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Children's Attitudes Towards the Crippled, the Retarded and the Mentally III

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CHILDREN'S ATTITUDES TOWARDS
THE CRIPPLED, THE RETARDED AND THE MENTALLY ILL

BY
JOAN WILKINS

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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PSYCHOLOGY

UNIVERSITY OF RHODE ISLAND

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ABSTRACT

Children's attitudes towards the crippled, the retarded, the mentally ill and normal people were assessed using the semantic differential. Subjects were ten boys and ten girls from both the third and sixth grades (total $N=40$). Separate analyses of variance with repeated measures were performed for each of the four scales of the semantic differential: Evaluation, Potency, Activity and Understandability.

A significant sex main effect was found for the Evaluation ($p .05$) and Activity ($p .01$) scales. Females rated all concepts more positively on these two scales than did males. A significant ($p .01$) grade by concept interaction was found for the Evaluation scale. Sixth graders rated the concept person relatively more negative than did the third grades.

In addition, significant ($p .01$) concepts effects were found for all four scales. Normal people were evaluated more positively than any of the three disability groups and were viewed as being more understandable. Although normal people were viewed as more active and potent than both the crippled and retarded, they were not seen as more active and potent than the mentally ill.

The disability groups of the crippled and the retarded were not differentiated. However, the mentally ill

were viewed as a distinctly different category of people. The mentally ill were evaluated more negatively and viewed as less understandable than the other two disability groups but they were also seen as more active and potent.

It was concluded that the semantic differential was a useful technique for differentiating children's attitudes towards concepts denoting various groups of people and the inclusion of the Understandability scale to the semantic differential was considered justified. Children as young as third graders were found to express different attitudes towards the groups of the crippled, the retarded, the mentally ill and normal people. Implications for the stereotypes of mental illness and for the social labeling theory of mental disorders were discussed.

AUTHOR'S NOTE

Throughout the text, the author has used the singular personal pronoun "he" to represent both the male and female sex. The author acknowledges the inequality of the traditional usage of the pronoun "he". No sexual discrimination is intended; the pronoun "he" has been used only for reasons of convenience.

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The purpose of the present investigation was to conduct an initial exploration of children's attitudes towards three atypical, stigmatized groups; the crippled, the retarded and the mentally ill. This problem was investigated because of the existing gap in the literature pertaining to attitudes and stereotypes among children. Adult stereotypes and attitudes towards the mentally ill have been extensively investigated. In a classic study, Nunnally (1961) reported that public attitudes were relatively negative towards people with mental health problems. The mentally ill were regarded with fear, distrust and dislike by the general public and thought of as relatively worthless, dirty, dangerous, cold, unpredictable and insincere. Nunnally concluded that a strong negative halo surrounds the mentally ill and that, "They are considered, unselectively, as being all things bad (p. 233)." Nunnally assessed attitudes, apart from knowledge, by means of semantic differential scales, free association tests and paired comparison items. He reported that in addition to the usual semantic differential factors of evaluation, potency and activity, a fourth factor of understandability emerged as an important component of public attitudes toward the mentally ill. Nunnally also reported that information and knowledge of the symptomatology and etiology of mental illness were not correlated with a decrease in negative

attitudes or an increase in tolerance.

Recent research on the attitude of the adult public towards the mentally ill (Crocetti & Lemkau, 1963, 1965; Farina & Ring, 1965; Lemkau & Crocetti, 1962; Meyer, 1964; Phillips, 1963, 1966, 1967; Ring & Schein, 1970; Rootman & Lafave, 1969; Sarbin & Manusco, 1970; Tringo, 1970) indicated that since the 1950's people have become better informed about mental illness and know that it is 'correct' to believe that mental illness is an illness like any other. However, the general public still holds a negative stereotype of, and negative attitudes towards, those labeled mentally ill.

All of the above studies have used adult populations as subjects. To date there has been no comparable research of children's attitudes towards the mentally ill. In spite of this lack of documentation with children, many investigators assume that these negative attitudes are acquired in childhood. Scheff (1963) is one such theorist. He is a major proponent of the 'social response' or 'labeling' theory of mental disorders. Labeling theory is concerned with how the society responds to and processes the 'sick' person once the symptoms have appeared. Scheff maintains that it is the societal response to the person with symptoms that is the prime determinant of whether he will remain 'sick' and require treatment. In other words, the individual is influenced not so much by

biological, interpersonal or social factors in his past as by the reaction of his present social environment. Labeling theory as presented by Scheff proposes that once a person is labeled as mentally ill, the traditional stereotype and attitudes towards insanity become a guiding imagery for the reacting society and eventually for the deviant himself.

The theory therefore rests on the assumption of a commonly held stereotype of mental illness; and Scheff specifically states that, "Stereotyped imagery of mental disorder is learned in early childhood....The literal meaning of "crazy," a term now used in a wide variety of contexts, is probably grasped by children during the first years of elementary school....In this socialization the grossest stereotypes that are heir to children's fears, e.g., of the 'boogie man' survive (p. 64)." Scheff admitted that these conclusions are merely speculative, and he has called for a systematic investigation. The present investigation of children's attitudes towards the mentally ill represents a test of this aspect of Scheff's model.

Attitudes towards race, nationalities, religious and ethnic groups have been investigated in both adults and children. Investigations of children's racial and ethnic attitudes indicated that children as young as four expressed negative attitudes, and that the older the child

the more likely he was to possess negative attitudes (Radke, Trager & Davis, 1949; Blake & Dennis, 1943; Goodman, 1952; Taylor, 1966).

However, investigations of the attitudes towards other disability groups are more uncommon. For adult populations, studies have either treated all disabled people as one homogeneous group (e.g., Yuker, Block & Young, 1966) or have focused on one disability in a specific context. The few comparative studies (Jones, Gottfried & Owens, 1966; Shears & Jensen, 1969; Siller and Chipman, 1967) indicated that attitudes vary with the disability and social context.

Tringo (1970) went one step further in investigating the public's hierarchy of preferences among various categories of disabled and stigmatized people. He asked 455 high school, college and graduate students, as well as a small number of professionals to rate 21 disabled groups using a social distance scale. He reported that although demographic variables of the raters affected the extent of social distance expressed towards specific disability groups, demographic variables did not affect the relative position of disability groups in the hierarchy. The four categories that were consistently ranked the lowest were ex-convicts, retardates, alcoholics and the mentally ill (in that order). In addition, he reported that females

expressed less social distance and more acceptance towards all the disability groups than did the males.

As previously mentioned, there are no studies of children's attitudes towards the mentally ill. In addition, there are only a few studies which have investigated children's stereotypes of and attitudes towards other disability groups. Some initial investigative work has been done with the disability groups of the crippled and the retarded.

Willey (1967) compared the stereotypes of normal and mentally retarded students. A total of 396 fifth graders were asked to assign 46 favorable and unfavorable adjectives according to whether they were 'like' or 'not like' groups of pupils in their own and in other classrooms in the school. The stimulus groups to which each of the adjectives was applied were (a) a regular fifth grade class, (b) a special class for intermediate level educable mentally retarded and (c) a special class for orthopedically handicapped pupils. Willey reported that the normal children held a more negative or unfavorable view of retarded pupils than they hold of their normal peers and that the normal children perceived themselves as demonstrating predominately positive characteristics. Normal children attributed a greater number of favorable descriptions to the orthopedically handicapped

than to the retarded students. However, the retarded pupils (who did not assess the handicapped group) did not show a self-image consistent with the stereotype of the retarded group as shown by the normal children.

Billings (1967) explored the attitudes of non-crippled children toward crippled children. She employed two projective techniques: a "Tell Me a Story" test and the "Complete This Sentence" test. She confirmed her hypothesis that the attitudes of the non-crippled children were significantly more unfavorable towards the crippled children than towards non-crippled children. In addition, she reported a significant difference between the first and third grades but no significant differences were found between the third and fourth grades. However, contrary to her expectations, she found that children judged by teachers as being highest in adjustment were the children with the most unfavorable attitudes towards the crippled children.

Attitudes towards various groups have been investigated using a variety of methods. Social distance scales, adjective checklists, ratings of spontaneous statements and projective techniques using pictures and photographs are common methods. The semantic differential has also been used to investigate attitudes and stereotypes (Prothro & Keehn, 1957; Snider, 1962).

The semantic differential presents the subject with a concept or word to be rated on a series of bi-polar adjective scales. The sub-scales are then factor analyzed to determine the number and nature of factors entering into semantic description and judgment. These major factors will be called scales. The scales of Evaluation, Potency and Activity have been found to be the most important descriptors of semantic space (Osgood, Suci & Tannenbaum, 1957). The Evaluation scale was found to account for about 45% of the total variance, the Potency scale about 12% and the Activity scale about 5%. Although the percentage of variance accounted for by each of the scales varies somewhat depending on the sub-scales and words employed, these three scales consistently emerged in the same order of relative importance.

. The semantic differential is therefore not a specific standardized test but rather a technique for the measurement of meaning. It must be emphasized that this measurement of meaning reflects primarily affective meaning by virtue of the metaphorical usage of selected sub-scales. Nunnally (1970) concluded that the semantic differential measures mainly connotative aspects of meaning. Moreover, he stated, "It is probably the most valid measure of connotative meaning available" (p. 443). As previously mentioned, Nunnally (1961) investigated adult

attitudes towards the mentally ill through the use of the semantic differential. In addition to the three scales of Evaluation, Potency and Activity, he reported that a fourth scale of Understandability emerged as particularly relevant to the public's attitudes towards the mentally ill. This fourth scale was composed of sub-scales such as familiar-strange, safe-dangerous, unpredictable-predictable and understandable-mysterious.

By choosing a position on each bi-polar sub-scale of the semantic differential, each subject indicates two points of information. First, each subject indicates whether the adjective applies to the concept being judged by the direction of his response from the neutral center point of the sub-scale. Secondly, the distance of the response from the neutral center point indicates the intensity of the judgment.

The semantic differential has been used with children in grades as low as the first grade (Ervin & Foster, 1960; Harasyn, Boersma & Maguire, 1971). In reporting the results of three studies of children in grades two through seven, DiVesta (1966) concluded that the dimensions of children's affective semantic space corresponds closely to those of adolescents and adults found by Osgood, et al (1962) and Tanaka, Oyama and Osgood (1963). Specifically, DiVesta supported the generalizability of the three adult

scales of Evaluation, Potency and Activity to children's use of language. The percentage of variance accounted for by the three most salient scales in the second grade was essentially the same as those found in the adult and adolescent investigations. DiVesta concluded: "Thus the semantic differential provides an excellent basis for comparing the location of concepts in semantic space among wide ranges of age groups" (p. 258).

Maltz (1963) administered a semantic differential consisting of seven concepts and nine scales to 91 children in the second, fourth and sixth grades and in college. He computed the reliability coefficients using the split-group method and reported coefficients of $+0.86$, $+0.94$, $+0.87$ and $+0.96$ for the second, fourth, sixth and college grades, respectively. DiVesta and Dick (1966) also investigated the reliability of the semantic differential under delayed and immediate test-retest conditions. The study was conducted with children in grades two through seven in the former and in grades three, five and seven in the later condition. Only individual correlations were reported for the delayed condition. Coefficients for the three scales ranged between $+0.39$ and $+0.86$ with a marked increase in reliability of ratings above the third grade. In the immediate retest condition, correlation coefficients for the three scales ranged between $.73$ and $.94$.

Both Maltz (1963) and DiVesta and Dick (1966) concluded that the semantic differential was a useful and reliable instrument for the measurement of meaning of concepts of children.

The present exploratory investigation of children's attitudes toward the crippled, the retarded and the mentally ill was conducted to contribute further additional knowledge to an area which to date has received insufficient attention--the area of children's attitudes towards stigmatized groups. In addition, it sought to provide evidence that would support Scheff's (1966) assumption of the early aquisition of negative stereotypes and attitudes.

The attitudes of boys and girls in the third and sixth grades were investigated using the semantic differential. Since the racial attitude studies indicated more negative attitudes with increased age, children from both the third and sixth grades were tested. A parallell increase in expressed negative attitudes was therefore expected in this investigation. The concepts that were rated by the semantic differential were 'person', 'crippled', 'retarded', 'crazy' and 'insane'. The specific hypotheses under investigation were:

- (1) Children express relatively more negative attitudes towards concepts denoting the mentally ill as compared to concepts denoting normal people.

- (2) Children express relatively more negative attitudes towards concepts denoting the mentally ill as compared to concepts denoting other stigmatized groups.
- (3) Children express different attitudes towards different concepts that denote the mentally ill. That is to say that certain words act as advanced organizers for the negative stereotypic responses.

METHOD

SUBJECTS

Subjects were ten boys and ten girls from regular classrooms of both the third and sixth grades (Total N=40) of a public elementary school in Washington County, Rhode Island. The elementary school was situated in a predominantly white, middle-class community adjacent to a major university. Although most of the subjects were white there was some minority representation.

Subjects were tested by the author and two assistants over a six week period starting in October. Children were selected who had received parental approval, who were not engaged in any academic activity at the time of the testing sessions and who volunteered to go with the experimenter. Thus the sampling procedure produced an accidental sample rather than a precise randomized sample. Two subjects who reported that they did not know what the words crazy or retarded meant were not included in the study.

INSTRUMENT

The semantic differential was used to assess subjects' attitudes towards the concepts person, crippled, retarded, crazy and insane. This instrument was utilized since (1) the groups of the insane and crazy cannot be represented visually, (2) since children's language

fluency is limited and (3) since the data obtained in spontaneous reports are not easily quantified.

For this investigation, the five concepts were rated on a total of fourteen sub-scales that represented the four scales of Evaluation, Potency, Activity and Understandability. The scale of Understandability was included since Nunnally (1961, 1970) reported that scale to be particularly relevant in his studies of attitudes towards the mentally ill.

The specific sub-scales of this form of the semantic differential were:

- (1) Evaluation scale: good-bad, pretty-ugly, friendly-unfriendly, healthy-sick, happy-sad.
- (2) Potency scale: strong-weak, big-small, heavy-light.
- (3) Activity scale: warm-cold, loud-quiet, moving-still.
- (4) Understandability scale: known-strange, safe-dangerous, can tell what will happen-cannot tell what will happen.

Following Maltz (1963) the items were rated on a five-point, instead of a seven-point scale since young children were expected to experience difficulty with something as complex as seven alternatives against which to judge a concept. In addition, adverbs defining the

five alternatives were written beneath each position on the scale. The following is an example of a sub-scale:

The polarities of the scales were randomized so that the positive pole appeared at each end of the scale 50% of the time.

After completion of the semantic differential, all subjects were interviewed concerning their ideas about the mentally ill using a semi-structured questionnaire.

PROCEDURE

Subjects were called from their classroom and taken by the experimenter to a quiet room where they were tested individually. Subjects were told they were going to play a word game and that they were going to show what they thought or felt about certain words. Subjects were informed that neither their teacher or classmates would learn of their answers; that the experimenter was interested in just what they thought.

Two practice concepts with different sub-scales were given as examples and the use of the sub-scales explained. Each concept and each sub-scale was presented on a separate sheet of paper. The concept to be rated was shown to the subject, read out loud, then placed in full view. The fourteen sub-scales were then presented individually and read out loud. Each sub-scale was removed before the next sub-scale was presented. This was to prevent what Osgood, et al (1957) considered the 'halo' effect or the influencing of subsequent judgment of the subject by having previous choices in front of him.

When the concept PERSON was shown, the experimenter said, "Show me what you think or feel a normal, average person is like in terms of these two words (pointing to the bi-polar adjectives)." When the concept CRAZY was shown, the experimenter again repeated, "Show me what you think or feel an average crazy person is like." The same process was repeated for CRIPPLED and RETARDED.

The order of presentation of the sub-scales and concepts was randomized.

RESULTS

The variables of sex, grade and concepts were analyzed using a 2x2x4 analysis of variance with repeated measures across the third factor (BMD P2V). Four separate analyses were performed for each of the four scales of Evaluation, Potency, Activity and Understandability. The proposed design called for five concepts but the majority of the third grade subjects reported that they did not know what "insane" meant so this concept was excluded from the initial analyses.

Hartley's $F_{\max}$ procedure was employed to test the homogeneity of variance for each scale. None of the $F_{\max}$ tests was found to be significant ($p > .01$).

To assess the assumption of conceptual independence of the four scales, the correlations of the four scales were found for each of the concepts using the S.A.S. program. The Understandability scale was not included in Osgood, et al's (1957) original development of the semantic differential, but from the theory of the instrument, low positive correlations between the three main scales were expected. Specifically, low positive correlations between the Evaluation scale and the other scales were expected since nearly all adjectives imply the evaluative negative and positive characteristics to some extent. The only pattern that emerged from the analysis was low to

middle positive correlations between the Evaluation and Understandability scale. Since Nunnally (1970) reported that the average correlations between the three main scales ranged between $+.30$ and $+.50$, the present correlations were considered to be within an acceptable range. The three original scales were therefore considered to be conceptually independent although some overlapping may exist between the Evaluation and Understandability scales.

RESULTS OF EVALUATION SCALE

The five bi-polar sub-scales (good-bad, pretty-ugly, friendly-unfriendly, healthy-sick and happy-sad) were combined to obtain one Evaluation score for each subject for the concepts of person, crippled, retarded and crazy. A numerically low Evaluation score indicates a relatively positive assessment (ie. the combined ratings falled toward the good, pretty, friendly, healthy and happy ends of the sub-scales). The mean and standard deviations of the Evaluation scale for all concepts are presented in Table I.

The overall analysis of variance (see Table II) indicated no significant grade main effect but did indicate a significant sex main effect ($F=5.641$; $d.f.=1, 36$; $p<.05$). Males rated the concepts more negatively than females.

The analysis also indicated a significant concept main effect ($F=48.852$; $df=3, 108$; $p<.01$) as well as a significant concept by grade interaction ($F=4.333$; $df=3, 108$; $p<.01$). A simple effects test was performed for concepts at both the third and sixth grade level (see Figure I).

This analysis (see Table III) indicated a significant difference among concepts at the third grade ($F=39.22$; $df=3, 108$; $p<.01$). The Newman-Keuls procedure was employed for the follow-up comparisons (see Table IV). The Newman-Keuls test indicated that the concept person was rated significantly ($p<.01$) more positive than the concepts retarded, crippled and crazy. In addition, the concepts retarded and crippled were rated significantly ($p<.01$) more positive than the concept crazy. In other words, the concept person was rated significantly more positive as compared to the other three concepts and the concept crazy was rated as significantly more negative than the other three concepts. No significant difference was found between the concepts retarded and crippled.

The simple effects analysis at the sixth grade level (see Table V) also indicated a significant difference among concepts ($F=13.966$; $df=3, 108$; $p<.01$). The Newman-Keuls procedure (see Table VI) indicated that the concept person was rated significantly ($p<.01$) more positive than

the concepts crippled, retarded and crazy. The concepts retarded and crippled were both rated as significantly ($p < .01$) more positive than the concept crazy. No significant difference was found between the concepts retarded and crippled.

In addition, a simple effects test was performed for grade at each of the four concepts. A significant difference was found between the third and sixth grade ratings of the concept person ($F=13.987$; $df=1,108$; $p < .01$) but no other significant difference was found (see Tables VII through X).

Although the general pattern of rated concepts was similar for both the third and sixth grade subjects, the sixth graders rated the concept person significantly ($p < .01$) more negative than the third graders. Thus the third graders rated a greater amount of difference between the concepts person and crazy since their person ratings were initially more positive.

RESULTS OF POTENCY SCALE

The three bi-polar sub-scales (strong-weak, big-small and heavy-light) were combined to obtain one Potency score for each subject for each of the concepts of person, crippled, retarded and crazy. A numerically low Potency score indicates a relatively positive potency assessment (ie. the combined rating falling towards the strong, big

Table I

Mean Scores and Standard Deviations
Evaluation Scale

Mean Scores

	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade	Marginal
person	10.10	11.20	7.60	12.60	10.375
crazy	19.50	18.20	15.70	15.90	17.325
crippled	14.90	14.90	13.80	13.10	14.175
retarded	14.40	17.09	12.90	13.20	14.40
marginal	14.725	15.35	12.50	13.70	14.068

Standard Deviations

	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade
person	3.381	2.973	2.913	2.503
crazy.	2.592	3.119	5.355	2.766
crippled	1.663	2.643	4.049	2.601
retarded	2.836	4.254	5.384	3.224

Table II

Summary Table of Analysis of Variance:
Evaluation Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	150.155	1	150.155	5.641*
grade	33.305	1	33.305	1.251
sex/grade interaction	3.305	1	3.305	0.124
error	958.222	36	26.617	
concepts	974.715	3	324.905	48.852**
concepts/sex interaction	39.817	3	13.272	1.995
concepts/grade interaction	86.467	3	28.822	4.333**
concepts/sex/grade interaction	55.968	3	18.656	2.805
error	718.272	108	6.650	

**significant at the .01 level

*significant at the .05 level

FIGURE I

Concept by Grade Interaction:

Evaluation Scale

Table III

Summary Table of Analysis of Variance of
Rated Concepts:
Evaluation Scale--Third Grade Subjects

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
concepts	782.535	3	260.844	39.220**
pooled error	718.272	108	6.650	

**significant at the .01 level

Table IV

Summary Table of Newman-Keuls Test
Comparing Concepts:
Evaluation Scale--Third Grade

	Person	Retarded	Crippled	Crazy
Person	—	**	**	**
Retarded		—		**
Crippled			—	**
Crazy				—

**significant at the .01 level

TABLE V

Summary Table of Analysis of Variance of
Rated Concepts:
Evaluation Scale--Sixth Grade Subjects

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
concepts	278.648	3	92.882	13.966**
pooled error	718.272	108	6.650	

**significant at the .01 level

Table VI

Summary Table of Newman-Keuls Test
 Comparing Concepts:
 Evaluation Scale--Sixth Grade

	Person	Crippled	Retarded	Crazy
		*	*	*
Person	—	**	**	**
				*
Crippled		—		**
Retarded			—	*
Crazy				—

**significant at the .01 level

* significant at the .05 level

TABLE VII

Summary Table of Analysis of Variance
of Person Concept at Grade Level:
Evaluation Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
grade	93.025	1	93.025	13.987**
pooled error	718.272	108	6.650	

**significant at the .01 level

TABLE VIII

Summary Table of Analysis of Variance
of the Concept Retarded at Grade Level:
Evaluation Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
grade	22.35	1	22.35	3.360
pooled error	718.272	108	6.650	

**significant at the .01 level

TABLE IX

Summary Table of Analysis of Variance
of the Concept Crippled at Grade Level:
Evaluation Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
grade	1.225	1	1.225	.184
pooled error	718.272	108	6.650	

**significant at .01 level

TABLE X

Summary Table of Analysis of Variance
of the Concept Crazy at Grade Level:
Evaluation Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
grade	4.24	1	4.24	.637
pooled error	718.272	108	6.650	

**significant at the .01 level

and heavy ends of the sub-scales). The means and standard deviations of the potency scale for all concepts are presented in Table XI.

The overall analysis of variance (see Table XII) indicated no significant sex or grade main effects. The results do indicate a significant concept main effect ($F=9.897$; $df=3,108$; $p<.01$) with no first or second order interaction.

The Newman-Keuls (see Table XIII) follow-up test was employed. The concept person was rated as significantly ($p<.01$) more potent than the concepts retarded and crippled. The concept of crazy was also rated significantly more potent than the concepts crippled ($p<.01$) and retarded ($p<.01$). No significant difference was found between the concepts person and crazy or between the concepts retarded and crippled.

RESULTS OF ACTIVITY SCALE

The three bi-polar sub-scales (warm-cold, loud-quiet and moving-still) were combined to obtain one Activity score for each subject for each of the concepts. A numerically low Activity score indicates a relatively positive assessment (ie. combined ratings falling towards the warm, loud and moving ends of the sub-scales). The means and standard deviations of the Activity scale are presented in Table XIV.

TABLE XI

Mean Scores and Standard Deviations:
Potency Scale

	Mean Scores				Marginal
	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade	
person	8.00	7.70	8.20	8.90	8.20
crazy	8.50	8.30	8.10	8.90	8.45
crippled	11.00	10.50	9.80	9.40	10.175
retarded	10.20	9.80	8.80	9.20	9.50
marginal	9.425	9.075	8.725	9.10	9.081

	Standard Deviations				
	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade	
person	1.154	2.162	2.394	0.567	
crazy	2.321	2.057	1.449	1.523	
crippled	1.699	0.849	2.780	0.843	
retarded	0.788	2.347	2.820	1.316	

TABLE XII

Summary Table of Analysis of Variance:
Potency Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	4.556	1	4.556	1.421
grade	0.006	1	0.006	0.001
sex/grade interaction	5.256	36	5.256	1.640
error	115.374	3	3.204	
concepts	101.867	3	33.955	9.897**
concept/sex interaction	23.667	3	7.889	2.299
concept/grade interaction	3.318	3	1.106	0.322
concept/sex/grade interaction	1.368	108	0.456	0.132
error	370.523		3.430	

**significant at the .01 level

Table XIII

Summary Table of Newman-Keuls Test
Comparing Concepts:
Potency Scale

	Person	Crazy	Retarded	Crippled
Person	—		** *	** *
Crazy		—	*	** *
Retarded			—	
Crippled				—

**significant at .01 level

* significant at .05 level

The analysis of variance (see Table XV) indicated both a sex and concept main effect but no grade main effect and no interactions. The sex main effect ($F=7.790$; $df=1,36$; $p<.01$) indicated that males rated all the concepts significantly less active than the females.

The analysis also indicated a significant difference among concepts ($F=11.586$; $df=3,108$; $p<.01$). The Newman-Keuls (see Table XVI) indicated that the concept crazy was rated significantly ($p<.01$) more active than the concepts crippled and retarded. The concept person was also rated significantly ($p<.01$) more active than both the concepts crippled and retarded. No significant differences were found between the concepts person and crazy or between the concepts crippled and retarded.

RESULTS OF UNDERSTANDABILITY SCALE

The three bi-polar sub-scales (known-strange, safe-dangerous and can tell what will happen-cannot tell what will happen) were combined to obtain one Understandability score for each subject for each concept. A numerically low Understandability score indicates a relatively positive understandability assessment (ie. the combined rating falling towards the known, safe and can tell what will happen ends of the sub-scales). The means and standard deviations of the Understandability scale are

TABLE XIV

Mean Scores and Standard Deviations:
Activity Scale

	Mean Scores				Marginal
	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade	
person	7.00	7.30	7.50	7.00	7.20
crazy	8.10	6.80	6.60	6.80	7.075
crippled	11.20	9.20	8.80	8.60	9.45
retarded	10.20	9.70	7.60	7.80	8.825
marginal	9.125	8.25	7.625	7.55	8.137

	Standard Deviations			
	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade
person	2.357	2.00	1.715	2.211
crazy	2.884	1.475	2.913	1.475
crippled	1.032	1.751	3.190	1.505
retarded	1.751	2.496	4.087	1.316

TABLE XV

Summary Table of Analysis Variance:
Activity Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	48.399	1	48.399	7.790**
grade	9.024	1	9.024	1.452
sex/grade interaction	6.399	1	6.399	1.030
error	223.649	36	6.212	
concepts	168.123	3	56.041	11.586**
concepts/sex interaction	30.449	3	10.149	2.098
concepts/grade interaction	6.424	3	2.141	0.442
concept/sex/grade interaction	10.149	3	3.383	0.699
error .	522.348	108	4.836	

**significant at the .01 level

Table XVI

Summary Table of Newman-Keuls Test
Comparing Concepts:
Activity Scale

	Crazy	Person	Retarded	Crippled
Crazy	—		**	**
Person		—	**	**
Retarded			—	
Crippled				—

**significant at the .01 level

TABLE XVII

Mean Scores and Standard Deviations
Understandability Scale

	Mean Scores				Marginal
	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade	
person	7.90	7.10	7.40	8.50	7.725
crazy	12.20	12.20	11.10	11.70	11.80
crippled	8.60	6.80	9.10	8.20	8.175
retarded	8.00	9.20	9.10	8.90	8.80
marginal	9.175	8.825	9.175	9.325	9.125

	Standard Deviations			
	Male 3rd grade	Male 6th grade	Female 3rd grade	Female 6th grade
person	2.726	1.370	2.118	2.013
crazy	2.299	1.686	2.233	1.567
crippled	2.270	2.043	2.960	2.201
retarded	2.708	1.475	2.998	2.131

The overall analysis of variance (see Table XVIII) indicated no sex or grade main effects. There was a significant concept main effect ($F=31,920$; $df=3,108$; $p<.01$) with no interactions.

The Newman-Keuls test (see Table XIX) indicated that the concept crazy was rated significantly ($p<.01$) less understandable than the three concepts of person, crippled and retarded. No other significant difference was found.

ANALYSIS USING THE INSANE CONCEPT: SIXTH GRADE SUBJECTS ONLY

Since only two of the third grade subjects responded to the concept insane, the concept could not be included in the initial analyses. However, since an hypothesis of the study was concerned with the relative attitudes towards the concept crazy and insane, separate analyses were performed on the eighteen sixth graders (ten males and eight females) who did rate all five concepts. Four separate 2×5 analyses of variance with repeated measures across the factor of concepts were performed.

Since a full design was not employed in this section, the only results reported here concern the relative ratings of the two concepts crazy and insane. The results for the other concepts have been reported earlier using the larger sample.

No significant difference was found between the concepts crazy and insane on any of the scales.

TABLE XVIII

Summary Table of Analysis of Variance:
Understandability Scale

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	2.499	1	2.499	0.348
grade	0.399	1	0.399	0.055
sex/grade interaction	2.499	1	2.499	0.348
error	258.098	36	7.169	31.920**
concepts	404.948	3	134.982	1.304
concepts/sex interaction	16.549	3	5.516	1.690
concepts/grade interaction	21.449	3	7.149	1.131
concept/sex/grade interaction	14.349	3	4.783	
error	456.699	108	4.228	

**significant at the .01 level

Table XIX

Summary Table of Newman-Keuls Test
Comparing Concepts:
Understandability Scale

	Person	Crippled	Retarded	Crazy
Person	—			**
Crippled		—		**
Retarded			—	**
Crazy				—

**significant at the .01 level

SUMMARY OF RESULTS

A significant sex main effect was found for the Evaluation and Activity scales. Females rated all concepts more positively on these two scales than did males. A significant grade by concept interaction was found for the Evaluation scale. Sixth graders rated the concept person relatively more negative than did the third graders. Finally, a significant concept effect was found for all four scales. The results for each scale are presented in Figure II.

FIGURE II

Summary of Comparison
of Concepts

 significant difference
 between groups.

EVALUATION SCALE

Person Crippled/Retarded Crazy
 positive evaluation negative evaluation

POTENCY SCALE

Person/Crazy Crippled/Retarded
 most potent least potent

ACTIVITY SCALE

Person/Crazy Crippled/Retarded
 most active least active

UNDERSTANDABILITY SCALE

Person/Crippled/Retarded Crazy
 most understandable least understandable

DISCUSSION

The present investigation was an exploratory study of children's attitudes towards normal people, the crippled, the retarded and the mentally ill. Since the sampling procedure produced an accidental sample rather than a precise randomized sample and because of the small sample size, the generalizability of the results is limited. However, no systematic sampling bias was apparent and the results justify further research using the same testing technique, but with more precise randomized sampling procedures to ensure generalizability.

The semantic differential was found to be a useful technique for differentiating children's attitudes towards concepts denoting various groups of people. All the children, including the third graders, readily understood the directions and used all five rating positions when marking their responses. However, further psychometric analyses of the sub-scales might be done with this population to determine the extent to which each sub-scale contributed to the differentiation among concepts. The inclusion of the fourth scale of Understandability seemed justified for the purpose of studying attitudes towards the mentally ill. Not only did this scale statistically isolate the concept crazy from the other groups, but the children's comments to the semi-structured questionnaire emphasized the importance of the adjectives dangerous and

strange when describing crazy people. Half of the children reported that crazy people engage in violent activities that are dangerous to themselves or others such as suicide, killing, hitting and yelling. The children in the study also emphasized that crazy people did strange and inappropriate things such as laughing and talking at the wrong time.

Ratings of the concept person reflected attitudes toward normal, average people. Normal people were evaluated more positively than any of the three disability groups and were viewed as being more understandable than crazy people. Although normal people were found more active and potent than both the crippled and retarded, they were not rated as more active or potent than crazy people.

Thus, the study's first hypothesis that children express more negative attitudes towards concepts denoting the mentally ill as compared to concepts denoting normal people was supported by the Evaluation and Understandability scales. The mentally ill were not viewed as less active or potent.

Direct statistical comparison with Nunnally's (1961) findings is not possible since Nunnally (1) used a seven-point instead of a five-point scale, (2) analyzed his data using only individual sub-scales and (3) used the concepts 'average man', 'average woman', 'insane man' and

'insane woman' instead of the concepts 'person' and 'crazy' employed in this study. However, a general comparison is possible. Nunnally found that the mentally ill and normal people were differentiated most clearly on the Understandability sub-scales of unpredictable-predictable and dangerous-safe, and on the Evaluation sub-scales of sick-healthy and happy-sad. These findings parallel the present investigation's results. However, although Nunnally did not report if the following differences reached statistical significance, he did report that the mentally ill were found to be relatively weaker (Potency scale), slower, colder and more passive (Activity scale). The present investigation found no statistically significant difference between the mentally ill and normal people on the scales to which these sub-scales contribute. Furthermore, the means for the concepts crazy and person on both the Potency and Activity scales are so close (see Tables XI and XIV) that it cannot even be said that there is a tendency to distinguish between these two groups on those dimensions.

Therefore, the results of this investigation indicate that children's attitudes towards the mentally ill parallel adult attitudes (as found by Nunnally, 1961) in that the mentally ill are evaluated more negatively by both populations and are believed to be more dangerous and unpredictable than normal people. However, children's

attitudes differ from adult attitudes in that the mentally ill are not viewed by children as less active or potent than normal people.

The disability groups of the retarded and crippled were not differentiated on any of the rating scales. However, crazy people were found to be different from these two disability groups on all scales. Thus, crazy people were evaluated more negatively and found less understandable than the other disability groups but were also considered more active and potent.

The second hypothesis, that children express more negative attitudes towards the mentally ill as compared to other stigmatized groups, was supported by the Evaluation and Understandability scales. Contrary to this hypothesis, the mentally ill were rated as more active and potent than the other disabilities.

In summary, crazy people are viewed as a distinct disability group that is more worthless, dangerous, unpredictable and bad than both normal people and other disability groups. However, unlike the crippled and the retarded they are seen as just as active and potent as normal people. This finding has important implications for the labeling process as outlined by Scheff (1966) and helps explain why the mentally ill are viewed as being so dangerous. For, not only are the mentally

ill bad, but they also have the power, ability and inclination to act out their 'badness'. When the label crazy is applied to an individual by those around him it will tend to increase their fear and distrust of him and cause them to place more social distance between themselves and the labeled individual. In addition, as the individual accepts the label, he will come to see himself as dangerous and unpredictable. The acceptance of the label may therefore actually serve to lessen an individual's inhibitions and, in a sense, give the individual permission to act violently since those behaviors are expected actions of a crazy person. As previously mentioned, half of the children in the study spontaneously mentioned violent behavior as typical reactions of crazy people. Furthermore, of the children who responded to the question, 'What do crazy people look like?', over half answered that crazy people look like normal people. This may also contribute to the fear and distrust of the mentally ill, for, although they are seen as violent and dangerous, they have no physical characteristics that would serve to 'warn' others. The lack of distinguishing physical characteristics would also facilitate the acceptance of the label.

This study therefore supports Scheff's assumption that attitudes towards the mentally ill are learned early in childhood. Only two third grade children reported

that they did not know what 'crazy' meant and many children offered details when responding to the semi-structured questionnaire.

When asked what makes a person crazy, sixteen children responded that being drunk and/or taking drugs lead people to act crazy. Several children responded that something was wrong with crazy people from birth, that something was physically wrong with their brain or that they had been in a severe accident that hurt their heads. However, although children had definite attitudes and beliefs, only five reported that they had ever seen a crazy person. One child had seen a crazy man steal a wallet from and hurt a man on the street; one child had visited his grandmother in an institution; two children had been to Ladd School (they made a differentiation between the retarded and crazy people there.); and one child provided no further information. Thus, the children of the study possessed attitudes towards and beliefs about the mentally ill while having a minimum of personal exposure.

The last hypothesis, that children express different attitudes towards different concepts denoting the mentally ill was not supported by the results. The words crazy and insane were not viewed differently by the children responding to these concepts. Although Nunnally (1961) did not employ the concept crazy in his investigation,

he did not find distinctions between neurotic concepts (eg. neurotic man, neurotic woman) and psychotic concepts (eg. insane man, insane woman). It may be that such subtle discriminations of connotative meanings do not appear until an older age. Further research is needed in this area.

The lack of difference in attitudes expressed by the third and sixth grade subjects runs counter to the tendency to express more negative attitudes with increased age found in racial attitude studies. However, attitudes towards the mentally ill and other disability groups may be already formed and firmly established by the third grade and therefore show no incremental increase at the sixth grade. To find a difference in attitude ratings, the researcher might have to assess first grade or kindergarten subjects, a task difficult to accomplish using the semantic differential. In addition, the possibility must be considered that these attitudes are already learned in the family and established by the time children enter school. Further research is needed to determine the developmental pattern of these attitudes.

The tendency of males to rate concepts more negatively than females on the Evaluation and Activity scales is consistent with Tringo's (1970) finding that females expressed less social distance and more acceptance towards all disability groups than did males. This finding may

also reflect the tendency for some subjects to give more socially desirable responses that has been found on some personality inventories (Block, 1965). The influence of this tendency to give socially desirable responses was minimized by looking at the relative positioning of the expressed attitudes towards concepts. In addition, the anonymity of the respondents was stressed.

The isolated finding that sixth graders rated the concept person more negatively than third graders on the Evaluation scale is more difficult to place in context. Although the sixth graders' rating was relatively more negative than that of the third graders, both group means fell towards the positive pole of the neutral mid-point. Since the children were asked to rate the concept person as a "normal, average person", it may be that the sixth graders interpreted the adjective "average" in a more literal way, thus pushing the overall rating towards the mid-point of the sub-scales.

Finally, two general issues relating to attitude surveys must be considered in interpreting these results. Firstly, the nature of the stimulus is an important variable in determining the attitudes expressed by subjects. Jaffee (1967) found that students expressed more favorable attitudes towards sketches describing disability groups than towards labels referring to those groups. Similarly,

Sarbin and Manuso (1970) found adults more tolerant of deviant conduct when not described with mental health labels. Husek and Bobren (1964) also found differences between ratings given to labels, but the relative importance of the two stimuli conditions varied according to the type of mental health disability.

Secondly, the results of the present investigation indicated what children think or feel but not necessarily how they would behave. Fishbeen and Ajzen (1972) point out that in order to predict specific actions, personal factors (eg. other attitudes, values, competing motives and social factors (eg. influence of other people, social norms and alternative available behaviors) must be combined with expressed attitudes. Therefore, for specific predictions of individual behavior the interactions between expressed attitudes and personal and social factors must be taken into account. However, expressed attitudes are important descriptors of shared group stereotypes.

SUMMARY

The semantic differential was administered to forty third and sixth grade children to assess their attitudes towards the concepts 'person', 'crazy', 'crippled', 'retarded', and 'insane'.

The concepts crazy and insane were not differentiated by any of the children who knew the meaning of both words.

Normal people were evaluated more positively than any of the three disability groups and were viewed as more understandable than crazy people. Normal people were found to be more active and potent than both the crippled and retarded but were not viewed as more active or potent than crazy people.

The disability groups of the crippled and the retarded were not differentiated. However, crazy people were viewed as a distinctly different category of disabled people. Crazy people were evaluated more negatively and found less understandable than the other disability groups but were also considered more active and potent.

The present investigation supports Scheff's (1966) assumption that children hold negative attitudes towards the mentally ill. The mentally ill are considered to be generally bad. They are viewed as dangerous, unpredictable and strange, as well as active, big and strong. Implications for the social labeling theory raised by these findings were explored.

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APPENDIX A

Instructions of the Semantic Differential
and Example Scales

Semi-structured Questionnaire

Parental Permission Slip

Instructions for the Semantic Differential

We are going to play a word game that lots of children have played. You can go as fast or as slow as you like and can ask questions any time. Remember that this is not a test so there are no right or wrong answers. Neither your classmates or your teacher will see what you do. I'm interested in what you think about some different groups of people.

There are some boxes in a line on this paper--(give S, the first example sub-scale of nice-awful:)

You will show me what you think or feel about groups of people by putting a mark somewhere on this line. On this side (point to the left) there are two boxes which go with this word Nice. On the other side (point to the right) there are two boxes that go with the word AWFUL. In the middle (point), this line doesn't go with either word. It means you don't know or you can't make up your mind.

The big box here (point to extreme left) means you feel VERY NICE. The big box here (point to extreme right)

means you feel VERY awful. The little box here means you feel kinda nice and over over here (point) means you feel kinda awful.

I want you to use the boxes on this line or show me what you think or feel about some words I'm going to show you.

Here is a word. This time the word is GHOST (present the concepts on its separate sheet). Show me what you think most ghosts are like.

(Discuss S.'s response to determine if he/she has understood. Present next example sub-scale, hard-soft, and concept KITTEN. Discuss response.)

That's fine. Now let's go on and do some more words. (Present first concept.)

Semi-structured Questionnaire

- (1) What is a crazy person?
- (2) What sorts of things, do you think, a crazy person does?
- (3) What, do you think, they look like?
- (4) What, do you think, makes a person crazy?
- (5) How do you think people treat crazy people?
- (6) Is a crazy grown-up the same as a crazy child?
- (7) Do you know or have every seen a crazy person?

Dear Parent,

The South Kingstown School Department in conjunction with the University of Rhode Island is working together on a survey of children's opinions and attitudes towards the handicapped. We would appreciate it if your child would join in this effort.

The survey will take about 20 minutes of your child's time. No names will be used, all information will be kept strictly confidential and nothing will be entered into your child's school file. Participation in the survey is entirely voluntary and will in no way affect your child's education. You may call Ms. Joan Wilkins at 294-9150 if you have any further questions.

If you agree to allow your child to participate in the survey, please sign the permission slip and return it to your child's teacher. Thank you for your cooperation.

* * * * *

I agree to have my son/daughter _____ of
class _____ participate in the survey.

Signature

APPENDIX B

$F_{\max}$ Test for Homogeneity of Variance

TABLE XX

 $F_{\max}$ Test for Homogeneity of Variance

Evaluation Scale

 $F_{\max} = 3.2$ $df = 16,9$ $p > .01$

Potency Scale

 $F_{\max} = 4.91$ $df = 16,9$ $p > .01$

Activity Scale

 $F_{\max} = 3.96$ $df = 16,9$ $p > .01$

Understandability Scale

 $F_{\max} = 5.03$ $df = 16,9$ $p > .01$

APPENDIX C

Correlation Matrix of the Semantic Differential Scales

TABLE XXI

Correlation Matrix of the Four Scales
for the Concept Person

	Eval.	Pot.	Act.	Under.
Evaluation	—	.397	.022	.209
Potency		—	-.144	.291
Activity			—	.207
Understandability				—

TABLE XXII

Correlation Matrix of the Four Scales
for the Concept Crippled

	Eval.	Pot.	Act.	Under.
Evaluation	—	.230	.378	.341
Potency		—	.219	.104
Activity			—	.257
Understandability				—

TABLE XXIII

Correlation Matrix of the Four Scales
for the Concept Retarded

	Eval.	Pot.	Act.	Under.
Evaluation	—	.231	.332	.596
Potency		—	.322	-.054
Activity			—	.137
Understandability				—

TABLE XXIV

Correlation Matrix of the Four Scales
for the Concept Crazy

	Eval.	Pot.	Act.	Under.
Evaluation	—	.066	.142	.470
Potency		—	-.204	-.283
Activity			—	.244
Understandability				—

TABLE XXV

Correlation Matrix of the Four Scales
for the Concept Insane

	Eval.	Pot.	Act.	Under.
Evaluation	——	-.046	.014	.610
Potency		——	.284	-.197
Activity			——	.028
Understandability				——

APPENDIX D

Analysis of Scales with the Concept Insane Included:

Tables of Non-Significant Results

TABLE XXVI

Summary Table of Analysis of Variance
of Evaluation Scale including Concept Insane

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	101.764	1	101.764	3.701
error	439.917	16	27.494	
concepts	390.678	4	97.669	21.375**
concepts/sex interaction	72.547	4	18.136	3.969**
error	292.429	64	4.569	

**significant at the .01 level

TABLE XXVII

Summary Table of Analysis of Variance
of Evaluation Scale including Concept Insane:
Female, Sixth Grade Subjects

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
concepts	125.831	4	31.457	6.884**
pooled error	292.429	64	4.569	

**significant at the .01 level

TABLE XXVIII

Summary Table of the Newman-Keuls Test Comparing
Concepts, including the Concept Insane:
Evaluation Scale--Female, Sixth Grade Subjects

	Person	Crippled	Retarded	Crazy	Insane
Person	—			*	*
Crippled		—		*	**
Retarded			—	*	*
Crazy				—	**
Insane					—

**significant at the .01 level

*significant at the .05 level

TABLE XXIX

Summary Table of Analysis of Variance
of Evaluation Scale including Concept Insane:
Male, Sixth Grade Subjects

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
concepts	343.186	4	85.796	18.777**
pooled error	292.429	64	4.569	

**significant at the .01 level

TABLE XXX

Summary Table of the Newman-Keuls Test Comparing
Concepts, including the Concept Insane:
Evaluation Scale--Male, Sixth Grade Subjects

	Person	Crippled	Retarded	Crazy	Insane
Person	—	**	**	**	**
Crippled		—	*	**	**
Retarded			—		
Crazy				—	
Insane					—

**significant at the .01 level

*significant at the .05 level

TABLE XXXI

Summary Table of Analysis of Variance
of Potency Scale including Concept Insane

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	1.125	1	1.125	.269
error	66.874	16	4.179	
concepts	38.127	4	9.531	3.533*
concepts/sex interaction	15.238	4	3.809	1.412
error	172.649	64	2.697	

*significant at the .05 level

Table XXXII

Summary Table of the Newman-Keuls Test Comparing
 Concepts, including the Concept Insane:
 Potency Scale

	Person	Insane	Crazy	Retarded	Crippled
Person	—				*
Insane		—			*
Crazy			—		*
Retarded				—	
Crippled					—

*significant at the .05 level

TABLE XXXIII

Summary Table of Analysis of Variance
of Activity Scale including Concept Insane

Source Variance	Sum of Squares	Degrees of Freedom	Mean Square	F
sex	17.601	1	17.601	3.024
error	93.119	16	5.819	
concepts	69.180	4	17.295	6.964**
concepts/sex interaction	6.069	4	1.517	0.611
error	158.929	64	2.483	

**significant at the .01 level

Table XXXIV

Summary Table of the Newman-Keuls Test Comparing
 Concepts, including the Concept Insane:
 Activity Scale

	Crazy	Person	Insane	Crippled	Retarded
Crazy	—			**	**
Person		—		**	**
Insane			—		
Crippled				—	
Retarded					—

**significant at the .01 level

TABLE XXXV

Summary Table of Analysis of Variance
of Understandability Scale, including Concept Insane

Source of Variance	Squares	Degrees of Freedom	Mean Square	F
sex	0.125	1	0.125	0.018
error	108.374	16	6.773	
concepts	309.087	4	77.271	28.291**
concepts/sex interaction	17.977	4	4.494	1.645
error	174.799	64	2.731	

**significant at .01 level

Table XXXVI

Summary Table of the Newman-Keuls Test Comparing
Concepts, including the Concept Insane:
Understandability Scale

	Crippled	Person	Retarded	Insane	Crazy
Crippled	—		*	*	*
				**	**
Person		—	*	*	*
				**	**
Retarded			—	*	*
				**	**
Insane				—	
Crazy					—

**significant at the .01 level

* significant at the .05 level