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SOURCES OF VARIABILITY IN PERFORMANCE
ON THE GOODENOUGH
DRAW - A - MAN
TEST

by

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Nahid H. Usayran

ABSTRACT

Human figure drawings have been used as a measure of intelligence and personality without any consideration of cultural factors as possible influences on children's drawings of a man.

Recent studies have cast doubt on Goodenough's claim that her "Draw - a - man" test contain norms that have universal application. The cultural factor was found capable of decreasing or increasing the IQ on the "Draw - a - man" test.

In relation to personality, Machover has presented hypotheses for the various kinds of treatment of each body part. She considered the variability found between individuals in their treatment of various body parts to be due to differences in their temperament and personality. Empirical evidence in support of Machover's hypotheses is either conflicting or does not support her claims.

This study originated out of the fact that Machover neglected the cultural influence as a possible factor producing different kinds of drawings in different communities.

The purpose of this thesis was to test the hypothesis that in schools, classrooms and communities, there are certain local styles that affect the human figure drawing of each particular group.

The data consists of 459 drawing (305 drawings from boys and 154 drawing from girls) collected from twenty-one classrooms in eight different Moslem communities in Lebanon. Where possible Goodenough's "Draw - a - man" test was administered to two grade levels - the fifth primary grade and the 1st secondary in the boys' school and in the girls' school. In places where there were only coeducational schools, the test was given to two classes only. In villages where there ^{were}/no secondary classes, the test was given to the 4th and 5th primary grades.

Drawings were collected from schools in Moslem communities so as to hold the religious factor constant, due to the possibility that if schools with different religions were tested this might affect the drawings. The schools tested were selected from different parts of Lebanon in the expectation that differences would be greatest among villages having little communication with each other.

The procedure used in analyzing the drawings was to select the characteristics that seemed to distinguish some of the groups from others and find the frequencies with which these characteristics were exhibited. To test whether the differences found between classes in relation to the various characteristics listed was a chance occurrence, the Chi-square technique was the statistic used. The results indicate that differences in all the categories except one were significant at the .05 level of confidence and above.

Further analysis of the data showed that differences in most of the categories were still significant at the same level of confidence even when the most deviant classes were excluded. These findings clearly show that there exist significant non-chance differences between the various classes with regard to the categories tested.

Since the main interest of the study was centered on the relation of human figure drawings to personality, some of Machover's hypotheses regarding the meaning of the different kinds of treatment of various body parts were examined in relation to the findings of this study. Most of our findings do not confirm her various hypotheses about the meaning of the particular kinds of treatment of each body part. This confirms the idea that there are local styles of drawing that are characteristic of a certain class, school or community. The variability found between individuals in their drawings of the human figure can be attributed only slightly to personality differences, but are the result chiefly of differences in group norms - that is there are certain group norms or traditional ways of drawing that are responsible for much of the observed variability. The various claims and hypotheses of Machover seem thus of limited validity.

It follows that human figure drawings of individual cases in clinics as a measure of personality without any reference to group norms is an unjustified measure.

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I. INTRODUCTION

A. Statement of the Problem

Children's drawings possess great possibilities and potentialities for the study of child development. There are many psychological factors involved in the spontaneous drawing of young children, some of which are related to intellectual development and personality dynamics.

Most of the studies made on the Draw-a-Man test, especially those of Goodenough and Machover neglected the cultural factor which affects to an extent the performance of children on this test.

Goodenough considered that her Draw-a-Man test for children to contain norms which have universal application. Recently, some doubt was thrown on this idea by Goodenough herself, and by Dennis and others who found that cultural factors have an effect on the Goodenough IQ.

With relation to personality, projective theorists, especially Machover, suggest interpretations for the various aspects of the human figure drawing.

Machover's interpretation neglects the cultural influences which cause various aspects of the human figure to be drawn differently in different communities.

The present study is to a certain extent an investigation of the influence of environment on performance on the

Draw-a-Man test. The study originated from the hypothesis that in communities, schools and classrooms there are certain local styles which affect the human figure drawing of each particular group.

The purpose of the present study is to test this hypothesis.

CHAPTER II

BACKGROUND

"The scientific interest in children's drawings reached its height between 1900-1915."¹ Many studies were made of various aspects of children's drawing - its development, its relation to primitive art, the psychological factors involved, the methods used etc.

Sketching the development of graphic expression in childhood and adolescence, we find that the most rapid improvement occurs during the early years with negative acceleration becoming clearly apparent after the age of five. Various developmental aspects of children's drawings were extensively studied by many investigators. Gesel and Ames studied the development of directionality in drawing. Barnhart studied the manner in which space was depicted by children of different ages. He also examined the hypothesis that in drawing, children proceed from the whole to the parts² and did not confirm it.

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1. Florence Goodenough, Measurement of Intelligence by Drawings, (New York, World Book Company, 1926), p. 2.
 2. Florence L. Goodenough and Dale B. Harris "Studies in the Psychology of Children's Drawings." II, 1928 - 1949" Psy. Bull. 47, (1950), pp.372-373.

See Seeman, Schilder and Bender studied the scibbling stage and stressed the importance of the circular movement known as the "whorl". Seeman found that this circular movement "whorl" - is equally characteristic of the drawings of all young children regardless of race or culture. Out of this circular movement the "stick" man gradually evolves in which the circle still predominates, but to which is added various appendages in accordance with cultural influences."¹

Many methods were used for the study of children's drawing, but we will be concerned with one - the Draw - a - man technique. The Draw - a - man test was designed by Goodenough in 1926 for use in the kindergarten and primary grades.²

This test was adopted and extended for use with older children and for many kinds of studies and comparisons such as the possibility of using the Draw - a - man test as an indicator of maladjustment and for comparing the performance of delinquent and non-delinquent subjects etc.

We shall limit ourselves in this brief review of previous studies to the relation of drawing the human figure to three important factors.

- A. Drawing as a measure of intelligence
- B. Drawing as a measure of personality
- C. Drawing as related to Culture.

1. Ibid., p. 373
2. Ibid., p. 384.

A. Drawing as a Measure of Intelligence

As mentioned before, Florence Goodenough designed the Draw-a-Man test for use in the kindergarten and primary grades.

The test was based upon the findings of earlier investigators "that the drawing of young children have an intellectual rather than an aesthetic origin. These drawings are determined more by the stage of concept development of the child than by his visual imagery or manual skill."¹

Goodenough bases the value of her test on the close relationship found in young children between concept development and general intelligence. Considering the reports of many investigators, Goodenough finds close agreement in the order of development in drawing among children of different social antecedents which is shown in the method of indicating the separate items and the order in which these items tend to appear.²

Since the human figure is universally familiar, this conclusion applies well to this kind of drawing and so was used by Goodenough as the basis of her Draw-a-Man test. Based on the human figure drawing, a scale was constructed to measure the intellectual factors in development. The scale consists of 51 points (or units of measurement) from which a

1. Ralph F. Berdie, "Measurement of Adult Intelligence by Drawings" J. of Clin. Psy. V.I., (1945) p. 288.

2. Goodenough, op.cit., p. 12

score is obtained. An IQ is obtained by substituting mental age equivalents for scoring points and then dividing the mental age by chronological age.¹

Goodenough takes into consideration the probable influence of many factors on the score such as the influence of artistic talent, the influence of special training, and sex differences, but neglects the influence of the cultural factor which later was found to contribute to the decrease and increase in IQ on the Draw-a-Man test.

With regard to the first factor, that of artistic ability. Goodenough found that it had no influence on the score obtained by children at the ages 4 to 10.² Recent studies dealing with the relation of artistic aptitude and general intelligence show that the correlation between artistic ability and general intelligence is positive but low.³

Coming to the second factor which is the influence of special training on the score, Goodenough found that direct specific training in drawing the human figure affect the test results to some extent. But no evidence was found that any art training that does not include specific instruction on the human figure drawing has any appreciable effect on the

1. Ibid. p. 82.

2. Ibid. p. 53.

3. Goodenough and Harris Op. Cit. pp. 402 - 403.

score.¹ Mott made a study which confirms Goodenough's results with relation to this factor. He investigated the effect upon drawing scores of previous movements of specific parts of the body. His results showed that when the drawings were made immediately after the exercises of the special parts, these parts were more likely to be drawn and with more care for details.²

Mc Hugh found significant IQ gains when the Draw-a-Man test was given after an interval of time and came to the conclusion that the drawing of a man is not free from the influence of experience.³

In relation to the third factor that of sex differences Goodenough's data show the ranking of girls to be higher than that of the boys at all ages except twelve and that the variability of boys to be slightly greater on the whole than that of girls. The marked sex difference between boys and girls was found to be of a qualitative rather than of a quantitative nature which Goodenough explained to be possibly due to the difference in interests and abilities of boys and girls.⁴

Havighurst and others in a study made on Indian children of six different tribes, found that Indian children obtained

1. Goodenough Op. Cit. pp. 54 - 55.

2. Goodenough and Harris. Op. Cit. p. 386

3. Ibid. p. 387.

4. Goodenough Op. Cit. pp. 56 and 60.

higher scores than white children and that the boys were superior to the girls, which is in contradiction to Goodenough's results. This difference was explained by modifying Goodenough's argument that there is a close relationship between concept development as shown in drawing and general intelligence, and suggesting instead that concept development is one aspect of general intelligence that may or may not be closely related to the other aspects. Since the Draw - a-Man test measures concept development, it becomes a measure of this one aspect and is hence useful in measuring the ability to form concepts based upon observation. The Indian children, especially the boys, are stimulated and given opportunity to deal with the world of nature and to form concepts of natural objects including the human figure and hence produce higher scores on the "Draw -
1
a - man" test. This study shows that environment is an important factor affecting the performance of children on the "Draw - a - Man" test, which is neglected by Goodenough.

Recently Goodenough abandoned her earlier position that since the human figure is universally familiar and her norms are applicable to all populations. Recent studies showed evidence that cultural differences affect children's drawings to a certain extent which lead Goodenough to the opinion that there is no culture - free test and to abandon
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her previous position.

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1. Robert J. Havighurst, et.al "Environment and the Dra-a-man test: The Performance of Indian Children" J.of Abno. and Soc. Psy. V. 41, (1956) pp. 50-63.
 2. Goodenough and Harris, op.cit., p. 399

Dennis and others in a recent study also cast doubt on Goodenough's earlier position which neglected the cultural influence on the score. Drawings of a man were obtained from various schools in Lebanon and Egypt and the results show a decrease in IQ with increasing age. This decrease was given a cultural explanation which is felt to have produced the difference in IQ between groups.¹

The recent outlook with regard to scores on the Draw - a - man test take into consideration the fact that cultural factors affect to some extent the child's IQ on the Goodenough scale.

B. Drawing as a Measure of Personality

Interest at the present time is great in the possibilities which graphic expression offers for the understanding of personality.

Projective theorists and especially Machover, attempt to analyze personality from interpretations of many aspects of human figure drawings.

The origin of Machover's method arose in the course of administering Goodenough's Draw - a - man test for intelligence testing. While giving the test, it was observed that individual drawings often yields clinical material that is not related to the intellectual level of the subject.

1. Wayne Dennis "Performance of Near Eastern Children on the Draw-a Near Test" Child Development V. 28, (1957) pp. 427-430.

Different and individualized drawings were produced by children who secured the same mental age rating. Out of this observation emerged the use of the graphic communications of children, and especially drawings of the human figure, as a clinical tool for personality analysis.¹

Machover asserts that various aspects of human figure drawings are related to various personality dynamics. Her basic hypothesis is that in drawing a person, the self is projected in the drawing. This projection provides a natural vehicle for the expression of the individual's body needs, desires and conflicts.²

Machover considers the projection, or the "psychic Datum" as she calls it, which contributes to the structure of the "body Image" in the human figure drawing to relate to three channels. The first source consist of the "common social meanings that physical attributes tend to acquire in the course of social expression and intercourse."³ This means that certain body types and physical attributes are associated with certain temperaments.

The second source of projection arises from the individual's own special experience. Certain body expressions became charged with emotional valences that are specific to

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1. Karen Machover, Personality Projection in the Drawing of the Human Figure (Springfield Illinois, U.S.A. Charles C. Thomas, 1949) pp. 20-21.
 2. Ibid., p. 5
 3. Ibid., p. 7

the individual, some of which may become the axes of his emotional life. One of the examples given by Machover relating to this source of projection, is the attention given to the neck by the individual who is disturbed about the interrelation of his body impulses and mental control.¹

The third source consist in the symbol values that are projected in drawings such as the cigarette, the pipe, hat, buttons and hair etc.²

So in drawing the human figure, the individual draws from his experiential background a unique pattern of movement and idea. The significance of this kind of drawing to personality lies in the fact that the individual can select from the wide experience and imagery that are potentially available to him.³

The technique of administering Machover's Draw - a - person - test is to instruct the subject to "draw - a - person" and when one drawing is completed, note is made on what sex was drawn. Then the subject is instructed to "draw the other sex". Associations are considered to be valuable as a method of indirect interview.⁴

Machover developed the concepts underlying the technique of drawing analysis in the course of studying

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1. Ibid., p. 8.
 2. Ibid., p. 9.
 3. Ibid., p. 9.
 4. Ibid., pp. 28-29.

thousands of drawings in clinical contexts. These concepts were based on the established projective methods of personality analysis and psychanalytic theory. She feels that although some of her assumptions lack experimental verification, yet they were proved to be clinically valid.¹ Her basic assumption, which she feels is verified repeatedly in clinical experience, is that the human figure drawn by an individual who is directed to "draw - a person" relates intimately to that individual's impulses, conflicts, and compensations. The figure drawn is considered to be, in a way, an introduction to the individual who is drawing. She hypothesizes that "the figure drawn is the person and the paper correspond to the environment."²

Machover suggests that particular kinds of treatment of particular parts of the body, tend to have a particular significance. Various hypotheses are given which deal with the meaning of a particular kind of treatment of each body part.

Some of Machover's hypotheses regarding the treatment of certain body parts are:

Mouth - With regard to the mouth, Machover gives different interpretations for the different ways of drawing the mouth. A single line for a mouth is considered to be an

1. Ibid., p. 34

2. Ibid., p. 35

indication that the individual is shutting the mouth against something (drawn by those who have had active homosexual experience). A mouth defined by a heavy line slash is generally an indication of aggression and is drawn by over-critical, verbally aggressive and sometimes by sadistic subjects etc.¹

Lips - One of Machover's hypotheses with regard to the treatment of the lips, is that, girls drawing elaborate cupid - bow lips in combination with other cosmetized features are generally sexually precocious. Another hypothesis is that objects drawn in the mouth such as a straw, a toothpick, cigarette or pipe etc. generally indicate oral erotic trends.²

The Eyes - The eyes are considered by Machover as the window through which the self is revealed and as the basic organ for contact with the outside world. This being the case it follows that the individual who is most concerned with keeping contact with the outside world (the suspicious, paranoid individual) is most apt to emphasize the eye. Paranoid individuals may draw large, dark or menacing eye that create an image of hostility and suspicion. People concerned with social functions (women more than men) are more apt to detail the eye and draw elaborate eyelashes.

1. Ibid., p. 44

2. Ibid., p. 46.

People with a tendency to shut out the world, tend, according to Machover, to draw figures with closed eyes, or would draw a circle for the eye and omit the pupil.¹

Eyebrow - Machover suggest different interpretation for the various ways of drawing the eyebrow. The trim eyebrow is interpreted as reflecting refinement and grooming; while the bushy eyebrow is interpreted as reflecting the rough, primitive individual.²

Fingers - Machover considers the **fingers** to be very important because they are the real contact points between the individual and the environment.

Petal or graps - like figures that are short and rounded are normal for young children but when drawn by adults they indicate poor manual skill and infantility. Shaded or reinforced **fingers** are considered in general to be indicative of guilt.

The clutched fist, held away from the body is an indication of aggression and is seen in the drawings of adolescent delinquents. Abnormally long **fingers** are occasionally found in regressed drawings and are connected with shallow, simple type of personality.³

Hands and Arms - 'Are contact features charged with psychological meanings that refer to the ego development and social adaptation. The direction of the arm placement

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1. Ibid., pp. 47-49
 2. Ibid., p. 50.
 3. Ibid., pp. 63-65.

is important, according to Machover, in determining the contact of the individual with the environment.

Omission of the hand should not be overlooked. Schizophrenics or extremely depressed subjects may omit the arms as an indication of withdrawal from the environment. Asthmatic children who seek excessive attention from their mothers, may draw abnormally long arms that lack¹ strength.

The Trunk - Machover associates round figures with passive individuals with feminine characteristics, whereas square trunks are associated with masculine characteristics. The drawing of the trunk is connected with maturity since it is occasionally omitted by children and seldom omitted by² adults.

Perspective - Machover states that boys and men draw figures in profile more than girls and women. Profile drawing is associated with intellectual maturity and are very rare in young children's drawings.

Machover considers the most pathological handling of perspective in drawings to be the confusion of profile and full face, with the forehead and nose in profile and the eyes and mouth in front view. This kind of treatment occur in low grade defectives, organic cases and most

1. Ibid., pp. 60-62

2. Ibid., p. 69.

frequently in schizophrenic characters.¹

Swensen examined Machover's hypotheses with regard to the Draw-a-man test in the light of the empirical evidence that had accumulated from 1949² to 1956, in the various studies reported in the literature.

The studies cited suggest that there is possible support for Machover's hypotheses regarding one body part and that is the neck. With regard to the other various hypotheses regarding the treatment of the other body parts, either conflicting evidence is reported or no support is given. Since empirical evidence does not support Machover's hypotheses, her claims and interpretations seem to be doubtful.³ Machover felt that the variability present in the human figure drawing is due to individual differences in temperament and personality and overlooked the fact that this variability could be due to other factors such as the cultural factor which might produce local modes of representing the various parts of the human figure.⁴

In a recent study, Dennis examined Machover's hypotheses regarding the position of the drawing upon the page. To

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1. Ibid., pp. 93-94.
 2. Clifford H. Swensen, "Empirical Evaluations of Human Figure Drawings" Psy. Bull. v. 54 (1957) p. 431.
 3. Ibid., p. 460
 4. Wayne Dennis "Handwriting Conventions as Determinants of Human Figure Drawings." J. of Consult. Psy. v. 22, (1958) pp. 293-295.

Machover, if the location of the drawing was toward the right side of the page, it indicates that the subject is environment - oriented; whereas if the location was to the left side, it indicates a self-oriented person. Placing the figure high on the page suggest optimism, while placing the figure low on the page suggest pessimism. The idea that there might^{be} cultural determinants of drawing position that have little relation to personality, gave rise to this study. Culture determines the position on a page at which a person begins to write, and since there may be habit - transfer between writing and drawing, the position of the drawing may be affected by the handwriting habits which are culturally determined.¹

The study examined the drawing location of two kinds of writers - those who begin to write at the top left of the page (Americans and Armenians) and those who begin to write at the top right of the page (Lebanese and Egyptians). The results indicate that handwriting customs have some influence in producing differences between certain group, but they do not explain the within - group variability which might be due to other factors than difference in handwriting. Although the hypotheses of this study need still to be firmly supported, yet it casts doubt on the idea of interpreting cross cultural differences in drawing locations as indicative of differences in personality.²

1. Ibid.

2. Ibid.

C. Drawing as Related to Culture

The recent outlook in relation to graphic expressions or art products of children is that cultural factors affect children's drawings to a certain extent, so that there is no culture free test.

Many studies have been made on the drawings of children in different culture groups to detect differences and similarities between them.

Rouma collected one thousand, nine hundred, eleven drawings from very primitive Indian tribes living in the high plateaus of Bolivia. The drawings of adults in these groups were found to be hardly distinguishable from drawings made by European children at the age of twelve.¹

Du Bois collected over one thousand free drawings from thirty-three Alorese boy and twenty-two Alorese girl between six and sixteen years of age. When the children were asked specifically to draw the human figure, they produced results well below the Goodenough age norm. To Du Bois, such a difference "should be considered a difference in 'aptitude' adaptation and the development of 'skills' rather than of comparative intelligence."²

Appia compared human figure drawings of Negro children in French East Africa with drawings of European children. The same developmental growth was shown in the

1. Goodenough and Harris, op.cit., p.394

2. Ibid., p. 395

drawings of both groups. Drawings of Negro children were quite comparable with drawings of European children of similar age and showed more creative imagination.¹

The Draw - a - man test was used in a number of comparative studies of national and racial groups. Manuel and Hughes gave the Draw - a - man test to two comparable groups of Mexican and non-Mexican children in Texas. There was a mean difference in IQ of approximately ten points in favor of non-Mexican children.²

Menzel gave the Draw - a - man test to nearly two thousand school children in East India. Their scores and especially those of girls were found to be far below the scores of other national or racial groups. The low score earned by the girls was assumed to be due to the seclusion of girls as they approach puberty. This study suggests the influence of experience on the score.³

The Goodenough scale was also used with groups of American Indians. Mac Gregor in a study of two Sioux Indian communities found the score of children with more "white influence" to average 102 IQ and the score of the other group to average 113.6. This finding was interpreted as a possible indication that interbreeding between Indians as white has been carried chiefly by the less intelligent

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1. Ibid.
 2. Ibid., p. 396
 3. Ibid., p. 397

members of one or both races.¹

Dennis studied Hopi Indian children where graphic art holds an important place, and is practiced chiefly by males. The results indicate marked sex differences in performance on the Draw - a - man test. The mean IQ earned by the boys was 117 and that earned by the girls was 100. This study contradict Goodenough's finding that the ranking of girls was higher thanthat of boys at all ages except twelve. It shows the obvious influence of experience on the obtained score on the Goodenough test.²

The study of Havighurst and his associates,³ cited previously in this thesis, on six differant Indian tribes, give similar results of sex difference in all the tribes where art work is practiced chiefly by males.

Taylor studied the drawings of young college students in Central India who come from various castes and religious groups. The Jains and the Hindus were found to show less unity than other groups which suggest that cultural influences seem to persist even after several years of common school training similar to all sects. The numbers being small in many cases, make the comparison between sub-groups not very reliable.⁴

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1. Ibid.
 2. Ibid.
 3. Ibid. p. 398.
 4. Ibid. p. 399

Dennis in a recent study, cited before, based upon seven hundred and eight drawing of a man collected from Lebanon and Egypt, report evidence relative to the cultural influence on the Goodenough score. The Near Eastern children were found to have mean Goodenough quotients approximating 100 at age 5, a slightly lower mean at age 6, and a mean about 80 at age 10. This study indicated cultural handicaps relating to performance on the Draw-a-Man test in the Near East which affect children most strongly after age six. The handicaps in experience which created downward trend in Goodenough scores were related to deficiencies in the child's experience relative to representation of the human figure such as dolls, woodcarving, paintings etc.¹ This finding of Dennis is in agreement with Havighurst's findings which reflect the influence of experience in producing higher scores on the Goodenough Draw-a-Man test.

Paget made an extensive study of the drawings of young children of many different races and cultures. More than sixty thousand drawings were collected from various parts of Africa, India, China and elsewhere. He considers children's drawings to be unlike nature in two ways.

1. Between the age of 5 to 9, children draw what interest them and do not try to depict nature. This is why

1. Dennis. "Performance of Near Eastern Children on the Draw-a-Man test." op. cit. p. 429.

children's drawings often show mixtures of points of view, disproportions etc.

2. Children are forced to invent and adopt ways of representing complex objects which are beyond their technical powers. Having invented or adopted a particular symbol for a nose, eye, foot etc. which is often very much unlike nature, the child may use this symbol for a short¹ or a long period of time.

Statistical studies of the drawings of men and women by American and European children show that among the earlier age-group there is decided preference for the "full face" view. Men were drawn "full face" but animals were drawn in profile. Among non-European children, animals are almost always drawn side view, but people are not so generally drawn "full face". Some specialized features such as "mixed profiles" (full face features combined with side view contour) were found to be rare among Maori drawings while it was common² among West African negroes. Highly distinctive local conventions were found among groups of children that are widely separated from one another. Paget considered the geographical distribution of the symbols employed for a particular feature - the nose - since it showed the widest variety of symbolization from group to group. One hundred

1. G. W. Paget "Some Drawings of Men and Women Made by Children of Certain Non-European Races" Journal of the Royal Anthropological Institute of Great Britain and Ireland, London, v. 62 (1932) p. 128.

2. Ibid., p. 132.

fourty seven symbols for the nose in full view were employed by the children. Since children know nothing about light and shade, they are limited in getting their effect from lines or dots only. Not all the groups were found to use the same symbols, but there was a great degree of similarity in symbols used by any particular group. Certain symbols for the nose such as symbols indicating continuity of nose and eyebrows were found to characterize the oriental collection and also dominate greatly all the collections received from West Africa. With regard to another symbol-"the wings of the nostrils" it was found to be rarely emphasized by Chinese children, whereas it was frequently found in Burmese drawings. These racial preferences for one symbol rather than another are explained by Paget to be partly due to the fact that they are conditioned by the actual shape of the nose of the racial type represented; the Arab nose is slender, the Chinese nose is broad and thick etc. Being limited to the use of lines and dots only, children are apt to choose the most "realistic" symbol. To Paget "there is not the least doubt, when the drawings of young children of different nationalities are compared, that many are astonishingly successful in seizing the racial types."¹

Paget considers the influence of adult tradition on on children's drawing to be slight. Particular symbols first

1. Ibid. p. 136.

employed by children are, as a rule, personal and spontaneous rather than imitative. This fact is supported by abundant evidence. The first evidence come from records of the drawing development of individual children which show that even when the child has seen for months dozens of drawings of a particular man or animal, yet when he draws the same subject himself, he constructs it on a different plan than the "model".¹

Another line of evidence comes from the fact that a child who has employed certain symbols for weeks, may suddenly for no apparent reason, adopt an entirely different set of symbols for the various parts. Further evidence come from the fact that wide range of symbols occur in a fairly large groups of children brought up in the same environment. This fact is the expected result; since children have no decided view on the way the object should be represented, and since the object could be represented in an equally large number of ways, it is only natural that a wide variety of symbols are exhibited. This fact, that most groups use a wide variety of symbol for representing objects, give significance to the cases where particular symbols are apparently absent or are extremely rare in certain areas and common in others.²

1. Ibid; p. 137.

2. Ibid. p. 138.

Paget conclude that "there is no doubt, that however they may have arisen, distinctive local modes of representation exist among untaught children, and that these modes are often peculiar and unconnected with local adult tradition.¹

This study by Paget casts doubt on the hypothesis of Machover with regard to the meaning of the human figure drawing. Machover considered the variability found in human figure drawings to be due to individual differences in temperament and personality. Paget's study indicates that there is a great deal of similarity in symbols used by a particular group, which show clearly the cultural influence on the mode of drawing.

1. Ibid.

CHAPTER III

METHODOLOGY

A. Testing Procedures

The drawing test explored was the Goodenough draw - a - man test. Goodenough's instructions were followed. The directions given were - " I want you to draw a man. Make the drawing the best that you can. Draw the man in any way you like. Put your sex and age on the paper."

The test was administered by the examiner who was present all the time to insure that proper testing conditions were maintained. The class teacher was also present during the testing. The test was administered to two classes of each school - the fifth primary grade and the first secondary. In case the school did not give secondary education (as was the case in some villages) the test was administered to the fourth and fifth primary grades.

In each town and village, the test was administered in the boy's school and in the girl's school. In some villages, where there is only coeducational government schools, boys and girls were tested in the same classroom.

The drawings were obtained from schools in Moslem communities where the majority of students are Moslems. Religion was held constant in this way because of the possibility that if schools with different religions were tested

this might affect the drawings. The towns and villages were chosen from different parts of Lebanon so as to collect data from various places. In a way this sets some control on the traditional or local styles which direct the various groups. Children from different parts of Lebanon - North or South etc., where little communication occur between them are felt to exhibit certain local styles in their drawings that are characteristic of their particular group.

While reading this thesis, one should take into consideration the fact that although we tried to administer the test in a uniform way, there were many variables that could not be controlled. Most of the drawings were collected from government schools because these are usually the only schools in small village. There is usually a great number of students in a small classroom. The desks are very near to each other and the student could easily see each other's drawings. The teacher was usually present during the testing and although he or she was instructed not to suggest or comment on the drawing, some of them could not help commenting and giving few suggestions.

In all cases the students were asked to write their age on the drawing paper. Students especially in villages do not know their real age and so they write what they think is their real age. Although some of them wrote their date of birth as registered on their identity cards, yet, even this is not always an accurate record of their age.

These few limitations on the study do not render it less valuable with regard to its aims and purposes.

B. Subjects

The data to be reported here was based on 459 drawings (305 drawings from boys and 154 drawings from girls). The drawings were obtained from twelve different schools in eight different Moslem communities in Lebanon. The drawings collected come from the following schools.

Sidon Schools

Sidon is the biggest town in the south of Lebanon. The schools tested are private schools directed by the Mak-kassid Islamic Society. The students are chiefly Moslems and they come from upper and middle class homes.

The test was administered to two classes - the 5th primary and the first secondary of the boy's school and the same classes of the girl's school.

Nabatiyeh Schools

This is a big village in the south of Lebanon. It has a high percentage of educated people. The drawings were gathered from two government schools - one for the boys and the other for girls. The majority of the students are Moslems and come from middle and lower class homes. The 5th primary grade and the first secondary, were tested from each school.

Tyre Schools

Tyre is the second big town, after Sidon, in the South of Lebanon. The town is inhabited by people of various classes - upper, middle and lower.

Data were gathered from two government schools - one for boys and one for girls. In the girl's school the students represented come from the lower class. The test was administered to the fourth and fifth primary grades, because there was no secondary classes. The boys' school is better than the girls' school and the students come from the middle and lower class. The test was given to the fifth primary and first secondary.

Jubeigh School

Jubeigh is a fairly big village in the south of Lebanon, inhabited by people of the upper lower class.

The school is a government coeducational school and the only one in the village. Jubeigh is wholly a Moslem village. Two classes were tested - the fifth primary grades and the first secondary.

Bar Elyas School

Bar Elyas is a small village in the Bekaa, inhabited by a Moslem lower class community. The village is poor and the condition of the school is also poor. The school is a government coeducational school that has only primary classes. The test was administered to the fourth and fifth primary grades.

Bidnayil Schools

Bidnayil is a big village very near to Baalbeck. It is a wholly Moslem village with the majority of the population from one family. The schools are government schools and the only ones in the village. The girls' school is in poor conditions and has no secondary classes. The boys' school is in better conditions and has secondary classes. The students come from lower-middle class and lower class homes. Drawings were gathered from the fifth primary grade of the girls' school, and the fifth primary grade and first secondary grade of the boys' school.

Halba School

Halba is a village in the north of Lebanon. The school is a government coeducational school in a chiefly Moslem village, but having many Christian students. The students come from upper-lower class homes. Drawings were collected from the first secondary only.

Beirut School





Beirut, being the capital of Lebanon, is inhabited by people of various classes, religions and nationalities.

The school tested is a private coeducational school directed by the Makkassid Islamic Society of Beirut. The students are mostly from upper and upper-middle class homes. Drawings were collected from the first secondary grade.

C. Method of Analyzing Results

The drawings were carefully examined in order to discover characteristics that seemed to distinguish some of the group from other groups.

The characteristics selected for study were the following.

1. Profile right - (Head in profile facing the right of the page and body in full view).
2. Profile left - (Head in profile facing the left of the page while body is in full view)
3. Round face.
4. Oval face.
5. Eyebrows attached to nose.
6. Eyebrows like a bow - (Eyebrows drawn look like the shape of a bow - )
7. Eyes with eyelashes shown.
8. Dot eyes - (Eyes are represented by dots only)
9. Elliptical eyes - (Eyes are drawn in the shape of an ellipse or like the shape of an almond )
10. Indental nose. 
11. Nose with nostrils shown (Nose drawn whether in full view face or in profile drawings shows the nostrils clearly).
12. Nose three - quarter view - (Nose drawn like this  on a full view face).
13. Cupid bow mouth.
14. Elliptical mouth - mouth drawn in the shape of an ellipse.

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7. Eyes with eyelashes shown.

8. Dot eyes - (Eyes are represented by dots only)

9. Elliptical eyes - (Eyes are drawn in the shape of an ellipse or like the shape of an almond )

10. Indental nose. 

11. Nose with nostrils shown (Nose drawn whether in full view face or in profile drawings shows the nostrils clearly).

12. Nose three - quarter view - (Nose drawn like this  on a full view face).

13. Cupid bow mouth.

14. Elliptical mouth - mouth drawn in the shape of an ellipse.

15. Lips shown separately - the mouth is drawn in such a way that each lip is clearly indicated in profile or in full view.

16. Ears shown

17. Mustache shown

18. Pointed chin - In both profile and full view faces the chin is emphasized by being drawn pointed.

19. Beard shown

20. Rectangular body - The trunk is drawn like a rectangle or in a rectangular shape.

21. Round body - The trunk is drawn in a round or elliptical shape.

22. Triangular body - The body drawn by straight lines is wide at the shoulders and narrow at the waist.

23. Hands shown

24. One hand raised

25. Hands absent

26. Fingers shown

27. Upper part of body drawn only.

28. Holding something in hand.

a) stick

b) gun

c) flag

d) cigarette

e) other things - such as a basket, flowers etc.

29. Clothing

- a) tarbush
- b) necktie
- c) Shoes
- d) Other things (shirt, trouser, hats etc.)

The frequencies with which these characteristics were exhibited by each group were counted and recorded. The percentage of drawings of each group exhibiting each characteristic was then found. In finding the percentage of the various characteristics the sexes were divided. The modal age of the subjects in each class and each sex was computed.

The final stage in analyzing the results was to find whether the differences between the various groups with regard to each characteristic were significant. The best technique to test this hypothesis was found to be the chi-square technique. The chi-square is a statistic that measures the discrepancy between observed and expected frequencies to show what is the probability that the difference between theoretical and observed results is due to chance sampling fluctuations. The size of the chi-square value indicates the probability that the observed differences could arise from a sampling error, i.e., the probability that the results are due to chance. In computing the chi-square for each characteristic listed, the sexes in each

coeducational class were treated together as a single classroom group. There were twenty - one classes. The observed frequency in a group was the frequency of the characteristic in that class - that is the number of students in the class showing the characteristic on their drawing and the number of students not showing the same characteristic. The expected frequencies were computed on the assumption that the proportions of students exhibiting a characteristic in each group is the same as for the total of all groups.

TABLE I

FREQUENCY AND PERCENT OF OCCURRENCE

SAIDA SCHOOL

	Girls		Boys	
	5th	1st Sec.	5th	1st sec.
N. of cases	15	20	12	26
Modal Age	12	13	12	14
Profile right	4 (27%)	7 (35%)	2 (17%)	1 (4%)
Profile left	11 (73%)	9 (45%)	4 (33%)	7 (27%)
Round face	0	0	3 (25%)	5 (19%)
Oval face	0	1 (5%)	3 (25%)	13 (50%)
Eyebrows attached to nose	0	0	4 (33%)	7 (27%)
Eyebrows like a bow	10 (67%)	12 (60%)	5 (42%)	16 (62%)
Eye with no pupil	5 (33%)	4 (20%)	3 (25%)	1 (4%)
Eyes with eyelashes shown	3 (20%)	-	1 (8%)	2 (8%)
Dot eyes	1 (7%)	2 (10%)	3 (95%)	1 (4%)
Elliptical eyes	11 (73%)	12 (60%)	4 (33%)	16 (62%)
Indented Nose	0	1 (5%)	0	6 (23%)
Nose with nostrils shown	2 (13%)	0	4 (33%)	2 (8%)
Nose $\frac{3}{4}$ view	0	1 (5%)	0	6 (23%)
Cupid bow mouth	0	2 (10%)	1 (8%)	3 (12%)
Lips shown separately	3 (20%)	2 (10%)	0	6 (23%)
Elliptical mouth	-	2 (10%)	0	4 (15%)
Ears shown	7 (47%)	6 (30%)	4 (33%)	18 (68%)
Moustache shown	1 (7%)	3 (15%)	0	9 (35%)
Pointed Chin	3	1	3 (25%)	0
Beard shown	1 (7%)	0	0	7 (27%)
Rectangular shaped body	5 (33%)	7 (35%)	8 (66%)	10 (38%)

	Girls		Boys	
	5th	1st Sec.	5th	1st sec.
Round shaped body	3 (20%)	3 (15%)	1 (8%)	
Triangular shaped body	7 (47%)	3 (15%)	0	2 (8%)
Hands shown	15 (100%)	20 (100%)	12 (100%)	21 (81%)
Hands absent	0	6 (30%)	0	0
One hand raised	4 (27%)	0	0	0
Fingers shown	10 (67%)	13 (65%)	5 (42%)	13 (50%)
Upper part of body drawn only	0	0	0	0
Holding something in hand				
a) Stick	0	2 (10%)	0	2 (8%)
b) Gun	0	1 (5%)	2 (17%)	1 (4%)
c) Flag	6 (40%)	6 (30%)	1 (8%)	0
d) Cigarette		0	0	0
e) Otherthings	2 (13%)	7 (35%)	0	2 (8%)
Clothing				
a) Tarbush	0	1 (5%)	0	4 (15%)
b) Necktie	3 (20%)	2 (10%)	1 (8%)	14 (54%)
c) Shoes	9 (60%)	13 (65%)	5 (42%)	15 (58%)
d) Otherthings	13 (87%)	15 (75%)	5 (42%)	23 (88%)

FREQUENCY AND PERCENT OF OCCURRENCE

TYRE SCHOOLS

	Girls		Boys	
	5th	4th	5th	1st sec.
N. of cases	12	12	30	14
Modal age	14	12	14	14
Profile right	3 (25%)	1 (8%)	13 (43%)	2 (14%)
Profile left	9 (75%)	1 (8%)	10 (33%)	6 (43%)
Round face	0	7 (58%)	2 (7%)	3 (21%)
Oval face	0	1 (8%)	5 (17%)	3 (21%)
Eyebrows attached to nose	0	6 (50%)	2 (7%)	6 (43%)
Eyebrows like a bow	5 (42%)	3 (25%)	13 (43%)	5 (36%)
Eyes with no pupil	4 (33%)	8 (66%)	3 (10%)	2 (14%)
Eyes with eyelashes shown	1 (8%)	1 (8%)	4 (13%)	0
Dot eyes	0	1 (8%)	1 (3%)	0
Elliptical eyes	6 (50%)	4 (33%)	18 (60%)	0
Indented nose	0	1 (8%)	2 (7%)	0
Nose with nostrils shown	0	0	3 (10%)	0
Nose $\frac{3}{4}$ new	0	0	1 (3%)	0
Cupid bow mouth	1 (8%)	2 (16%)	0	0
Lips shown separately	1 (8%)	0	10 (33%)	5 (36%)
Elliptical mouth	0	2 (16%)	3 (10%)	1 (7%)

	Girls		Boys	
	5th	4th	5th	1st sec.
Ears shown	0	3 (25%)	13 (43%)	9 (64%)
Moustache shown	1 (8%)	0	10 (33%)	2 (14%)
Pointed chin	1 (8%)	0	5 (17%)	6 (43%)
Beard shown	0	0	0	0
Rectangular shaped body	3 (25%)	4 (33%)	21 (70%)	6 (43%)
Round shaped body	1 (8%)	0	0	1 (7%)
Triangular shaped body	2 (16%)	4 (33%)	1 (3%)	0
Hands shown	12 (100%)	10 (84%)	29 (97%)	14 (100%)
Hands absent	0	1 (8%)	0	0
One hand raised up	2 (16%)	1 (8%)	3 (10%)	0
Fingers shown	10 (84%)	9 (75%)	29 (97%)	13 (93%)
Upper part of body drawn only	0	0		
Holding something in hand				
a) Stick	0	0	2 (7%)	0
b) Gun	0	0	0	1 (7%)
c) Flag	0	0	1 (3%)	0
d) Cigarette	0	0	0	0
e) Other things	0	3 (25%)	1 (3%)	0
Clothing				
a) Tarbush	0	0	2 (7%)	0
b) Necktie	0	0	12 (40%)	9 (64%)
c) Shoes	2 (16%)	0	22 (73%)	12 (85%)
d) Other things	8 (66%)	0	20 (66%)	11 (78%)

FREQUENCY AND PERCENT OF OCCURRENCE

BIDNAYIL SCHOOLS

	Girls		Boys	
	5th		5th	1st sec.
N. of cases	25		22	19
Modal age	11		12	13
Profile right	8 (32%)		0	2 (10%)
Profile left	8 (32%)		21 (95%)	10 (53%)
Round faces	2 (8%)		0	0
Oval face	6 (24%)		1 (5%)	6 (31%)
Eyebrows attached to nose	5 (20 %)		1 (5%)	3 (16%)
Eyebrows like a bow	9 (36%)		11 (50%)	11 (58%)
Eyes with no pupil	3 (12%)		4 (19%)	2 (10%)
Eyes with eyelashes shown	1 (4%)		4 (19%)	7 (37%)
Dot eyes	3 (12%)		0	0
Elliptical eyes	4 (16%)		18 (82%)	17 (89%)
Indented nose	1 (4%)		1 (5%)	3 (16%)
Nose with nostrils shown	2 (8%)		0	5 (26%)
Nose $\frac{3}{4}$ view	0		0	1 (5%)
Cupid bow mouth	1 (4%)			2 (10%)
Lips shown separately	1 (4%)		7 (33%)	4 (21%)
Elliptical mouth	8 (32%)		0	0
Ears shown	11 (44%)		16 (73%)	14 (74%)
Moustache shown	2 (8%)		0	3 (16%)

	Girls		Boys	
	5th		5th	1st sec.
Pointed chin	0		16 (73%)	8 (42%)
Beard shown	0		2 (9%)	0
Rectangular shaped body	10 (40%)		5 (23%)	10 (53%)
Round shaped body	1 (4%)		0	1
Triangular shaped body	0		1	0
Hands shown	19 (76%)		19 (86%)	14 (74%)
Hands absent	1 (4%)		2 (9%)	5 (26%)
One hand raised up	10 (40%)		5 (23%)	0
Fingers shown	17 (68%)		18 (82%)	13 (68%)
Upper part of body drawn only	0		0	0
Holding something in hand				
a) Stick	0		0	0
b) Gun	0		0	0
c) Flag	0		0	0
d) Cigarette	1 (4%)		0	0
e) Other things	0		0	0
Clothing				
a) Tarbush	0	0	0	0
b) Necktie	7 (28%)	0	2 (9%)	3 (16%)
c) Shoes	6 (24%)	0	13 (59%)	6 (31%)
d) Other things	13 (52%)	0	16 (73%)	8 (42%)

FREQUENCY AND PERCENT OF OCCURRENCE

BAR ELYAS SCHOOL

	Girls		Boys	
	5th	4th	5th	4th
N. of cases	4	3	21	12
Modal age	12	12	12	11
Profile right	2 (50%)	0	4 (19%)	4 (33%)
Profile left	2 (50%)	2 (66%)	16 (76%)	2 (17%)
Round face	0	0	1 (5%)	6 (50%)
Oval face	0	0	0	0
Eyebrows attached to nose	0	0	0	3 (25%)
Eyebrows like a bow	3 (75%)	2 (66%)	8 (38%)	6 (50%)
Eyes with no pupil	0	1 (33%)	9 (43%)	11 (91%)
Eyes with eyelashes shown	2 (50%)	0	3 (14%)	0
Dot eyes	0	1 (33%)	1 (5%)	2 (17%)
Elliptical eyes	3 (75%)	1 (33%)	11 (52%)	3 (25%)
Indented nose	0	0	0	0
Nose with nostrils shown	0	0	0	1 (8%)
Nose $\frac{3}{4}$ view	0	0	0	0
Cupid bow mouth	0	0	0	0
Lips shown separately	3 (75%)	0	2 (10%)	1 (8%)
Elliptical mouth	0	0		2 (17%)
Ears shown	1 (25%)	0	9 (43%)	3 (25%)
Moustache shown	0	0 _m	1 (5%)	1 (8%)

FREQUENCY AND PERCENT OF OCCURRENCE

BAR ELYAS SCHOOL

	Girls		Boys	
	5th	4th	5th	4th
N. of cases	4	3	21	12
Modal age	12	12	12	11
Profile right	2 (50%)	0	4 (19%)	4 (33%)
Profile left	2 (50%)	2 (66%)	16 (76%)	2 (17%)
Round face	0	0	1 (5%)	6 (50%)
Oval face	0	0	0	0
Eyebrows attached to nose	0	0	0	3 (25%)
Eyebrows like a bow	3 (75%)	2 (66%)	8 (38%)	6 (50%)
Eyes with no pupil	0	1 (33%)	9 (43%)	11 (91%)
Eyes with eyelashes shown	2 (50%)	0	3 (14%)	0
Dot eyes	0	1 (33%)	1 (5%)	2 (17%)
Elliptical eyes	3 (75%)	1 (33%)	11 (52%)	3 (25%)
Indented nose	0	0	0	0
Nose with nostrils shown	0	0	0	1 (8%)
Nose $\frac{3}{4}$ view	0	0	0	0
Cupid bow mouth	0	0	0	0
Lips shown separately	3 (75%)	0	2 (10%)	1 (8%)
Elliptical mouth	0	0		2 (17%)
Ears shown	1 (25%)	0	9 (43%)	3 (25%)
Moustache shown	0	0 ^m	1 (5%)	1 (8%)

	Girls		Boys	
	5th	4th	5th	4th
Pointed chin	1 (25%)	0	4 (19%)	0
Beard shown	0	0	0	0
Rectangular shaped body	2 (50%)	2 (66%)	17 (81%)	9 (75%)
Round shaped body	0	0	1 (5%)	0
Triangular shaped body	0	0	0	0
Hands shown	3 (75%)	2 (66%)	17 (81%)	8 (66%)
Hands absent	0	0	3 (14%)	2 (17%)
One hand raised up	0	0	2 (10%)	1 (8%)
Fingers shown	3 (75%)	1 (33%)	11	8 (66%)
Upper part of body drawn only	0	0		1 (8%)
z Holding something in hand				
a) Stick	0	0	0	0
b) Gun	0	0	0	0
c) Flag	0	0	0	0
d) Cigarette	0	0	2 (10%)	0
e) Other things	0	0	2 (10%)	0
Clothing				
a) Tarbush	0	0	0	1 (8%)
b) Necktie	2 (50%)	0	2 (10%)	2 (17%)
c) Shoes	3 (75%)	0	6 (29%)	2 (17%)
d) Other things	4 (100%)	1 (33%)	12 (57%)	6 (50%)

FREQUENCY AND PERCENT OF OCCURRENCE

JUBEIGH SCHOOLS

	Girls		Boys	
	5th	1st sec	5th	1st sec.
N. of cases	2	10	17	16
Modal age	13	14	13	13
Profile right	0	0	2 (12%)	4 (25%)
Profile left	0	2 (20%)	8 (47%)	8 (50%)
Round face	2 (100%)	6 (60%)	1 (6%)	1 (6%)
Oval face	0	2 (20%)	5 (29%)	3 (19%)
Eyebrows attached to nose	0	2 (20%)	2 (12%)	5 (31%)
Eyebrows like a bow	1 (50%)	6 (60%)	7 (41%)	6 (38%)
Eyes with no pupil	1 (50%)	4 (40%)	4 (24%)	5 (31%)
Eyes with eyelashes shown	0	2 (20%)	2 (12%)	1 (6%)
Dot eyes	0	0	2 (12%)	2 (12%)
Elliptical eyes	0	9 (90%)	6 (35%)	9 (56%)
Indented nose	0	7 (70%)	3 (18%)	4 (25%)
Nose with nostrils shown	0	0	0	2 (12%)
Nose $\frac{3}{4}$ View	0	0	0	0
Cupid bow mouth	1 (50%)	4 (40%)	0	1 (6%)
Lips shown separately	0	0	0	2 (12%)
Elliptical mouth	0	2 (20%)	4 (24%)	3 (19%)
Ears shown	0	8 (80%)	6 (35%)	10 (63%)
Moustache shown	0	0	0	3 (19%)

	Girls		Boys	
	5th	1st sec	5th	1st sec
Pointed chin	0	0	1 (6%)	6 (38%)
Beard shown	0	0	0	0
Rectangular shaped body	0	4 (40%)	15 (88%)	10 (63%)
Round shaped body	1 (50%)	0	1 (6%)	0
Triangular shaped body	1 (50%)	0	0	0
Hands shown	2 (100%)	9 (90%)	16 (94%)	15 (94%)
Hands absent	0	1 (10%)	1 (6%)	1 (6%)
One hand raised up	0	1 (10%)	0	2 (12%)
Fingers shown	2 (100%)	9 (90%)	14 (82%)	13 (81%)
Upper part of body drawn only	0	0	0	0
Holding something in hand	0	0		
a) Stick	0	0	0	0
b) Gun	0	0	0	0
c) Flag	0	0	0	0
d) Cigarette	0	0	1 (6%)	0
e) Other things	0	0	1 (6%)	0
Clothing				
a) Tarbush	0	0	3 (18%)	2 (12%)
b) Necktie	0	3 (30%)	1 (6%)	5 (31%)
c) Shoes	0	4 (40%)	3 (18%)	7 (44%)
d) Other things	0	5 (50%)	2 (12%)	11 (69%)

FREQUENCY AND PERCENT OF OCCURRENCE

NABATIYEH SCHOOLS

	Girls		Boys	
	5th primary	1st sec	5th primary	1st sec
N. of cases	14	16	32	32
Modal age	14	15	11	13
Profile right	3 (21%)	2 (12%)	2 (6%)	4 (12%)
Profile left	1 (7%)	1 (6%)	13 (41%)	3 (9%)
Round face	6 (43%)	2 (12%)	4 (12%)	4 (12%)
Oval face	4 (28%)	2 (12%)	13 (41%)	21 (66%)
Eyebrows attached to nose	2 (14%)	2 (12%)	17 (53%)	20 (62%)
Eyebrows like a bow	8 (57%)	12 (75%)	12 (37%)	7 (22%)
Eyes with no pupil	3 (21%)	2 (12%)	10 (31%)	3 (9%)
Eyes with eye lashes shown	5 (36%)	4 (25%)	7 (22%)	13 (41%)
Dot eyes	0	0	0	0
Elliptical eyes	12 (86%)	13 (81%)	25 (78%)	31 (97%)
Indented nose	8 (57%)	2 (12%)	6 (19%)	12 (37%)
Nose with nostrils shown	0	1 (6%)	10 (31%)	6 (19%)
Nose $\frac{3}{4}$ view	0	1 (6%)	0	1 (3%)
Cupid bow mouth	6 (43%)	2 (12%)	4 (12%)	8 (25%)
Lips shown separately	1 (7%)	6 (37%)	6 (19%)	10 (31%)
Elliptical mouth	4 (28%)	2 (12%)	7 (22%)	12 (37%)
Ears shown	11 (78%)	9 (56%)	23 (72%)	26 (81%)
Moustache shown	8 (57%)	7 (44%)	20 (62%)	16 (50%)

	Girls		Boys	
	5th primary	1st sec	5th primary	1st sec
Pointed chin	1 (7%)	4 (25%)	4 (12%)	4 (12%)
Beard shown	5 (36%)	3 (18%)	1 (3%)	3 (9%)
Rectangular shaped body	5 (36%)	8 (50%)	18 (56%)	4 (12%)
Round shaped body	0	1 (6%)	0	0
Triangular shaped body	2 (14%)	0	0	0
Hands shown	12 (86%)	15 (94%)	20 (62%)	4 (12%)
Hands absent	1 (7%)	1 (6%)	3 (9%)	0
One hand raised up	1 (7%)	5 (31%)	0	0
Fingers shown	5 (35%)	10	20 (62%)	4 (12%)
Upper part of body drawn only	0	0	11 (34%)	27 (84%)
Holding something in hand				
a) Stick	2 (14%)	2 (12%)	0	0
b) Gun	0	0	1 (3%)	0
c) Flag	0	3 (18%)	0	0
d) Cigarette	1 (7%)	4 (25%)	1 (3%)	2 (6%)
e) Other things	3 (21%)	3 (18%)	0	1 (3%)
Clothing				
a) Turbush	3 (21%)	8 (50%)	13 (41%)	2 (6%)
b) Necktie	10 (71%)	3 (18%)	17 (53%)	24 (75%)
c) Shoes	10 (71%)	8 (50%)	4 (12%)	3 (9%)
d) Other things	14 (100%)	14 (88%)	21 (66%)	17 (53%)

Table I (Cont'd.)

FREQUENCY & PERCENT OF OCCURRENCE

	Beirut School		Halba School	
	Girls	Boys	Girls	Boys
	1st Sec.	1st Sec.	5th Prim.	5th Prim.
No. of Cases	7	19	14	33
Modal Age	13	12	14	14
Profile right	1 (14%)	4 (21%)	1 (7%)	7 (21%)
Profile left	5 (57%)	9 (47%)	9 (64%)	20 (61%)
Round Face	2 (28%)	3 (16%)	0	3 (9%)
Oval Face	0	3 (16%)	0	3 (9%)
Eyebrows attached to nose	1 (14%)	0	4 (28%)	2 (6%)
Eyebrows like a bow	2 (28%)	10 (53%)	5 (36%)	15 (45%)
Eyes with no pupil	1 (14%)	4 (21%)	0	2 (6%)
Eyes with eyelashes shown	0	0	5 (36%)	2 (6%)
Dot eyes	3 (43%)	3 (16%)	0	5 (15%)
Elliptical eyes	3 (43%)	4 (21%)	10 (71%)	22 (67%)
Indented Nose	1 (14%)	0	0	1 (3%)
Nose with Nostrils shown	1 (14%)	4 (21%)	0	2 (6%)
Nose 3/4 view	0	2 (10%)	0	0
Cupid bow mouth	1 (14%)	-	0	0
Lips shown separately	0	6 (31%)	1 (7%)	6 (18%)
Elliptical mouth	0	4 (21%)	4 (28%)	4 (12%)
Ears shown	2 (28%)	12 (63%)	9 (64%)	18 (54%)
Moustache shown	0	5 (26%)	-	4 (12%)
Pointed chin	0	6 (31%)	1 (7%)	12 (36%)

Table I (Cont'd.)

	Beirut School		Halba School	
	Girls	Boys	Girls	Boys
	1st Sec.	1st Sec.	5th Prim.	5th Prim.
Beard shown	0	0	0	1 (3%)
Rectangular shaped body	6 (86%)	8 (42%)	6 (42%)	16 (49%)
Round shaped body	1 (14%)	0	1 (7%)	0
Triangular shaped body	0	0	0	2 (6%)
Hands shown	7 (100%)	19 (100%)	11 (78%)	23 (70%)
Hands absent	0	0	3 (21%)	4 (12%)
One hand raised up	0	0	2 (14%)	0
Fingers shown	6 (86%)	12 (63%)	7 (50%)	17 (51%)
Upper part of body drawn only	0	0	1 (7%)	2 (6%)
Holding something in hand				
a) Stick	0	3 (16%)	0	0
b) Gun	1 (14%)	0	0	4 (12%)
c) Flag	0	0	0	1 (3%)
d) Cigarette	1 (14%)	5 (26%)	0	1 (3%)
e) Other things	1 (14%)	5 (26%)	0	2 (6%)
Clothing				
a) Tarbush	1 (14%)	2 (10%)	0	3 (9%)
b) Necktie	1 (14%)	4 (21%)	7 (50%)	10 (30%)
c) Shoes	6 (86%)	16 (84%)	5 (36%)	15 (45%)
d) Other things	<u>6</u> (86%)	19 (100%)	12 (86%)	20 (61%)

Table II

STATISTICAL TESTING OF THE DIFFERENCES BETWEEN THE

VARIOUS CLASSES

<u>Categories</u>	<u>2</u> <u>X</u>	<u>Level of</u> <u>Significance.</u>
Profile right	42.5	.01
Profile left	97.9	.001
Round face	126.1	.001
Oval face	111.2	.001
Eyebrows attached to nose	103.8	.001
Eyebrows like a bow	41.9	.01
Eyes with no pupil	71	.001
Eyes with eyelashes shown	50	.001
Dot eyes	57.9	.001
Elliptical eyes	118.1	.001
Indented nose	82.9	.001
Nose with nostrils shown	52.4	.001
Nose 3/4 view	42.2	.01
Cupid bow mouth	56.4	.001
Lips shown separately	38.6	.01
Elliptical mouth	43	.01
Ears shown	85.2	.001
Moustache shown	113.1	.001
Pointed Chin	83.3	.001
Beard shown	73.4	.001
Rectangular shaped body	65.6	.001
Round shaped body	32.8	.05

Table II (Cont'd.)

<u>Categories</u>	<u>$\frac{2}{X}$</u>	<u>Level of Significance</u>
Triangular shaped body	94.6	.001
Hands shown	148.7	.001
Hands absent	41.3	.01
One hand raised up	77.2	.001
Fingers shown	108.5	.001
Upper part of body drawn only	301.5	.001
Holding something in hand		
a) Stick	40.3	.01
b) Gun	26.1	Not.Sign
c) Flag	109.7	.001
d) Cigarette	52.1	.001
e) Other things	71.1	.001
Clothing		
a) Tarbush	86.8	.001
b) Tie	101	.001
c) Shoes	102.6	.001

TABLE III

Class	Grade	School	Place
1	5th Primary	Girls'	Saida
2	1st Secondary	"	"
3.	5th Primary	Boys'	"
4	1st secondary	"	"
5	5th Primary	Coeducational	Halba
6.	5th Primary	Girls'	Nabatiyeh
7	1st Secondary	Girls'	"
8	5th Primary	Boys'	Nabatiyeh
9	1st Secondary	Boys'	Nabatiyeh
10	5th Primary	Girls'	Tyre
11	4th "	"	"
12	5th Primary	Boys'	Tyre
13	1st Secondary	"	"
14	5th Primary	Coeducational	Jubeigh
15	1st Secondary	"	"
16	1st Secondary	"	Beirut
17	5th Primary	"	Bar Elias
18	4th "	"	"
19	5th "	Girls'	Bidnayil
20	5th "	Boys'	"
21	1st Secondary	"	"

Table III shows the number that represents each class.

TABLE IV

THE EFFECT OF EXTREME SCORES ON THE CHI-SQUARES

Categories	Class or Classes having most deviant percentage score	Effect on X^2 if Excluded	Effect on X^2 if one of the two classes is excluded
Profile right	12	² X become sig.at.05	
Profile left	20	Unaffected	
Round Face	11 & 1	Unaffected	
Oval Face	9	Unaffected	
Eyebrows attached to nose	9 & 8	Unaffected	
Eyebrows like a bow	Various	-	
Eyes with no pupil	18	² X become sig.at.01	
Eyes with eyelashes shown	9	" " " " .05	
Dot eyes	16	" " " " .05	
Elliptical eyes	21,20	Unaffected	
Indented Nose	6 & 15	² X become sig.at.05	² X become sig.at.01
Nose with Nostrils Shown	8	Unaffected	
Nose 3/4 view	4	² X become unsig.	
Cupid bow month	6 & 9	² X " "	² X become sig.at.05
Lips shown separately	Various	-	
Elliptical mouth	9	² X become unsig.	
Ears shown	10	Unaffected	
Moustache shown	8 & 9	"	
Pointed Chin	20	² X become sig.at.01	
Beard shown	4	" " " "	

TABLE IV (Cont'd.)

Rectangular shaped body	9	Unaffected	
Round shaped body	1	X ² become unsig.	
Triangular shaped body	1 & 11	" " "	² X become sig.at.01
Hands shown	9	Unaffected	
Hands missed	2	X ² become unsig.	
One hand raised up	19 & 7	" " sig.at.05	² X become sig.at.01
Fingers shown	9 & 4	Unaffected	
Upper part of body drawn only	9	"	
Holding something in hand			
a) Stick	1 & 2	X ² become Unsig.	² X become sig.at.01
b) Gun	Unsig.		
c) Flag	1 & 2	X ² become unsig.	² X become sig.at.01
d) Cigarette	16 & 7	" " "	" " " "
e) Other things	2	" " sig.at.01	
Clothing			
a) Tarbush	8 & 7	" " unsig.	² X become sig.at.01
b) Tie	9	Unaffected	
c) Shoes	12 & 13	"	

CHAPTER IV

RESULTS

The main result obtained from the collected drawings are shown in tables I and II.

Table I reveals the number and percent of drawings in each class which show each particular characteristic tested. The sexes in co-educational classes are shown separately in table^I/for purposes of comparison.

The differences between the various classes with regard to each characteristic, were tested by means of the chi-square technique and the results are shown in table II. In doing this test for co-educational classes the sexes were combined because we wished to test the difference between classes and not between the sexes. Attention was paid to whether the difference exhibited by the various classes with regard to the various categories was attributable to chance or not.

The results show that out of the thirty-six characteristics tested only one is not significant at the .05 level. The others were all significant at this level or beyond; one was significant at the .05 level of confidence seven were significant at the .01 level of confidence; and

twenty-seven were significant at the .001 level of confidence. These high levels of significance obtained means that there exist significant statistical differences between the various classes with regard to the characteristics examined, which could not be attributed to chance.

Certain classes seemed to have contributed greatly to the significance of the chi-squares obtained. Examination of these classes that seemed to have influenced greatly the obtained chi-squares would be helpful in determining whether these classes were responsible for the differences found.

Table III shows the numbers of the various classes from the different schools tested .

Table IV shows the effect of the most deviant classes on the chi-squares obtained - that is those classes that contributed the highest and lowest percentages of scores. If one class seemed to be the greatest contributor to the chi-square, this class was chosen, and if two classes seemed to contribute equally to the chi-square, these two classes were chosen. The aim was to determine whether the disregard of this one class or two classes that contributed greatly to the chi-squares, would render these chi-squares insignificant or not.

Examination of table IV show that even if the most deviant groups are excluded, fourteen out of the thirty-six

characteristics tested would still be significant at the same level of confidence; four characteristics would become significant at the .01 level instead of the .001 level of confidence; five characteristics would still be significant at the .05 level instead of the .01 and .001 level of confidence. Five characteristics would become insignificant if extreme scores are excluded; five characteristics would become insignificant if extreme scores contributed by two classes are excluded, but would still be significant at the .01 and the .05 level of significance if only one class is excluded.

This examination of table IV indicate that, in general even if extreme groups are excluded, the differences between the various classes with regard to the tested characteristics would still be significant at a high level of confidence.

CHAPTER V

DISCUSSION

In discovering the results of this research, we have to take into consideration the main purpose of this thesis, which was to investigate cultural influences on children's drawing of a man.

Goodenough designed her "Draw-a-Man" test for use with children as a measure of their Intelligence Quotient or general intelligence. The test, however, is not valid beyond age ten. Since the present study was made on children above ten years of age, it was not advisable to compute their I.Q. by using Goodenough's scale. To determine, then, from the data the effect of experience on the Goodenough score is not feasible in the case of our data. But, drawings collected from certain rooms or classes appeared to be quite underdeveloped for the age of the group, which might be due to the lack of experience relative to the representation of the human figure. This is just an impression because this generalization is not based on statistical results.

The main interest in this study is centered on the relation of human figure drawing to personality. Machover

attributes the variability found between individuals in the drawing of the human figure to individual differences in temperament and personality. She suggests interpretations for different ways of drawing the various aspects of the human figure and neglects the fact that local styles in communities, schools and classes might be responsible for the observed variability.

In this discussion, we are going to examine some of Machover's hypotheses in relation to our findings.

Regarding the drawing of profiles, Machover states that "the profile head with the full view body is commonly seen in boys, especially adolescents and seldom encountered in girls' drawings."¹

The data in table I show that 73% of the girls of the 5th primary grade in Saida drew the head in profile (profile left), while 27% of the boys of the 1st. secondary grade in Saida did so. This finding is contrary to Machover's assumption that profile heads are more common in boys' drawings than in girls' drawings.

In the 5th primary grade in Bidnayil school, 95% of the boys drew the head in profile facing the left side of the page, while only 9% of the 1st secondary boys in Nabatiyeh did so. This difference between the two groups of boys, that have little contact with each other, with regard to profile drawing,
a

1. Machover. op. cit. p. 94.

could be given one explanation and that is - there are local styles of drawing the human figure which produced this difference between the two classes.

Taking another characteristic - eyes with no pupil - Machover hypothesize in this respect that "A less voluntary and more subtle projection of 'not seeing' is the omission of the pupil and drawing only the outline of the eye. In this treatment, the world is not actively shut out, but it is perceived vaguely, as a sort of undifferentiated mass of stimulations with little discrimination of detail." "The un-seeing eye is often symptomatic of emotional immaturity and egocentricity."¹

Our findings indicate that 80% of the 4th primary class in Bar Elyas drew eyes with no pupil, while only 15% of the 1st secondary boys in Bidnayil did so. This finding can scarcely mean that the Bar Elyas 4th primary class is emotionally less mature than the 1st secondary boys in Bidnayil. This difference could be given a developmental and intellectual explanation. From a developmental point of view, the modal age of the Bar Elyas group was eleven years old while the modal age of the Bidnayil group was thirteen years old. The difference in age could be a possible factor in producing more advanced drawings by the Bidnayil group. From an intellectual point of view, there is a difference of

1. Ibid.

two grades between the two groups, which could be another possible factor for producing this difference. Being two grade higher the Bidnayil group had more knowledge and experience with regard the representation of the human figure.

With regard to a third characteristic - cupid bow mouth - Machover states that "the elaborate cupid-bow lips in combination with other heavily cosmetized features in the figure, are seen in drawings of the sexually precocious girls."¹

In table I we find that 11% of the 1st secondary boys in Sidon drew cupid bow mouths, while 10% of the 1st secondary girls in Sidon did so. In this school the difference between the two sexes with regard to this characteristic is very slight.

Girls in the 5th primary grade in Nabatiyeh drew cupid - bow mouths in 43% of their drawings while girls in the 1st secondary grade drew this characteristic in 12% of their drawings. Does this mean that the younger girls are more precocious than the elders?

This that different classes of girls, even from one school, exhibit this characteristic in different proportions, can scarcely be attributed to differences in personality, but could be the result of different styles of drawing the mouth in various classes.

Another details of the human figure are the mustache and beard. Machover considers "hair emphasis whether it occurs

1. Ibid. p. 46.

on the head, as a beard or as a mustache is generally considered an indication of virility strivings."¹

The data in table I shows that 62% of the 5th primary boys in Nabatiyeh drew mustaches on their figures, while 57% of the 5th primary girls in Nabatiyeh did so. This difference between the two sexes with regard to this characteristic is very slight so that we can assume that hair emphasis in the form of a mustache cannot be an indication of virility strivings as Machover hypothesizes. The Nabatiyeh boys and girls, in exhibiting this characteristic in more than 50% of their drawings indicate a local style of drawing which could be a result of their social values.

With regard to the beard, 27% of the 1st secondary boys in Sidon drew beards on their figures while 0% of the 5th primary boys in Sidon showed this characteristic. This difference between the two classes of one school and one community could be due to modes of drawing characteristic of those particular classes and not to any personality differences.

Considering another feature of the human body - the trunk - Machover states that "the round figure has been associated with less aggressive, more underdeveloped and more feminine drawings, while the figure involving angles is considered more masculine, corresponding with principles

1. Ibid. p. 32.

of expressive movement that pertain to all creative projection!"¹

The finding in table I show that 88% of the 5th primary coeducational class in Jubeigh drew rectangular trunks; 38% of the 1st secondary boys in Sidon exhibited this characteristic also. Nabatiyeh 1st secondary girls showed rectangular trunks on their figures 50% of the time, while 56% of the 1st secondary boys did so.

With regard to round shaped trunks, 6% of the 1st secondary girls in Nabatiyeh drew round trunks on their figures and 0% of the 5th primary girls did so. Boys of the 5th primary grade and 1st secondary grade in Nabatiyeh showed round trunks on their figures 0% of the time.

We cannot explain these findings according to Machover's assumptions that round figures are associated with feminine underdeveloped characteristics while rectangular figures are associated with masculine characteristics. To explain these findings according to Machover, we have to assume that Nabatiyeh boys and girls show masculine characteristics equally which would be a dubious assumption. Drawing rectangular shaped trunks instead of round shaped trunks could be due to classroom traditions of drawing human figures in particular ways.

Another characteristic to be considered is the absence of hands. Hands and arms according to Machover are

1. Ibid. p. 68.

"weighted with psychological meanings referring primarily to ego development and social adaptation." Omission of arms can be never considered as a casual oversight." "Schizophrenics or extremely depressed subjects omit the arms as an indication of positive withdrawal from people and things."¹

The findings in table I show that 30% of the 1st secondary girls in Sidon omitted the arms on their figures, while the 5th primary girls in Sidon did not omit the hands in any of their drawings. Bidnayil 1st secondary boys omitted the arms in 26% of their drawings, while the 5th primary boys did so only in 9% of their drawings. The fact that some classes show higher percentage of omission of arms in their drawings in comparison to others could not be explained, as Machover suggests, on the basis of personality differences. On the contrary, this difference in the omission of hands shown in the same school and the same community, could be only related to differences between classes.

Regarding accessories such as the cigarette, gun and stick, they are considered by Machover as sexual symbols. She states that "the pipe and cigarette are seen in drawings of young male adults or adolescents." "The gun most frequently enters the drawings of pre-adolescent or adolescent boys, while the cane is seldom seen in subjects below forty."² "The cane is rarely found in drawings of younger people."²

1. Ibid. pp. 60 and 62.

2. Ibid. pp. 82-83.

Cigarettes were found to be shown on 25% of the drawings of the 1st secondary girls in Nabatiyeh while it was shown on only 3% of the drawings of the 5th primary boys in Nabatiyeh.

Beirut 1st secondary class (boys and girls) depicted cigarettes on 23% of their drawings; while the boys and girls of Sidon group did not show cigarettes on any of their drawings.

Guns and sticks were not frequently shown in the drawings. In 17% of their drawings the 5th primary boys in Sidon drew guns. The 1st secondary boys in Sidon drew guns on 4% of their drawings only, while the 1st secondary girls in Saida drew guns on 5% of their drawings. Other groups and classes such as Bidnayil, Bar Elyas, Jubeigh did not show any guns in their drawings.

The stick was shown in 14% of the drawings of the 5th primary girls and in 12% of the drawings of the 1st secondary girls in Nabatiyeh. The 1st secondary class in Beirut showed sticks in 11% of their drawings. Other groups such as classes of Bar Elyas, Bidnayil and Jubeigh did not show sticks in their drawings.

The percentages found are not in accord with Machover's assumptions. Machover states that cigarettes are seen mostly in drawings of male adults and adolescents, while our findings show that cigarettes were found in 25% of the drawings

of a class of girls and in only 3% of the drawings of a class of girls in Nabatiyeh. Canes are rarely found in the drawings of young individuals according to Machover, while our findings show that in a certain girls school in Nabatiyeh 14% of the 5th primary and 12% of the 1st secondary girls drew sticks in their drawings.

From this discussion we see that we cannot interpret the variability in the treatment of various parts of the human figure as reflecting individual personality. Machover has not taken into consideration the social context which influences drawings. Machover's claims in relation to personality thus seem to be of limited validity.

In clinics, following Machover's principles, human figure drawings of individual cases were interpreted as measures of personality without any reference to group norms. Such an interpretation is unjustified because a certain treatment of a certain body part might be due to a local style of drawing in a particular group or community, and not due to any particular kind of temperament or personality characteristic. Interpreting drawings for clinical use without any reference to the group to which the individual belongs is an unwarranted procedure, since our data show that drawing norms vary greatly from group to group.

If clinical use of drawings is continued, it should

give careful consideration to the social norms from which various individual cases originate. Cases from different groups should not be lumped together and their drawings interpreted according to a standard set of hypotheses or assumptions without any regard to cultural or group influences.

CHAPTER VI

SUMMARY AND CONCLUSIONS.

The study presented in this thesis confirms the idea that there is no culture free test.

The Draw-a-man test designed by Goodenough has been used both as a measure of intelligence and as a measure of personality. Goodenough designed this test for use with children under the age of ten as a measure of their general intelligence and considered the test to contain norms that have universal application. The cultural factor as a possible influence on the score obtained on the "Draw - a - man" test was neglected by Goodenough. More recent studies have presented evidence that cultural factors play a role in determining the child's IQ on the Goodenough scale. In view of these findings Goodenough herself abandoned her earlier position.

With regard to the human figure drawings as a measure of personality, Machover suggested interpretations and hypotheses for the various kinds of treatment of each body part. She attributed the variability found between individuals in their drawings of particular body parts to be the result of differences in their temperament and personality. She neglected the cultural or environmental influences which may determine to a considerable extent the

kind of treatment of the various body parts that individuals exhibit in their drawings.

The hypothesis tested in this study was that in communities, schools and classrooms there are local styles that affect the treatment of various body parts and which are responsible for the variability observed when data from diverse groups are thrown together.

Drawings were collected from various classes and schools in different Moslem communities in Lebanon. The chi-square technique was used to determine whether the differences between various classes with regard to the various categories are attributable to chance. All the categories except one were found to be significant at the .05 level of confidence or higher, which means that there exists non-chance differences between the various classes. The classes which contributed the most deviant percentage scores were examined. The results showed that even if extreme groups were excluded, the differences between the remaining classes with regard to the tested characteristics still are significant at a high level of confidence. These findings indicate that many classes have local styles of drawing or of treating the various body parts that are characteristic of each particular class. The direction given and the experience afforded affect to a certain extent the human figure drawing of a class of girls or boys. Whether the traditional way of drawing the human figure is advanced or poor is very important in

determining a person's performance on the "Draw - a - man" test, and thus his score on the Goodenough scale.

Some of Machover's hypotheses were examined in relation to the findings of this study and the discussion showed that we cannot interpret the variability found between individuals in the treatment of various parts of the human figure as reflecting individual personality. Examination of her hypothesis that profile heads with the body in full view are common in boys' drawings and rare in girls' drawings was not confirmed in our findings, since a high percentage of a class of girls in Sidon drew the head in profile in comparison to a low percentage of a class of boys. Another hypothesis of Machover regarding eyes with no pupil - is that this kind of unseeing eye reflects emotional immaturity and egocentricity. Findings in our data show that a high percentage of the 4th primary class in Bar Elyas and a low percentage of the 1st secondary class in Bidnayil drew the eyes with no pupil - a finding which could not be attributed to the level of maturity exhibited by each class. A third hypothesis of Machover which was examined concerns the drawing of the trunk. She associates round figures with more feminine and underdeveloped characteristic and holds that angular figures that are more masculine. Our findings show that in one community (Nabatiyeh village) both girls' and boys' classes drew rectangular trunks in more than 50% of their drawings. Their performance cannot be interpreted

as meaning that girls and boys in Nabatiyeh show masculine characteristics equally. That rectangular shaped trunks were drawn instead of round shaped trunks is probably due to a classroom tradition of drawing human figures in that particular ways.

Other hypotheses of Machover when examined in relation to the data of this study also show that the variability observed between individuals in different classes, schools and communities can not be related to individuals differences in temperament and personality, but are rather the result of local styles or norms that vary from groups to groups.

Further research on human figure drawings should take into consideration the cultural factor as an important influence on performance on the Draw - a - man test. The use of human figure drawings of individual cases in clinics as measures of individual personality without any reference to group norms is thus unjustified.

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