SOCIAL INTEREST AND THE COMMUNICATIONS ORGAN SCORE IN HUMAN FIGURE DRAWINGS

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SOCIAL INTEREST AND THE COMMUNICATIONS ORGAN SCORE IN HUMAN FIGURE DRAWINGS

Human figure drawings have been used by many psychologists during the past 40 years as an aid to understanding personality. Florence Goodenough was a pioneer in the field and is the person most responsible for establishing human figure drawings as a basic instrument for measurement of children's intelligence. Goodenough's book, The Measurement of Intelligence by Drawings (1926), provided a working manual for a figure drawing test which became known as the Draw-a-Man Test (DAM). Although Goodenough realized the possible value of DAM as a device for the location of maladjustment in children, it was used primarily as a measure of children's intelligence.

Since the publication of Karen Machover's monograph, Personality Projection in the Drawing of the Human Figure (1949), the human figure drawing test known as the Draw-a-Person Test (DAP) has become a routinely used instrument by many psychologists. The DAP consists of both a male and a female drawing and is used as a measure of a great many personality factors, based on Machover's hypotheses of the meanings of various aspects of the drawings. Machover's hypotheses have stimulated a great deal of research, and as Swensen (1957) pointed out, there is a need for more empirical

research directed toward improving the DAP as a measure of personality.

Criticism has been leveled at the use of human figure drawings as an instrument for personality measurement. Swensen (1957) pointed out that few of Machover's hypotheses concerning body parts and structural aspects of such drawings have been empirically supported. Many clinicians, however, feel that much information can be derived from drawings of this sort. A possible reason for the discrepancy between empirical data and many clinicians' evaluations may stem from inadequate research or the clinicians' bias; possibly both. Caligor (1952) suggested that if once in a while a figure clearly illustrates a client's problem, the clinician may remember it well, but the same clinician may forget a case that does not fit the pattern. On the other hand, Swensen (1957) stated that much more research of human figure drawings is needed in order that the maximal value can be derived.

Conflicting results of published studies indicate disagreement as to the value of figure drawings as a diagnostic tool. Studies by Caligor (1952) and Hiler & Nesvig (1965) have shown that figure drawings have limited diagnostic value in placing an individual in a specific catagory. Other studies have shown that figure drawings can discriminate between normal and abnormal personality traits. Gravitz (1966), Watson (1967), and Stricker (1967) found that human figure drawings were useful as an indicator of abnormal traits.

Sundberg (1961) found that in a survey of 185 hospitals, counseling centers, and clinics, the DAM was used more often than all other tests with the exception of the Rorschach. It is evident that human figure drawings do have an important place in the clinician's armamentarium, but it is also evident that more research is needed. The ease and speed of administration and the non-threatening nature of this type of drawing test are factors which the clinician finds desirable. It appears that the convenience of human figure drawings may be an important factor in the drawing's popularity.

Swensen (1957) suggested that one of the most fruitful ways of researching figure drawings is to devise studies to test Machover's hypotheses. Of particular interest in the present study is Machover's hypothesis concerning the significance of the facial aspects of the drawing. According to Machover (1949), the face is the center of communication and is the most expressive part of the body. She felt that persons who draw the head as the last feature show disturbance in interpersonal relationships. Persons who deliberately omit facial features in their drawings show avoidance of social problems. Machover felt that such persons are superficial, cautious, and hostile in their social contacts.

Related Literature

Margolis (1948) used human figure drawings as an indication of the adjustment of a 16 year old girl who suffered

extreme withdrawal. During the process of therapy the patient became less withdrawn. Margolis reported that the facial feature was drawn last, indicating her difficulty at facing the world. The author felt that his observation supported Machover's hypothesis concerning the significance of the face in human figure drawings.

Further evidence concerning the social implications of the facial features was provided by Cook (1951). The author found that college students who drew the female figure's head larger than the male figure's head also attributed the social function to the female more than to the male. The author felt that the study tended to support Machover's hypothesis.

In a study by Fiedler and Siegel (1949) it was found that adult neurotics who drew detailed facial features improved during therapy more often than those who did not draw detailed facial features. The number of facial features present was used to predict 12 of 19 cases which failed to improve, and incorrectly predicted only one case of 15 which did improve. It was suggested by Fiedler and Siegel that the face is the social feature of the drawing and that the poor performance in drawing the face by persons not improving in therapy was indicative of an inability to form that interpersonal relationship between patient and therapist which is necessary for successful therapy. Fiedler and Siegel felt that the face was superior to the other parts of the body as an index of the social aspects of personality.

Richey and Spotts (1959) also felt that the hypothesis presented by Machover concerning the significance of the social aspects of human figure drawings could be tested by examining interpersonal relationships. It seemed to Richey and Spotts that the lack of ability to form interpersonal relationships could apply to many types of social situations, as well as to the relationship in therapy. The authors made the assumption that an individual who is unable to form relationships with others will not be well liked or accepted by those who know him. Elementary school children were given the DAP along with a sociometric rating test to determine the nature of each child's peer relations. The results were interpreted as supporting the hypothesis that the face is the social feature of the drawing and that it reflects the ability to form interpersonal relationships.

Stone and Ansbacher (1965) felt that by refining the face scale into a scale containing only the organs involved in communication, a more accurate indication of social interest would result. The authors reasoned that communications organs (CO) are the organs concerned with receiving messages from and sending messages to other people, and that persons with a high degree of social interest would place the most emphasis on them. It was felt by the authors that the neurotic who has less social interest would place the least amount of emphasis on the CO.

To test their assumptions, Stone and Ansbacher used the

California Test of Personality as a measure of social interest, as they felt that a sociometric scale could be confounded by factors other than social interest. The subjects (Ss) used in the study were 59 elementary-school children who were randomly selected. The DAM scale was divided into four subscores; the first was the CO score, followed by the remainder of the head score, the total head score, and the body score.

A correlation of the measures obtained tended to support the authors' hypotheses. The CO score yielded a correlation of .729 with the social interest scale, but only .074 with a measure of intelligence. The noncommunications (NC) score yielded a correlation of .360 with intelligence but only .259 with social interest. The body score yielded a correlation of .240 with intelligence and .022 with social interest. It was felt that the relationship between the CO score and the California Test of Personality was highly significant and was more meaningful than the entire head score containing noncommunications items. Body score and intelligence did not appear to be related to the CO score.

Strumpfer and Huysamen (1968) replicated the study by Stone and Ansbacher (1965), using scores based upon both male and female drawings by elementary school children. The DAM and Cattell's High School Personality Questionnaire were employed in the study. The authors correlated the CO score with the social interest measure from Cattell's High School

Questionnaire. A low but significant correlation was found. The sex of the Ss apparently interacted with the results but no explanation of this was found.

Statement of the Problem

The previously cited studies of Stone and Ansbacher (1965), and Strumpfer & Huysamen (1968) demonstrated a significant relationship between CO scores and social interest. Stone and Ansbacher (1965) felt that CO scores were related to what Adler included under the concept of Gemeinschaftsgefühl, translated as social interest or social feeling.

Social interest is a central concept in Adler's personality theory. Adler appears to associate the presence of social interest with good personal adjustment and the absence of social interest with maladjustment. The prime importance of social interest was shown by Adler (1929) in the following statement.

> It is almost impossible to exaggerate the value of an increase in social feeling. The mind improves for intelligence is a communal function. The feeling of worth and value is heightened, giving courage and an optimistic view, and there is a sense of acquiescence in the common advantages and drawbacks of our lot. The individual feels at home in life and feels his existence to be worthwhile just so far as he is useful to others and is overcoming common instead of private feelings of inferiority. Not only the ethical nature, but the right attitude in aesthetics, the best understanding of the beautiful and the ugly, will always be founded upon the truest social feeling [p. 155] .

Social interest, stated Adler (1956), "is the barometer of the child's normality [p. 154] ."

The relationship between social interest and personal adjustment described by Adler seems to imply that the CO score is positively correlated with personal adjustment. If the CO score in a human figure drawing indicates the degree of social interest manifested by an individual, it is reasoned that the CO score will measure that individual's adjustment level.

The relationship between social interest and CO scores has been demonstrated only in children. The relationship is dependent upon the selective emphasis of CO items by persons having differing levels of social interest. Should all persons emphasize all CO items, then no relationship could be demonstrated. Machover felt all persons of normal intelligence demonstrate selective emphasis on the head of human figure drawings.

Stone and Ansbacher (1965) demonstrated that the CO items were more significant in indicating social interest than NC items. The same relationship should be evident in drawings of human figures drawn by college students. The organs involved with communication should be more related to social interest than the NC items.

The hypotheses tested were;

1. Performance in drawing the communications organs in human figure drawings are positively correlated with a measure of social interest in a college population.

2. Performance in drawing the communications organs in

human figure drawings is positively correlated with a measure of personal adjustment in a college population.

3. The communications organs in human figure drawings are superior to the noncommunications organs as an indicator of personal adjustment and social interest.

Method

Subjects

Only undergraduate college students were used as subjects. Participation was voluntary; however, seven Ss received extra credit in an undergraduate psychology course. There were 17 male and 23 female Ss, totaling 40. The mean age for the Ss was 21 years.

Goodenough-Harris Drawing Test

Each S was asked to draw a picture of a man. The scoring scale of the Goodenough-Harris Drawing Test (GHT) (Harris, 1963) was used as a criterion for scoring the drawings. The GHT, a revised form of the DAM, provided 13 items that could be scored as CO instead of 10 items on the older form. Each item that was scored was weighted equally and counted as 1 point credit to S who made the drawing.

The entire GHT scoring scale was not used. The GHT consists of three drawings; a drawing of a man, a drawing of a woman, and a drawing of the self. The drawing of a man is scored using a 73 point scale, and the drawing of a woman is scored using a 71 point scale from the GHT scoring scale.

The drawing of the self is scored by using either the 73-point scale or the 71-point scale, depending upon the sex drawn. The GHT was devised as a measure of intelligence for children between the ages of 5 and 15 years. The scoring scales have proven to be of great value in evaluating the drawings by providing an objective criterion by which the drawing is measured. Even though the present study was not designed to study intelligence, the GHT scoring scales appeared to offer a basis for reliable study of human figure drawings used for investigation of other personality factors. Harris (1963) reported intercorrelations between two independent scorers of drawings to be .94 or more.

Only the section of the GHT scoring scale dealing with the drawings' heads was scored. The head items were divided into CO items and NC items. The criterion by which the NC and CO items were chosen was first that the item must have come from the portion of the GHT scale dealing with the head. Each item also must have been involved with the functions of sight, hearing, speech, or smell. It is these functions that are used in communications with other persons. The items that were involved with communications were designated CO items. The section of the GHT head scale which was not scored as CO items was scored as NC items. Stone and Ansbacher (1963) employed a similar method of classification of the head items. The CO items were associated with organs receiving and sending messages. The remaining head items were

items which are included in the head but are not related to communication. The CO and NC items are listed in the following table from an article by Stone and Ansbacher (1965).

Table 1

Items of the Communication-Organ Scale and Noncommunication Scale from the Goodenough-Harris Test

Communication items (N=13)	Noncommunication items (N=15)
4. Eyes present	1. Head present
5. Eye detail: brow or lash	2. Neck present
6. pupil	3. Neck, two dimensions
7. proportion	14. Chin & forehead shown
8. glance	15. Chin projection shown
9. Nose present	16. Line of jaw indicated
10. Nose, two dimensions	18. Hair: any indication
11. Mouth present	19. not transparent
12. Lips, two dimensions	20. some cut or styling
13. Nose & Lips, two dimen.	21. directed lines
17. Bridge of nose	48. Proportion: head 1
22. Ears present	49. head 2
23. Ears, proportion	50. face
	68. Directed lines: head
	69. Facial features

California Test of Personality

The California Test of Personality (CTP), Form S-AA, was used as a measure of both social interest and personal adjustment. The two major scales of the CTP are entitled Social Adjustment and Personal Adjustment. The Social Adjustment scale appears to measure that which Adler has called social interest. The Social Adjustment scale includes subscales relating to school, family, community, and occupational relations, as well as social skills, social standards, and anti-social tendencies.

The second major scale consists of subscales such as self-reliance, sense of personal worth, and nervous symptoms. Factors related to anxiety level, emotional stability, and fantasy withdrawal are measured by the Personal Adjustment scale.

Procedure

Each S was tested either individually or in a small group consisting of no more than five persons. Immediately before testing began each S was given an unruled sheet of white paper measuring 8½ by 11 inches, a Number 2 pencil, a CTP test booklet, and a CTP answer sheet. The CTP answer sheet and drawing paper were numbered identically for each S to avoid the possibility of error in pairing the Ss' scores. Half of the Ss were given the GHT, followed by the CTP. For the other 20 Ss the administration procedure was reversed, with

the CTP preceding the GHT. The order of presentation of the tests was randomly chosen. In group testing, each S within a group was given identical presentation orders.

Modification of the GHT administration instructions was necessary in order to be appropriate for college students. The GHT instructions were as follows: "I am going to ask you to draw a picture of a man. Draw the best picture you can; take your time and work carefully. Be sure to draw a whole man, not just his head and shoulders." Standard instructions for administration of the CTP were used.

Instructions for both tests were read aloud to the Ss at the beginning of the testing period in the order that the tests were to be administered. The Ss were dismissed when both tests were completed. The Ss' names were not placed on the test forms in order to encourage honesty in responding. A list of the names of seven Ss who were given extra credit in an undergraduate psychology course was made to insure that proper credit was given, but the list was not associated with the Ss' test forms.

The CTP was hand-scored and the two scores from the major scales were recorded and placed with the GHT scores for each individual. The GHT was scored by two individuals and the scores were compared to determine the degree of scoring reliability. Neither scorer knew the results of the CTP or GHT scored by the other at the time of scoring, in order that scoring bias be minimized.

Results

A correlation was applied to the raw scores to indicate the relationship between the CTP and the GHT. Table 2 presents correlations between the GHT scores and the measures of social interest and personal adjustment.

Table 2

Correlations of Goodenough-Harris Scores with Social Interest and Personal Adjustment

Goodenough-Harris	Social Interest	Personal Adjustment
Communication	.373**	.088
Noncommunication	.333*	.274

*Significant beyond the .05 level.

**Significant beyond the .02 level.

All correlations derived were positive, but only the measure of social interest was significantly related to the measures taken from the GHT. The highest correlation was between social interest and the CO score, followed in significance by the relationship between social interest and the NC score. Personal adjustment as measured by the CTP did not appear to be related to either of the GHT measures. The two scorers were in agreement on 94% of the CO and NC items. No item-by-item analysis of agreement was attempted.

The mean number of credited points for each of the four measures taken and the standard deviation of each were derived. The standard deviations and means are shown in Table 3.

Table 3

Standard Deviation and Mean Number of Credited Points on GHT and CTP Measures

Statistics	CO	NC	Social Interest	Personal Adjustment
$\bar{X}$	9.80	11.33	70.67	69.30
σ	2.25	2.67	12.05	9.55

The mean number of correct responses on the measure of social interest and personal adjustment were almost identical. The maximum number of points for each scale on the CTP was 90. The standard deviations of the two scales of the CTP were slightly different. The social interest deviation was higher. The standard deviations of the GHT scales were also very similar. The NC score had slightly more variance. Since it was possible to receive 2 points more credit on the NC scale than the CO scale, the higher mean number of points which was received on the NC scale was expected. The maximum number of points which was possible on the CO scale was 13 points. There was a maximum of 15 points possible on the NC scale.

Discussion

The present study was concerned with the relationship between the performance in drawing the head of a human figure and two personality measures from the CTP. Previous studies by Stone and Ansbacher (1965) and Strumpfer and Huysamen (1968) found that the CO score was related to measures of social interest in a group of elementary school children. Since the GHT scoring scales were designed for children from the ages of 5 years to 15 years, there was some question as to the usefulness of the scales with a group of college age students.

Harris (1965) found that the items of the GHT scale typically appeared more and more frequently as the age of the Ss increased. At approximately the age of 15 years a S's drawing would cease to increase in the number of scale items present. There appeared to be no widespread agreement on the factors that are involved in determining the presence or absence of the various scale items. Piagen (1950) stated that the earliest drawings by children involved primarily sensory-motor operations. Drawings by adolescents and adults were felt by Piaget to involve "formal operations" needing mental transformation of data about the real world using logic and concept formation. Piaget felt that the portion of a human figure that took on the most significance would be drawn most often. Stone and Ansbacher (1965) also felt

that a person draws that which is most important to him. A person with a high degree of social interest would place the most importance on the CO organs, with which social interactions are made possible.

A hypothesis of the present study was that the organs of the head that were not involved with communication would not be as important to a person with high social interest as the CO organs. The hypothesis formulated by Machover (1949) that the entire head was the social feature of the drawing seemed to imply that the NC items would have some significance in indicating social interest. The present hypothesis predicted that the NC items would be less indicative of social interest.

The hypothesis that the CO score is related to a social interest measure received support with the finding that the CO score and the social interest measure form the CTP were positively correlated with a level of confidence greater than the .02 level. The correlation was consistent with the results of a similar study of elementary-school children by Strumpfer and Huysamen (1968). Stone and Ansbacher (1965) also found a similar relationship in elementary-school children. The relationship between the CO score and social interest in a group of college students is quite similar to this relationship in elementary-school children.

The second hypothesis, that the CO score was significantly related to a measure of personal adjustment, did not

receive support from the present study. Adler (1937) stated that a close relationship existed between social interest and personal adjustment. Adler felt that social interest was a valid measure of personal adjustment. The failure of the present study to show a significant relationship between CO scores and personal adjustment measures from the CTP can be explained by rejecting Adler's view of the role of social interest. Another explanation of the failure could be that one or both of the CTP measures did not measure that which Adler had described as social interest and personal adjustment.

The hypothesis that the CO items were superior to the NC items in measuring social interest and personal adjustment received partial support; however, the results were complex. Neither the CO items nor the NC items were significantly correlated with the measure of personal adjustment; however, the NC score was more highly correlated with personal adjustment than the CO score with personal adjustment. The CO score was superior to the NC scores in the correlation with social interest. The study therefore gave partial support to the third hypothesis; however, more research should be conducted in order to clarify the relationshep between the CO and NC items.

The scoring reliability of the CO and NC items in the figure drawings was quite high. The agreement of two examiners on 94% of the scored items indicated that at least the

head of a human figure drawing can be scored with a high degree of agreement. This factor of reliability was in concordance with the findings of McCarthy (1944), Smith (1937), and McCurdy (1947), who found scorer agreement to be more than 90% of the scale items of the DAM scale.

A possible factor involved in the low correlations between social interest and the GHT scores as well as the very low nonsignificant correlations between the GHT scores and personal adjustment may lie in the limited number of items in the GHT scales. The mean number of items chosen on the CO scale was just three and two tenths points below the maximum number possible. The NC scale similarly had a high percentage of possible items which were scored. The standard deviation was less than three points on both GHT scales. A larger number of possible items and more variance in the number of items could increase the accuracy of the scale.

The question of whether or not the CO and NC scores can be of pratical value to the clinician was examined. The GHT measures that were taken did not have a significant relationship to a widely used measure of personal adjustment. This finding suggested that the CO and NC scores are of no pratical value to the clinician measuring personal adjustment.

The CO and NC scores were significantly related to the social interest measure. The CO items had slightly more significance than the NC items. The low correlations indicated that caution must be used in making assumptions about

the degree of social interest in a particular personality.

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