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THE RELATIONSHIP BETWEEN SELF CONCEPT
AND CHILDREN'S FIGURE DRAWINGS

by

Marta Lynn Severson Campbell

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

(Counseling Psychology)

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1976

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Marta Lynn Severson Campbell

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ABSTRACT

The Relationship Between Self Concept
and Children's Figure Drawings

by

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Utah State University, 1976

Major Professor: Dr. E. Wayne Wright
Department: Psychology

The present study investigated the relationship between self concept and children's figure drawings. The principle variable under consideration in each child's drawing were (a) size of drawing and (b) number of colors used. The Tennessee Self Concept Scale (Fitts, 1965) was administered to 80 students selected from the seventh grade at Logan Junior High School, Logan, Utah.

The subjects were then instructed to draw a picture of themselves. No further instructions were given regarding specific details of the requested picture. Ten colored pencils along with a regular pencil were made available to each student. No instructions were given as to the type or number of pencils to be used in their figure drawing. After the subjects completed their respective drawings, the experimenter rated each picture in terms of (a) number of colors used for the drawing, and (b) the height or vertical

size of the drawing measured in millimeters from top to bottom of the drawing.

It was hypothesized that students who obtain high scores on a measure of self concept (positive self concept) will use a greater number of colors in drawing a picture of themselves than will students who score low (negative self concept) on the same self concept measure. Students with high score on the measure of self concept will also draw a picture of themselves which is larger in size (height) than will students with low scores on the self concept measure.

In addition to the two major hypotheses, it was also hypothesized that: (1) the high self concept group will have more smiles on the faces of their drawings than the low self concept group; (2) the high self concept group will draw more full figures than the low self concept group; (3) the high self concept group will use more total space on the paper than the low self concept group; and (4) the high self concept group will draw their figures more in the top two-thirds of the page and the low concept group will draw their figures more in the bottom two-thirds of the page.

All of the subjects were ranked from high to low scores obtained on the Tennessee Self Concept Scale and were then divided into a high self concept group (top 20 scores) and a low

self concept group (bottom 20 scores). Scores for the total sample of 80 students ranged from 193 to 394. Thus, the high self concept group was comprised of students with scores from 314 to 394. The low self concept group scores ranged from 193 to 246.

The figure drawings of high and low scorers on the Self Concept Scale were then compared to determine any apparent relationship between measured self concept and (a) number of colors used in the drawing and (b) overall size of the drawing.

Analysis of the figure drawings indicated no significant differences, either in number of colors used, or in size of figure between high and low scorers on the Self Concept Scale. The mean number of colors used by high scorers was 3.5 millimeters. Thus, the basic hypotheses of the study were not substantiated by the results obtained. However, subjective inspection of the pictures in terms of the four sub-hypotheses did produce two significant findings in terms of projective-type ratings of the pictures and statistical analysis by the chi square method. In brief, these particular differences were that students who scored high in self concept drew more pictures with smiling faces and utilized the top two-thirds of the drawing paper, while students with low self concept drew pictures with sadder-looking faces and more toward the bottom two-thirds of the paper. The data also showed a significantly higher number of boys than girls in the high self concept group.

Introduction

The education a person receives at any given time may affect future attitudes, behaviors and life styles. Since education is a major process in most human development, factors relating to its potential with various students and curriculum are of continuing interest and value to educators. For example, recognizing and understanding underlying feelings and needs of children is an important skill of teachers and a great asset in their attempts to influence learning. Also, poor attention, lack of ambition and unacceptable behavior on the part of students is often the result of personal problems bearing on the student, and not necessarily the lack of mental ability nor the capability of the educator.

For example, Sravrianos (1970), compared House-Tree-Person Drawings of problem-free, good readers to deficient readers with primary emotional problems of withdrawal, immaturity, impulsivity and dependency and to two groups with specific reading deficits. The results indicate projective tests for young children can determine lack of adjustment in school. For this reason, the appropriate use of self concept measures with students may at times be a useful tool in assessing student behaviors.

Other forms of self expression may also constitute valuable assessment tools at the disposal of teachers. Art is one such avenue of self expression which has long been recognized as reflecting the artist's (or student's) state of mind and emotions, and thus, one might postulate a possible relationship between a person's general self concept and his self expression through art drawings. Such is certainly one assumption underlying many projective-type tests used in psychological evaluations, particularly with children (Rabin, 1968; Koppitz, 1968; DiLeo, 1973).

Since the early cave dwellers' artifacts, the role of art in human existence has been somewhat controversial. Regelski (1973) indicates that one purpose for art is shown in the insight it can give into the history of other cultures through artistic remains.

Langer (1964) suggests an even closer perspective regarding the function of art by stating that:

The primary function of art is to objectify feelings so that we can contemplate it and understand it. It is the formulation of so-called 'inner experience,' the 'inner life,' that is impossible to achieve by discussive thought because its forms are incommensurable with forms of language and all its derivatives. Art objectifies the sentience and desire, self consciousness and world-consciousness, emotions and moods, that are generally regarded as irrational because words cannot give us clear ideas of them. (p. 276)

Assuming that art is a means whereby one can more freely express his emotions and inner feelings, it raises other questions

regarding art methods, medium, eventual product, and potential uses of children's art in the classroom.

For example, what forms of art might be the most useful in analyzing children's art? Would one method or medium be more effective than the other? Some may think finger painting, with its wide use of movement and color, more effective than a plain pencil and paper drawing. Kadis (1960) states that finger painting has been used extensively for the past 10 years as an effective projective technique. Its primary objective is that it permits the individual to have a large measure of self-expressive behavior.

Assuming that children do (or can) use art to express their feelings and emotions, one might also ask what kinds of feelings and emotions affect their art?

Hammer (1960), in evaluating children's figure drawings, noted that the drawing of a particular child who was born missing his left arm did not draw a one-armed person, but the left arm of the figure drawing was withered, foreshortened, crippled and conspicuously less effective than the right arm. From this example, one would assume that the child projected his inner feelings into his figure drawing. Hammer also observed that children's movements have diagnostic potential whether they are gross (as in play) or confined (as drawing on a sheet of paper). Some children may

sit in a corner or on the edge of the chair as if ready to run away.

In contrast, a child may occupy the whole table showing no consideration for other children. No paper seems big enough either, and his drawings expand beyond the drawing sheet.

The assumption that a drawing placed more in the lower portion of the paper uses the bottom of the page as a "ground base," may reflect possible ground security, i. e., stabilizing the figure by having its "feet on the ground," or attached to something. On the other hand, it may seem that figures drawn in the upper two-thirds of the sheet possibly reflect a greater sense of autonomy and independence.

Review of Literature

The interest in children's drawings has a long and well-documented history in this country and in Europe. Goodenough (1926) reports that, as early as 1885, an article appeared in England by Ebenezer Cooke in which he described developmental stages in children's drawings.

One of the first and foremost books on human figure drawings was Goodenough's (1926) "Measurement of Intelligence by Drawings" which has become a classic. Goodenough's well standardized and validated Draw-A-Man Test has become widely accepted and used, especially in schools and for research purposes. Thirty-five years later, Harris (1963) tried to revise Goodenough's Draw-A-Man Test but he found her work so complete that little could be done to improve it. Harris reported many studies which showed high correlation between Draw-A-Man Test and IQ scores from intelligence tests. Harris specifically points out that the Draw-A-Man Test measures mental maturity and is not a test that measures personality dynamics, although Goodenough (1926, 1927) in scattered references recognized potentialities for personality analysis in her Draw-A-Man Test. DiLeo (1973) presents another view concerning personality factors related to figure drawing.

A source of error in estimating intellectual maturity from the Goodenough-Harris Test is traceable to those children whose concept of body image is defective, distorted, or disorganized because of emotional disorders. (p. 76)

In recent years, child art (or drawings) have come to be used as an instrument with which to gain a greater understanding of the child's personality. Psychologists have found child art tremendously helpful in penetrating the child's mind. More recently, it has been used as a projective technique to gain deeper understanding of personality and the subconscious. Some psychiatrists have found child art useful in clinical diagnosis and therapy (Lark-Harowitz, 1967). Certain characteristics of children's drawings have been used to diagnose learning disorders such as perceptual impairment and perseveration (DiLeo, 1973).

Drawings serve as a means of more easily establishing rapport and are a good "ice breaker" with shy or negative children. Children with emotional difficulties can be led more easily from drawings to verbal expression (Rabin, 1968).

A strange phenomenon of children's art is that it does not seem to change from culture to culture. Kellogg and O'Dell (1967) report that children of the world, wherever they live, make all their early drawings in the same way, and Jefferson (1963) says that young children of very primitive populations, given the same material,

produce approximately the same kind of drawings as do the children of the more highly developed regions of the world.

Art for children has been described as "a creative activity with materials for the purpose of bringing into existence artificial forms of expressing feeling and thought" (Jefferson, 1963). The viewpoint that children's art is a non-verbal form of self expression is fairly recent. For many years the goal of research in the field of art was primarily to describe and explain the characteristics of children's pictures. Later, however, children's pictures have come to be viewed as expressions of children's emotional and imaginative life (Lark-Harowitz, 1967).

Literature has shown that children's drawings also reflect their environment and their culture. They create art impressions through their own perspective. In most instances, a child's creativeness is born of real enthusiasm and joy of expression.

If children's art is an expression of emotions, then the question arises as to whether emotions also effect the outcome of the art. Jefferson (1963) expressed the viewpoint that "emotional problems affect a child's art and the art products change as the emotional problems are solved" (p. 104).

There have been many studies involving the development of children's figure drawing tests. The House-Tree-Person (H-T-P) Test, Hammer (1955), serves as a technique in which the subject

(a child) may project his inner world, his traits, attitudes, characteristics, and personality strengths and weaknesses.

Stravrianos (1970) compared House-Tree-Person drawings of problem-free, good readers; deficient readers with primary emotional problems, such as withdrawal, immaturity, impulsivity, and dependency; and two groups with specific reading deficits. The results indicate that projective tests for young children can determine lack of adjustment in school. The author urges research with projective techniques in the areas of emotional and organic factors relating to deficient readers.

Machover (1949) pointed out that a child will emphasize and exaggerate in his drawings those parts of the figure which have special meaning for him. She states that a child will change and distort a human figure on his drawing until it resembles or reflects his own perception of himself.

Stone and Ansbacher (1965) investigated the relationship between social interests and the drawings of 10-year-old children. They found that children who were interested in others and in communicating with others drew more frequently and in more detail the communication organs. The communication organs drawn consisted of eyes, ears, mouth and hands.

Handler and Regher (1963) investigated the effects of stress of figure drawing behavior. They found that stress and anxiety were related to figure drawing performance. They found a relationship between the size of the subject's drawing and the subject's psychological state. The greater the stress and anxiety the smaller the figure drawing.

The current trend in research seems directed toward developing rating scales for children's figure drawing instruments. Auriccho (1966) developed rating scales for a Draw-A-Child Test (a boy or girl) which correlated highly with earlier rating scales for the Draw-A-Person Test (a man or woman). The reported reliabilities were of sufficient magnitude (above .80) to warrant further development of such tests. The Draw-A-Child test promises to be useful in studies involving young children, because the rating scales are based on drawings of young school children, rather than adult figure drawing norms.

Pate and Nichols (1971) developed a scoring guide for the Koppitz system of evaluating human figure drawings. They propose that this approach offers promise as a useful element in the initial psychological evaluation of children, particularly with screening examinations in schools. The scoring sheet is divided into two main categories: Developmental Items such as body, head and clothing

and Emotional Indicators such as poor integration, shading and transparencies. A system as easily administered and scored as this can be a valuable asset to teachers and school psychologists as a preliminary evaluation of students.

Hall and Ladriere (1970) compared six scales of scoring children's human figure drawings to determine whether one scale is more efficient or has more diagnostic potential than another. Their finding indicated that three of the scales were equally efficient but further analysis revealed that no item from any of the scales was capable of distinguishing between human figure drawings of emotionally disturbed children from those of the brain-damaged group. They concluded that these types of tools were useful as a general screening out process.

Koppitz, a major investigator of the use of figure drawings and their personality correlates, used drawings of kindergarten children and scored them according to two major rating systems, the Goodenough-Harris system, and the Machover system. The Goodenough-Harris system consists of a list of developmental items which are related to a child's age and maturation. The Machover system is a list of 38 potential emotional indicators which are rare or unusual and occur at 15% or less at a given age level. Her study was designed to investigate whether young

children's figure drawings differ when the methods of administration and the drawing medium vary. She compared drawings made in pencil and in crayon and found little difference in the two types when they were scored for developmental characteristics (Goodenough-Harris Scale). However, she did find a significant interaction between the medium used and the emotional factors present in the drawing (using the Machover Scale). It would seem that the crayon provides an avenue toward more expressive drawings because of the emotional associations of different colors.

Consideration of current literature, which generally views children's art as expressive, leads to a number of research interests. For instance, what kinds of emotions are revealed in art? DiLeo (1973) indicates that emotions such as insecurity, anxiety neurosis, aggression and sex role confusion are some of the emotional characteristics revealed in figure drawings.

Research on the psychological aspects of color usage in art is difficult because human emotions are not constant, and human reactions vary from person to person. However, there are a number of general and universal reactions and/or associations with color which seems to be present in most people. A summary of different types of color associations, as reported by Birren (1950), may be found in Table 1.

Table 1

Modern American Color Associations

Color	General Appearance	Mental Associations	Direct Associations	Objective Impressions	Subjective Impressions
Red	Brilliant, intense, opaque, dry	Hot, fire, heat, blood	Danger, Christmas, Fourth of July, St. Valentine's, Mother's Day, flag	Passionate, exciting, fervid, active	Intensity, rage, rapacity, fierceness
Orange	Bright, luminous, glowing	Warm, metallic, autumnal	Halloween, Thanksgiving	Jovial, lively, energetic, forceful	Hilarity, exuberance, satiety
Yellow	Sunny, incandescent, radiant	Sunlight	Caution	Cheerful, inspiring, vital, celestial	High spirit, health
Green	Clear, moist	Cool, nature, water	Clear, St. Patrick's Day	Quieting, refreshing, peaceful, nascent	Ghastliness, disease, terror, guilt
Blue	Transparent, wet	Cold, sky, water, ice	Service, flag	Subduing, melancholy, contemplative, sober	Gloom, fearfulness, furtiveness
Purple	Deep, soft, atmospheric	Cool, mist, darkness, shadow	Mourning, Easter	Dignified, pompous, mournful, mystic	Loneliness, desperation
White	Spatial--light	Cool, snow	Cleanliness, flag, Mother's Day	Pure, clean, frank, youthful	Brightness of spirit
Black	Spatial--darkness	Neutral, night, emptiness	Mourning	Funeral, ominous, deadly, depressing	Negation of spirit, death

Hammer (1955) notes that the normal use of color for the (H-T-P) is from 3 to 4 colors for the house, 2 to 3 colors for the tree and 3 to 5 colors for the person. From his use of and experience with the House-Tree-Person Test, Hammer concluded that:

An inhibited use of color, below this range, is exhibited by subjects unable to make warm, sharing personal relationships freely. The most 'emotion shy' subjects tend to use crayon as if it were a pencil employing no coloring-in, whatsoever. (p. 364)

Margaret Lowenfeld, a developer of the Mosaic Test (1931), has found that designs made from colored mosaic pieces can be used as an aid in diagnosing emotional disturbances, temperament difficulties, formal psychological attitudes and intellectual deficiencies. It is also possible using this test, to determine mental retardation. Still other diagnoses may be made by an analysis of color and form.

My method of interpreting mosaics is far more limited and at the same time felt to be more valid. In thousands of cases it has been found that mosaics represent certain basic or dominant processes corresponding to definite clinical entities or reaction types. Certain mental diseases are clearly and definitely revealed by the Mosaic Test. This has been verified in schizophrenics for example, in hundreds of cases. I have never seen a patient suffering from a clear-cut case of schizophrenia make a normal design, nor have I ever seen a definitely normal person make a clear-cut schizophrenic design. (Wertham, 1959, p. 134)

The nature of the test allows for mosaic designs to be either very colorful or colorless. Colorful designs include the colors red, blue, green and yellow, while colorless designs may use only white, or

white and black. A predominance of blue and black in designs are seen as indicators of emotional darkness, in the sense of depression (Wertham, 1959). See Figures 1 and 2.

In a study of the drawings of depressed patients, a correlation was drawn between the depressed state of the person and the number of colors used in the drawing (Wadeson, 1971). Depression was negatively related to the number of colors used in the patients' figure drawing. High depression resulted in the use of less colors and low depression resulted in the use of more colors. Similarly, in an individual study of a hospitalized patient, Naumberg (1973) noticed, through art therapy, that when the patient was angry or depressed she would use black and brown colors, but when she was happy or elated, the patient used a myriad of colors.

Current research indicates that the role of color in children's art is an important variable in distinguishing definite patterns for preferred colors by children with differing emotions. For example, some children approach crayons with anxiety and hesitance. Their crayon lines are faint and uncertain. The color choices are restricted to black, brown or blue. This reveals their "personality constriction and interpersonal uncertainties" by not daring to use brighter colors such as reds, oranges, and yellows. Psychologically healthier

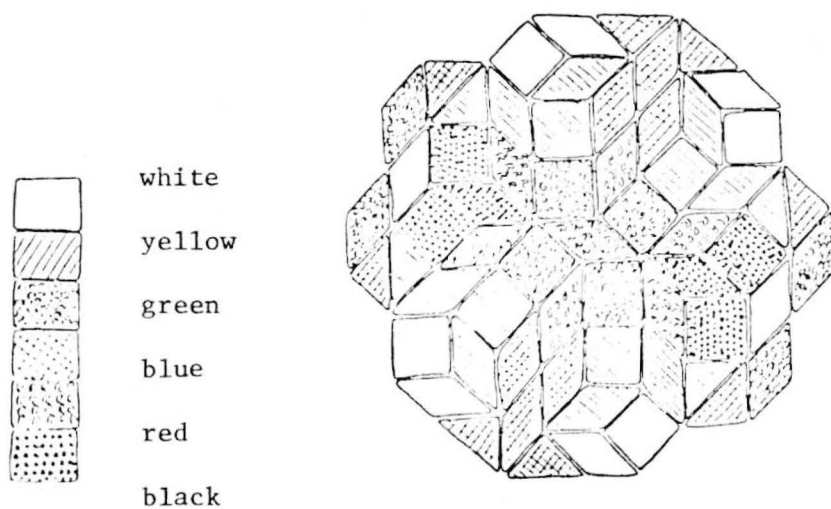


Figure 1. Normal abstract design (Mosaic Test).

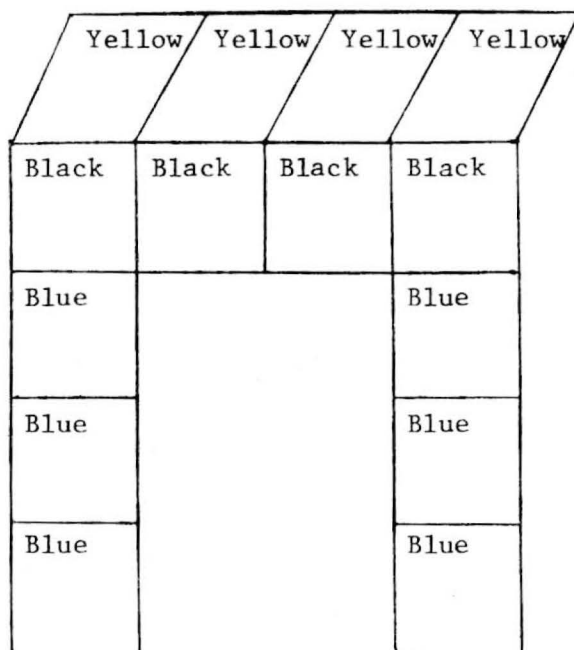


Figure 2. Design by a depressed person (Mosaic Test).

children use more warmer colors and apply a firm pressure on the crayon which might reflect a greater sense of self assurance (Hammer, 1960). In some instances, a child may prefer an outline in black or brown to a color drawing (Eng, 1957).

Another variable in art which seems to be affected by some inner influence is the size of a person's drawing (in proportion to the available space). A study by Cohen (1972) showed that children who were asked to draw pictures of themselves and a friend presented certain characteristics in the height of the figure drawings. Those children who drew themselves first tended to draw themselves taller as compared to those who drew themselves second.

Gellert (1968) tested the hypothesis that a child's conception of his own bodily attributes is more articulated and more accurate than his conception of the bodily attributes of children of the opposite sex. Studying a sample of elementary school children (K-6), she concluded that children seem equally aware of the bodily attributes of both sexes. A significant proportion of the subjects drew larger, though not qualitatively superior, self-representations than they did non-self figures.

Hammer (1960) feels that the size of children's drawings is a particularly important variable with children. Hammer maintains that children who draw small, or even tiny objects and persons, tend

to suffer from intensified awareness of the fact that they have been born "pigmies in a world of giants" (See Figure 3).

DiLeo (1973) states that in his 25 years of experience in studying children's drawings, certain characteristics appear time and again. Of these characteristics he notices that insecure, anxious children tend to draw small figures that "timidly occupy only a small area of the space available. In contrast, the secure well-adjusted child will draw a picture that expresses by its size, freedom from anxiety.

A study of depressed patients, for example, reported the drawings of 50 patients to be significantly shorter than those of non-depressed patients (Lewishon, 1964). However, Saltzman and Harway (1967) replicated Lewishon's earlier study and reported results which failed to support those of Lewishon's. The results of the Saltzman-Harway study did show a smaller size of figure drawing among depressed patients, and they did conclude that size perception and depression are related. However, they also concluded that other important personality factors were relevantly involved.

Lehner and Gunderson (1952) say that the height of drawings is related to the feelings of bodily adequacy. Figure 3 exemplifies how a child often perceives himself in relation to his environment.

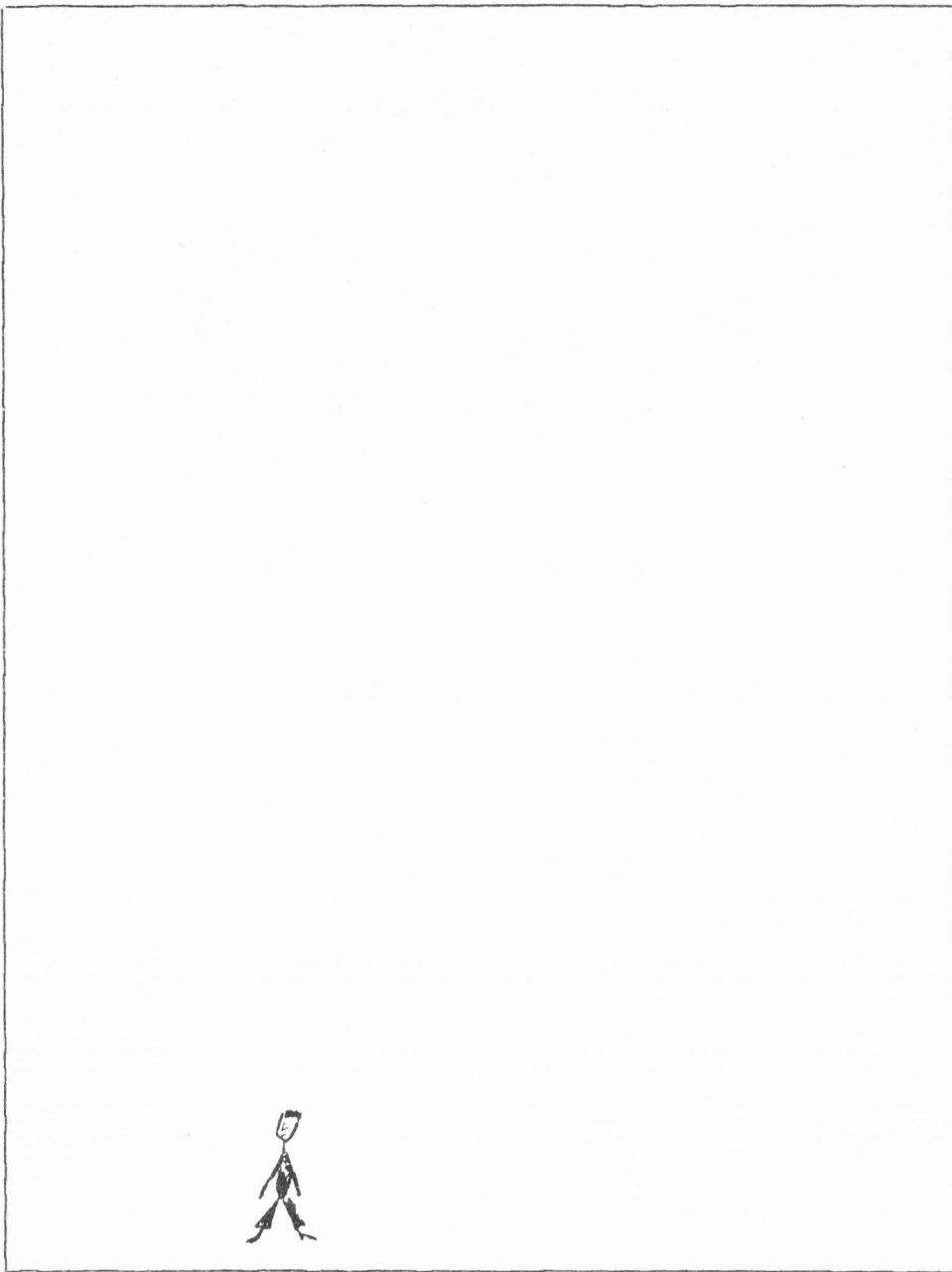


Figure 3. Replication of a person drawn by a 12-year-old boy.

Studies by Bennett (1964, 1966) involving young students found significant relationships between self-concepts and size of figure drawing. She was, however, not able to separate variables of personality from variables of intelligence.

Method

Subject

The population consisted of all seventh grade students in the Logan Junior High School. There were 80 students, 38 males and 42 females, participating in the experiment.

Materials

Each student was given a standard size white sheet of drawing paper, a pencil, and a box of 10 colored pencils with which to do their drawing.

Procedures

The approximately 250 students in the seventh grade at Logan Junior High were randomly placed into six homeroom classes. Only the six homeroom classes consisted of all 250 students. Other classes were elective and were chosen by preference of the student. Therefore, two of the six homeroom classes were selected by blind choice, to participate in the study. The two classes consisted of 80 students.

The Tennessee Self Concept Scale was administered to the 80 students. The students with the top 20 scores, indicating high self concept, and the students with the bottom 20 scores, indicating

low self concept, were chosen as the subjects for this design. The total number of subjects chosen for the experiment was 40, with 20 students in the high self concept group and 20 in the low self concept group. The 40 students consisted of 14 boys and 6 girls in the high self concept group and 4 boys and 16 girls in the low self concept group. Immediately following the test administration, the students were given a white sheet of paper and a box of 10 colored pencils. A regular pencil was also available to each student. As stated in Borg and Gall (1971), the Hawthorne effect would influence the performance if only those with the chosen scores were asked to draw a picture. Therefore, all 80 students tested were asked to submit drawings. The students were instructed as follows:

I would like you to draw a picture of yourself on the paper given you. There are regular pencils and also colored pencils available at your desk if you wish to use them. The drawing must be a picture of yourself and you may draw it however you like.

Measure

Tennessee Self Concept Scale. The individual's self concept has been demonstrated to be highly influential in much of his or her behavior and also to be directly related to one's general personality and state of mental health. A knowledge of how an individual

perceives himself is useful in attempting to help that end, or in making evaluations of him. The Tennessee Self Concept Scale has been developed and used for a variety of purposes; counseling, clinical assessment and diagnosis research in behavioral science and personnel selection. The Scale consists of 100 self descriptive statements which the subject uses to portray his or her self image.

The Scale is available in two forms, a Counseling Form and a Clinical and Research Form. Both forms are the same test booklet and test items (see Appendix A, B, C, D and E). The difference lies in the scoring and profile system. The counseling form is quicker and easier to score and deals with fewer variables. The Clinical and Research Form is not appropriate for direct feedback to the subject.

The Scale is self administering for either groups or individuals and can be used with subjects age 12 and higher and having at least a sixth grade reading level. It is also applicable to the whole range of psychological adjustment from healthy, well adjusted people to psychotic patients. The Scale is standardized from age 12 to 68. The test-retest reliability for the total Scale is stated in the publisher's manual at .92.

The Counseling Form of the Scale is scored in Columns and Rows. The Row scores deal with: (1) This is what I am, (2) This is

how I feel about myself, (3) This is what I do. The Columns range from A to E. The columns measure Physical Self, Moral-Ethical Self, Personal Self, Family Self and Social Self. The Total Row scores and Total Column scores are added to receive the Total Self Concept score (see Appendix F). This is the score with which the 20 extreme low scores and extreme high scores were selected.

With regard to validity of the Scale, the publishers manual indicates that items of the Scale were retained only if there was unanimous agreement by the judges that it was classified correctly. Thus, we may assume that the categories used in the scale are logically meaningful. Most of the scores of the Scale correlate positively with MMPI scores.

Data Analysis

The two primary hypotheses were analyzed by a one-way analysis of variance. Statistical analysis was run by the University Computer Center. The pictures were scored by counting all colors on the drawing, and the height was scored by measuring the drawings (height) in millimeters.

The sub-hypotheses were analyzed by chi square. Before the self concept measure was scored and the students placed in the high and low self concept groups, the figure drawings were counted

for color, measured for height and size, and judged for the facial expressions. The judges were in agreement on all the drawings placed in the smiles and non-smiles categories.

Findings

Hypotheses 1 and 2

Analysis of variance results, in testing the two primary hypotheses of the study, i. e., number of colors used and height of drawings, were as follows: The mean number of colors used by the positive self concept group was 3.5. The mean number of colors used by the negative self-concept group was 4.2. The F ratio obtained in comparing the two groups on number of colors used in their drawings was 1.25 which was not significant.

The mean height of the drawings by the positive self concept group was 169.2 millimeters. The mean height of the drawings by the negative self concept group was 189.5 millimeters. The F ratio obtained in comparing the two groups' size of drawings was .9, which was not significant.

Thus, on the basis of the above analyses, no support was found for the hypotheses that self concept affects either the number of colors used or the size of children's figure drawings.

Sub-Hypotheses 1-4

To test the four sub-hypotheses, chi square analyses were used to compare high- and low-self concept subjects in terms of

Table 2

One-way Analysis of Variance Comparing Colors
and Height of Figure Drawings for High
and Low Self Concept Subjects

Group	Comparison	Mean	F ratio
high self concept	no. of colors used	3.5	1.25(NS)
low self concept	no. of colors used	4.2	
high self concept	height of drawing	169.2	.91(NS)
low self concept	height of drawing	189.5	

subjective evaluations of their drawings. Of the four sub-hypotheses, three were significant at the .05 level. Each of the sub-hypotheses is discussed below.

1. Sub-hypotheses 1 was confirmed, that students with positive self concept will draw more smiles on the faces of their drawings than the negative self concept students. The chi square on the comparison was 4.0, which was significant at the .05 level.

Those students in the positive self concept group who put smiles on the faces of their drawing drew facial expressions that seemed to be happy. Subjective impressions of these drawings were that the faces portrayed more contented, straight forward expressions, whereas the negative self concept group drew faces that

Table 3

Sub-Hypothesis 1: Smiles Versus Non-Smiles
for High and Low Self Concept Subjects

	Smiles	Non-smiles
HSC	14	6
LSC	8	12

$p < .05$

df = 1

chi square = 4.0

looked more glum and sad. Also, more of the negative group drew faces with the eyes looking down or to one side, seemingly avoiding a straight forward, eye-to-eye contact with their drawing.

2. Sub-hypothesis 4 was confirmed, that students with positive self concepts will tend to draw their pictures in the top two-thirds of the paper, while students with negative self concepts will tend to draw their figure in the bottom two-thirds of the paper. The chi square for this comparison was 8.0, which was significant at the .01 level.

3. Sub-hypotheses 2 and 3 were not supported by the results obtained.

Table 4

Sub-Hypothesis 4 Position of Drawing for
High and Low Self Concept

	Top 2/3	Middle 2/3	Bottom 2/3
HSC	10	4	8
LSC	6	2	10

$p < .01$

df = 1

chi square = 8.00

Discussion

The results of the hypothesis that students who obtain a high score on a self concept measure would use a greater number of colors in drawing a picture of themselves than would students who score low on the same self concept measure was nonsignificant.

The results of the hypothesis that students with high scores on the measure of self concept would draw a picture of themselves larger in size than students with low scores on the self concept measure was also nonsignificant.

The sub-hypothesis that the high self concept group would have more smiles on the faces of their drawings than the low self concept group was significant.

Those pictures that had smiles on their faces seemed to portray a happier brighter look. The eyes were straight forward and wide open. Some of the non-smile faces were looking down, had the eyes half closed and appeared to look sad.

The sub-hypothesis that the high self concept group would tend to draw their pictures in the top two-thirds of the paper and the negative self concept group would tend to draw their figures in the bottom two-thirds of the paper was also significant.

It would seem that students who drew their figures in the top two-thirds of the page would be more autonomous and independent, while those who drew their figure in the bottom two-thirds of the page would have a need for security or a close connection with "ground base" or the bottom of the page.

One particular situation was observed by the experimenter which should be avoided in future research of this type. It was noted that possible contamination occurred, in that some pictures appeared to be copied somewhat from each other. While this was not directly observed during the drawing period, the pictures of these students showed marked similarity in design. It is suggested, therefore, that giving students a drawing assignment in smaller groups (8-10) instead of one large class would eliminate possible discussion or copying among the students.

Other possible contamination may have also occurred during the testing period. There seemed to be discussion among the students. Whether or not the students were comparing responses on the self concept test, or copying from each other cannot be determined.

Even though the data failed to support the two main hypotheses, one may assume that certain characteristics or emotional states affect figure drawing. Further research in more specific areas may reveal significant results.

Summary and Conclusions

The purpose of the research was to investigate the effects of self concept on children's figure drawings. The principle variable under consideration in each child's drawing were (a) size of drawing and (b) number of colors used. Several other variables, of a projective nature, were also investigated. The Tennessee Self Concept Scale (Fitts, 1965) was administered to 80 students in two seventh grade classes at Logan Junior High School.

Interest in this type of study grew out of some observation in teaching and from other research literature regarding art and personality.

With the research literature obtained, it was hypothesized that students who obtained high scores on a measure of self concept (positive self concept) would use a greater number of colors in drawing a picture of themselves than would students who scored low (negative self concept) on the same self concept measure. Further, it was expected that students with high scores on the measure of self concept would draw a picture of themselves larger in size than was expected of students with low scores on the self concept measure.

In addition to the two major hypotheses, it was also hypothesized that: (1) the high self concept group would have more smiles on the faces of their drawings than the low self concept group; (2) the high self concept group would draw more full figures than the low self concept group; (3) the high self concept group would use more total space on the paper than the low self concept group; and (4) the high self concept group would draw their figures more in the top two-thirds of the page, and the low self concept group would draw their figures more in the bottom two-thirds of the page.

All of the students were ranked from high to low scores obtained on the Tennessee Self Concept Scale and were then divided into a high self concept group (top 20 scores) and a low group (bottom 20 scores).

The figure drawings of high and low scorers on the Self Concept Scale were then compared to determine any apparent relationship between measured self concept and each of the variables hypothesized above.

Analysis of the figure drawings indicated no significant difference, either in number of colors used or in size of figure between high and low scorers on the Self Concept Scale. The mean number of colors used by high scorers was 3.5 and the mean height was 169.2 millimeters. The mean number of colors used by low scorers was

4.5 and the mean height was 189.5 millimeters. Thus the basic hypotheses of the study were not substantiated by the results obtained.

The four sub-hypotheses were analyzed by chi square. Of the sub-hypotheses, numbers 1 and 4 were confirmed at the .05 level. Sub-hypotheses, numbers 2 and 3 were not supported by the data. Thus, the only significant differences noted between the drawings of high- and low- self concept students were in three of the sub-hypotheses, as follows: (1) more high scorers drew pictures with smiling faces than did low scorers; (2) the high self concept groups had a significantly higher number of boys than girls; and (3) high scorers drew their pictures more in the top two-thirds of the page, while low scorers drew more in the lower two-thirds of the page.

I conclude that a relationship does exist between self concept and certain characteristics of children's figure drawings. The significance of sub-hypotheses 1 and 4 indicates that self concept will be portrayed through certain characteristics in the child's figure drawing.

Bibliography

- Auriccho, E. Comparison of several methods of scoring Draw-a-Person Test. Perceptual and Motor Skills, 1966, 23, 1124.
- Bennett, V. D. C. Combinations of figure drawing characteristics related to the drawer's self-concept. Journal of Projection Techniques and Personality Assessment, 1966, 30, 2, 192-196.
- Bennett, V. D. C. Does size of figure drawing reflect self-concept? Journal of Consulting Psychologists, 1964, 28, 285-296.
- Birren, F. Color Psychology and Color Therapy. New York: McGraw-Hill Book Company, Inc., 1950.
- Borg, W. R., and Gall, M. D. Educational Research. New York: McKay, Inc., 1971.
- Cohen, S. M., Money, J., & Whlenhuth, E. H. A computer study of selected features of self-and-other drawings by 385 children. Journal of Learning Disabilities, 1972, 5, 3, 145-155.
- DiLeo, J. F. Children's Drawings as Diagnostic Aids. New York: Brunner Mazell, 1973.
- Eng, H. The Psychology of Child and Youth Drawings. London: Ruteledge and Kegan Paul, 1957.
- Gellbert, E. Comparison of children's self-drawings with their drawings of other persons. Perceptual and Motor Skills, 1968, 25, 123-128.
- Goodenough, F. L. Measurement of Intelligence by Drawings. New York: World Book Company, 1926.
- Goodenough, F. L. Studies in the psychology of children's drawings. Psychology Bulletin, 1928, 25, 272-283.

- Hall, L. P., & Ladriere, M. L. Comparative study of diagnostic potential and efficiency of six scoring systems applied to children's figure drawing. Psychology in the Schools, 1970, 7, 7, 244-246.
- Hammer, E. F. The House-Tree-Person (H-T-P) drawings as a projective technique with children. In Albert, I. R., & Haworth, M. R. (Eds.), Projective Techniques with Children. New York: Grune and Stratton, 1960.
- Handler, L., & Reyher, J. The effects of stress on a Draw-A-Person Test. Unpublished Master's Thesis, Michigan State University, 1963.
- Jefferson, B. Teaching Art to Children. Boston: Allyn and Bacon, 1963.
- Kellogg, R. Analyzing Children's Art. Palo Alto: National Press Books, 1966.
- Kellogg, R., & O'Dell, S. The Psychology of Children's Art. New York: Random House, 1967.
- Lark-Harowitz B., Lewis, H. P., & Luka, M. Understanding Children's Art for Better Teaching. Columbus, Ohio: Merrill Books, 1967.
- Langer, S. K. Philosophy in a New Key. New York: The New American Library, 1948.
- Lehner, G. F., & Gunderson, E. K. Reliability of graphic indices in a projective test (DAP). Journal of Clinical Psychology, 1952, 8, 125-128.
- Lewishon, P. M. Relationship between height of figure drawings and depression in psychiatric patients. Journal of Consulting Psychology, 1964, 28, 4, 380-381.
- Machover, K. Personality Projection in the Drawing of the Human Figure. Springfield, Illinois: Charles C. Thomas, 1949.
- Naumberg, M. An Introduction to Art Therapy. New York: Teachers College Press, 1973.

- Pate, P. H., & Nichols, W. R. Scoring guide for the Koppitz system of evaluating children's human figure drawings. Psychology in the Schools, 1971, 8, 55-56.
- Regelski, T. A. Self-actualization in creating and responding to art. Journal of Humanistic Psychology, 1973, 13, 4, 57-68.
- Saltzman, L. E. Size of figure drawing of psychotically depressed patients. Journal of Abnormal Psychology, 1967, 72, 3, 205-207.
- Stone, P. A., & Ansbacher, H. L. Social interest and performance on Goodenough-Harris Draw-A-Man Test. Journal of Individual Psychology, 1965, 27, 178-186.
- Stravrianos, P. K. Emotional and organic characteristics in drawings of deficient readers; House-Tree-Person. Journal of Learning Disabilities, 1970, 3, 488-501.
- Wawrzaszek, I., Johnson, O. G., & Sciera, J. L. A comparison of H-T-P responses of handicapped and non-handicapped children. Journal of Clinical Psychology, 1958, 14, 160-162.
- Wadson, H. Characteristics of art expression in depression. Journal of Nervous and Mental Disease, 1971, 153, 3, 197-204.
- Wertham, F. The mosaic Test. In Abt, L. E., & Bellack, L. (Eds.), Projective Psychology. New York: Grove Press, 1959.

APPENDICES

Appendix A. Tennessee Self Concept Scale

	Page 1	Item No.
1. I have a healthy body.....		1
3. I am an attractive person.....		3
5. I consider myself a sloppy person.....		5
19. I am a decent sort of person.....		19
21. I am an honest person.....		21
23. I am a bad person.....		23
37. I am a cheerful person.....		37
39. I am a calm and easy going person.....		39
41. I am a nobody.....		41
55. I have a family that would always help me in any kind of trouble.....		55
57. I am a member of a happy family.....		57
59. My friends have no confidence in me.....		59
73. I am a friendly person.....		73
75. I am popular with men.....		75
77. I am not interested in what other people do.....		77
91. I do not always tell the truth.....		91
93. I get angry sometimes.....		93

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

Appendix B. Tennessee Self Concept Scale

	Page 2	Item No.			
2. I like to look nice and neat all the time.....		2			
4. I am full of aches and pains.....		4			
6. I am a sick person.....		6			
20. I am a religious person.....		20			
22. I am a moral failure.....		22			
24. I am a morally weak person.....		24			
38. I have a lot of self-control.....		38			
40. I am a hateful person.....		40			
42. I am losing my mind.....		42			
56. I am an important person to my friends and family.....		56			
58. I am not loved by my family.....		58			
60. I feel that my family doesn't trust me.....		60			
74. I am popular with women.....		74			
76. I am mad at the whole world.....		76			
78. I am hard to be friendly with.....		78			
92. Once in a while I think of things too bad to talk about.....		92			
94. Sometimes, when I am not feeling well, I am cross.....		94			
Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

Appendix C. Tennessee Self Concept Scale

		Page 3	Item No.		
			<u>7</u>		
			9		
			11		
			25		
			27		
			29		
			43		
			45		
			47		
			61		
			63		
			65		
			79		
			81		
			83		
			95		
			97		
Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

Appendix D. Tennessee Self Concept Scale

	Page 4	<u>Item No.</u>			
8. I am neither too tall nor too short.....		8			
10. I don't feel as well as I should.....		10			
12. I should have more sex appeal.....		12			
26. I am as religious as I want to be.....		26			
28. I wish I could be more trustworthy.....		28			
30. I shouldn't tell so many lies.....		30			
44. I am as smart as I want to be.....		44			
46. I am not the person I would like to be.....		46			
48. I wish I didn't give up as easily as I do.....		48			
62. I treat my parents as well as I should (Use past tense if parents are not living).		62			
64. I am too sensitive to things my family say.....		64			
66. I should love my family more.....		66			
80. I am satisfied with the way I treat other people.....		80			
82. I should be more polite to others.....		82			
84. I ought to get along better with other people.....		84			
96. I gossip a little at times.....		96			
98. At times I feel like swearing.....		98			
Responses -	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

Appendix E. Tennessee Self Concept Scale

	Page 5	Item No.
13. I take good care of myself physically.....		13
15. I try to be careful about my appearance.....		15
17. I often act like I am "all thumbs".....		17
31. I am true to my religion in my everyday life.....		31
33. I try to change when I know I'm doing things that are wrong.....		33
35. I sometimes do very bad things.....		35
49. I can always take care of myself in any situation.....		49
51. I take the blame for things without getting mad.....		51
53. I do things without thinking about them first.....		53
67. I try to play fair with my friends and family.....		67
69. I take a real interest in my family.....		69
71. I give in to my parents. (Use past tense if parents are not living).....		71
85. I try to understand the other fellow's point of view.....		85
87. I get along well with other people.....		87
89. I do not forgive others easily.....		89
99. I would rather win than lose in a game.....		99

Responses -	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

Appendix F. Tennessee Self Concept Scale

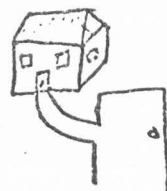
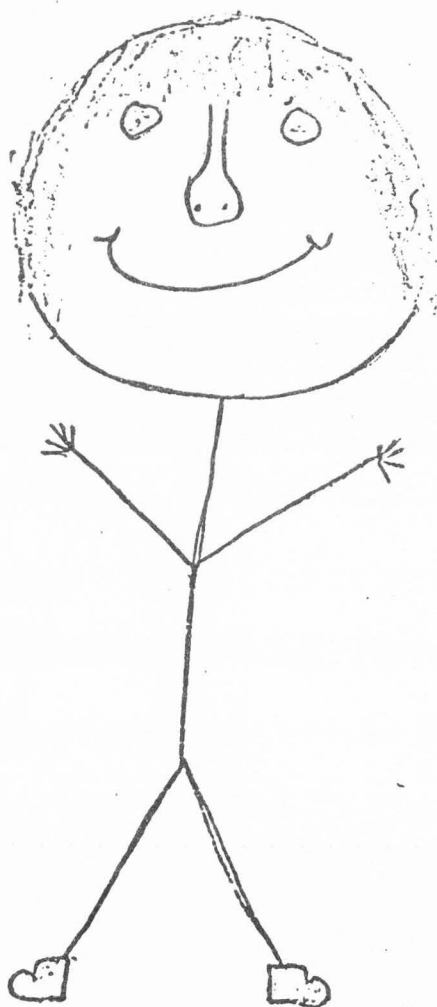
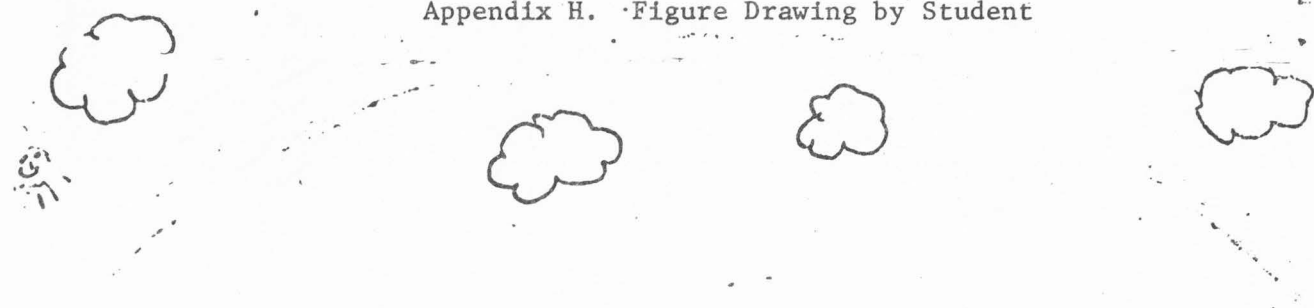
	Page 6	Item No.
14. I feel good most of the time		14
16. I do poorly in sports and games		16
18. I am a poor sleeper		18
32. I do what is right most of the time		32
34. I sometimes use unfair means to get ahead		34
36. I have trouble doing the things that are right		36
50. I solve my problems quite easily		50
52. I change my mind a lot		52
54. I try to run away from my problems		54
68. I do my share of work at home		68
70. I quarrel with my family		70
72. I do not act like my family thinks I should		72
86. I see good points in all the people I meet		86
88. I do not feel at ease with other people		88
90. I find it hard to talk with strangers		90
100. Once in a while I put off until tomorrow what I ought to do today		100

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

Appendix G. Score Sheet Counseling Form Tennessee Self Concept Scale

SCORE SHEET		NAME										SCHOOL GRADE	SEX	AGE	DATE	TIME STARTED	TIME FINISHED	TOTAL TIME	
Counseling Form Tennessee Self Concept Scale		HOW THE INDIVIDUAL PERCEIVES HIMSELF																	
IN TERMS OF	COLUMN A PHYSICAL SELF	COLUMN B MORAL-ETHICAL SELF	COLUMN C PERSONAL SELF	COLUMN D FAMILY SELF	COLUMN E SOCIAL SELF	SELF CRITICISM	ROW TOTALS		VARIABILITY Range of P-Cell Scores										
RCW 1.	P-1 P-2 P-3 N-4 N-5 N-6	P-19 P-20 P-21 N-22 N-23 N-24	P-37 P-38 P-39 N-40 N-41 N-42	P-55 P-56 P-57 N-58 N-59 N-60	P-73 P-74 P-75 N-76 N-77 N-78	91 92 93 94	POSITIVE P												
IDENTITY	5 5 1 1 1	5 5 1 1 1	5 5 5 1 1 1	4 4 4 2 2 2	4 4 4 2 2 2	4 4 4 2 2 2	5 5 5 5												
WHAT HE IS	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3												
	2 2 2 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 2 4												
	1 1 1 5 5	1 1 5 5 5	1 1 5 5 5	1 1 1 5 5	1 1 1 5 5	1 1 1 5 5	1 1 1 1												
	p 27		p 25		p 27		p 30		p 30		139	5							
RCW 2.	P-7 P-8 P-9 N-10 N-11 N-12	P-25 P-26 P-27 N-28 N-29 N-30	P-43 P-44 P-45 N-46 N-47 N-48	P-61 P-62 P-63 N-64 N-65 N-66	P-79 P-80 P-81 N-82 N-83 N-84	95 96 97 98													
SELF SATISFACTION HOW HE ACCEPTS HIMSELF	5 5 5 1 1 1	5 5 4 1 1 1	5 5 5 1 1 1	4 4 4 2 2 2	4 4 4 2 2 2	4 4 4 2 2 2	5 5 5 5												
	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3												
	2 2 2 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 2 4												
	1 1 1 5 5	1 1 5 5 5	1 1 1 5 5	1 1 1 5 5	1 1 1 5 5	1 1 1 5 5	1 1 1 1												
	p 22		p 25		p 25		p 30		p 26		128	8							
ROW 3.	P-13 P-14 P-15 N-16 N-17 N-18	P-31 P-32 P-33 N-34 N-35 N-36	P-49 P-50 P-51 N-52 N-53 N-54	P-67 P-68 P-69 N-70 N-71 N-72	P-85 P-86 P-87 N-88 N-89 N-90	99 100	SC#												
BEHAVIOR HOW HE ACTS	5 5 1 1 1	5 5 1 1 1	5 5 5 1 1 1	4 4 4 2 2 2	4 4 4 2 2 2	4 4 4 2 2 2	5 5	25											
	4 4 2 2 2	4 4 2 2 2	4 4 2 2 2	4 4 4 2 2 2	4 4 4 2 2 2	4 4 4 2 2 2	4 4												
	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3 3 3 3	3 3												
	2 2 2 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2 4 4 4	2 2												
	1 1 1 5 5	1 1 5 5 5	1 1 5 5 5	1 1 1 5 5	1 1 1 5 5	1 1 1 5 5	1 1												
	p 26		p 29		p 25		p 27		p 30		137	5							
COLUMN TOTALS	ΣP 75		79		77		87		86		Total Positive or P → 404								
	V. (Range of P-Cell Scores) 5		4		2		3		4		Col. Tot. V. → 18	18							
DISTRIBUTION OF RESPONSES											36	44							

Appendix H. Figure Drawing by Student



Appendix I. Figure Drawing by Student

