large incomes should be taxed more than they are now.

1 2 3 4 5 (40) Men would not do their best if government owned all industry.

1 2 3 4 5 (41) Most great fortunes are made honestly.

1 2 3 4 5 (42) Private ownership of property is necessary for economic progress.

1 2 3 4 5 (43) Without sweeping changes in our economic system, little progress can be made in the solution of social problems.

1 2 3 4 5 (44) On the whole, our economic system is just and wise.

1 2 3 4 5 (45) Labor does not get its fair share of what it produces.

1 2 3 4 5 (46) When a rich man dies, most of his property should go to the state.

1 2 3 4 5 (47) If our economic system were just, there would be much less crime.

1 2 3 4 5 (48) The incomes of most people are a fair measure of their contribution to human welfare.

1 2 3 4 5 (49) A man should strike in order to secure greater returns to labor.

1 2 3 4 5 (50) A man should be allowed to keep as large an income as he can get.

1 2 3 4 5 (51) Money should be taken from the rich and given to the poor during hard times.

1 2 3 4 5 (52) Our economic system is criticized too much.

1 2 3 4 5 (53) A large part of the problems facing blacks today are caused by blacks themselves.

1 2 3 4 5 (54) I would rather not marry a person who has very kinky hair, wide nostrils, and thick lips.

1 2 3 4 5 (55) The lower-class black is to blame for a lot of anti-black prejudice.

1 2 3 4 5 (56) Whites and blacks can get along on jobs until too many blacks push themselves in.

1 2 3 4 5 (57) One big reason why racial prejudice is still so strong is that blacks offend people by being so sensitive about racial matters.
(58) One important reason why blacks are discriminated against in housing is that they don't keep up the property.

(59) One reason why racial prejudice still exists today is the fact that many blacks are dirty, loud, and generally offensive in their ways.

(60) One trouble with blacks is that they are even more jealous of each other's success than are whites.

(61) Too many blacks have abused the privilege of attending baseball games by being rowdy, noisy, and cheering only for the black ballplayers.

(62) Segregation and timcrom will never end unless the average black person becomes better educated and better mannered.

(63) Black people can hardly be expected to gain social equality until many more of the them exert some effort to better themselves and live more decently.

(64) With all of the drinking, cutting, and other immoral acts of some blacks, white people are almost justified for being prejudiced.

(65) Too many blacks, when they get a little money, spend it all on whiskey, flashy cars, or expensive clothes.

(66) One is almost ashamed to be a black when he sees so many of them who look and act like cotton pickers fresh from the fields.

(67) A great many blacks become officious, overbearing, and disagreeable when given positions of responsibility and authority.

(68) Blacks would solve many of their social problems if so many of them were not irresponsible, lazy, and ignorant.
DIRECTIONS: Listed below are a number of statements collected from a variety of sources. There are no right or wrong answers. You will probably agree with some items and disagree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then indicate the extent to which you agree or disagree by circling the corresponding alternative to the left of each item. The number of alternatives and their meanings are:

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First impressions are usually best in such matters. Please read each statement carefully. Decide if you agree or disagree and the strength of your opinion. Then circle the appropriate alternative to the left. Work as rapidly as you can. Give your opinion on every statement.

If you find that the numbers to be used in answering do not adequately indicate your own opinion, use the one which is closest to the way you feel. Circle only one alternative for each item.

1 2 3 4 5 (1) Handicapped people should not be guaranteed the same rights and privileges as everyone else.
1 2 3 4 5 (2) The government should give a special tax consideration to handicapped people.
1 2 3 4 5 (3) Handicapped workers should be judged by how hard they try rather than how well they produce.
1 2 3 4 5 (4) The government should fund a special olympics for handicapped people.
1 2 3 4 5 (5) I respect handicapped people.
1 2 3 4 5 (6) I would prefer my child play with another child who is not handicapped.
1 2 3 4 5 (7) Cities should provide special paths for handicapped people.
(8) College admission requirements should be lowered for handicapped people.

(9) I would offer to assist a handicapped person if he or she appeared to be unable to navigate a curb.

(10) Handicapped people are a source of inspiration to me.

(11) Handicapped people are reliable workers.

(12) America's transportation systems should not be required to provide special seating areas for handicapped people.

(13) The government should not provide educational grants to the handicapped.

(14) I would invite a handicapped person to a basketball game.

(15) Handicapped confinement restricts a person from being happy.

(16) Handicapped people should not be in a position to influence children.

(17) I could not have sexual feelings toward a handicapped person.

(18) Handicapped adults should not be allowed to adopt a normal child.

(19) Handicapped people should not get any special tax breaks.

(20) I would invite handicapped people to parties in my home.

(21) Handicapped people are capable of holding skilled jobs.

(22) I feel comfortable around handicapped people.

(23) Handicapped people have no sense of humor.

(24) I would resent a member of my family dating a handicapped person.

(25) I would rather not have a child than have a handicapped one.

(26) Handicapped adults should only be allowed to adopt handicapped children.

(27) I find handicapped people unattractive.

(28) Handicapped people have a good outlook on life.

(29) I would not hire a handicapped person.

(30) Handicapped people scare me.

(31) I would start a conversation with a handicapped person at a social gathering even if I did not know him or her.

(32) Under the proper circumstances, I would have sex with a handicapped person.

(33) Special education and training programs should be provided for handicapped people.

(34) Special education and training programs should be provided for handicapped people.
1 2 3 4 5 (35) People's opinions of handicapped people would change with increased awareness of their needs.
1 2 3 4 5 (36) I would not vote for a political candidate who is handicapped.
1 2 3 4 5 (37) Handicapped people would make good counselors.
1 2 3 4 5 (38) I would not be comfortable working with someone who is handicapped.
1 2 3 4 5 (39) Handicapped people should not be allowed to drive.
1 2 3 4 5 (40) I would be embarrassed to have a child who was handicapped.
1 2 3 4 5 (41) Handicapped people are as intelligent as non-handicapped people.
1 2 3 4 5 (42) I would not invite a handicapped person to a concert.
1 2 3 4 5 (43) There is no reason to educate handicapped people.
1 2 3 4 5 (44) Handicapped people have good leadership qualities.
1 2 3 4 5 (45) Handicapped people are a great burden on society.
1 2 3 4 5 (46) Hiring handicapped people increases customer patronage of a business.
1 2 3 4 5 (47) Handicapped people have a chip on their shoulder.
1 2 3 4 5 (48) Handicapped elementary students retard the progress of normal elementary students.
1 2 3 4 5 (49) I believe research will show that handicapped people are an asset to society.
1 2 3 4 5 (50) Handicapped people should have full human and legal rights.
1 2 3 4 5 (51) Handicapped people cannot accept responsibility for themselves.
1 2 3 4 5 (52) I would rather die than be handicapped for life.
1 2 3 4 5 (53) I would marry someone who is handicapped.
1 2 3 4 5 (54) I would have confidence in my family doctor if he or she were handicapped.
1 2 3 4 5 (55) Handicapped people could not be good parents.
1 2 3 4 5 (56) Handicapped people should be treated with more respect than they currently are.
1 2 3 4 5 (57) Schools should have sufficient facilities for handicapped students.
1 2 3 4 5 (58) Handicapped people are stubborn.
1 2 3 4 5 (59) Society has many important uses for handicapped people.
1 2 3 4 5 (60) I would accept a date with a handicapped person.
1 2 3 4 5 (61) Society should give handicapped people a preference in hiring policies.
12345 (62) A big problem handicapped people have is that of other people's attitudes toward them.
12345 (63) Handicapped people use their handicap to take advantage of others.
12345 (64) Handicapped people are just an extra burden on a troubled society.
12345 (65) In terms of social relationships, handicapped people are just like everyone else.
12345 (66) Handicapped children can learn in the same way as other children.
12345 (67) We must make handicapped people feel part of society.
12345 (68) The state should make greater efforts to help handicapped children.
12345 (69) Handicapped people are courageous.
12345 (70) Businesses should not be required to hire handicapped people.
12345 (71) Schools should not spend their money on providing special ramps and elevators for the handicapped.
12345 (72) Society should provide full opportunity for play and recreation for handicapped people.
12345 (73) Schools should accept handicapped students in their classrooms.
12345 (74) Handicapped people are unfriendly.
12345 (75) Handicapped people resent society.
12345 (76) Handicapped people are slow learners.
12345 (77) Handicapped people are not as emotionally stable as non-handicapped people.
12345 (78) Handicapped people resent people who are not in wheelchairs.
12345 (79) Have you in the past or do you now have a handicap? YES ___ NO ___
12345 (80) Are any members of your immediate family handicapped? YES ___ NO ___
12345 (81) Do you have any close friends who are handicapped? YES ___ NO ___