

Children's Drawings in the Arab World

Dr. Shaker Abdel - Hamid

Dept. of psychology - Faculty of Arts
Cairo University
Cairo , Egypt

Interest in the study of children's drawings as a way of assessing mental maturity, intelligence, personality, and emotional characteristics goes back at least 100 years (kopitz, 1984). There are many justifications for this continuous interest in these early distinctive products of the child. The justifications may be artistic or social in nature, but most of them are psychological.

Dawing for the child is medium for personal expression, a tool for communication with others, and a manifestation of his or her mental, emotional, and social development. Koppitz (1984) asserts that " "Drawing is a language and can be analyzed, just like a spoken language."

This chapter presents the main trends governing psychological research on children's drawing in the Arab world. it discusses the most important empirical studies on the relationships between drawing and intelligence. This

problem has been the main focus of research in the Arab world, as it has been in other regions of the world. In addition, the chapter reviews some research studies in the areas of personality and creativity which have used children's drawings .

Children's Drawings and intelligence

Following Goodenough's (1926) successful effort to discover the main components in the development of children's drawings of man, the studies of children's drawings were more or less assimilated to the psychometric study of intelligence. This trend dominated the psychological literature from the 1940s until now, especially in the United States, the United Kingdom, and Japan (Child, 1984). As we shall see, the same is true in the Arab world, especially in Egypt, Sudan, Iraq, Kuwait, Yemen, Jordan, and Lebanon.

The first project using Goodenough's Draw-a-Man Test in the Arab World was started by Ismail El-Kabbany in Egypt in the late 1920's. He used it to validate another intelligence test prepared along the lines of the Ballard Test. the sample consisted of 63 children. El-Kabany found

significant correlations between the Draw-a-Man test and the other intelligence test (Abou- Hatab, 1970). During the years 1934 and 1935, Iskander applied Goodenough's test on a relatively large sample which consisted of 1929 children, both male and female, who enrolled in nursery and primary schools in Cairo (Abou- Hatab, 1977).Iskander found that the test discriminated between children of different ages and between normal and mentally retarded children. This research, as Aboul-Hatab (1977) indicated, paid attention to the problem of clothes (dress) in the drawings of Arabic children. This problem would later attract the attention of M. Badri in Sudan, who is one of the prominent Arabic researchers in this area.

In the 1950s, Fahmy administered the Draw-a-Man test to 967 male and female Egyptian children, ranging in age from 6 to 12. He used only forty items in scoring. He indicated that the same procedures were followed by Shaloot in Egypt during the 1940s. Fahmy compared the norms of Egyptian and American children, finding differences favouring the American children. The results were discussed in light of cultural, social and economic

factors. Fahmys' results may be a statistical artifact, as Abou- Hatab (1977) has noticed, because the original items of the test are 73 items, not the 40 items which Fahmy depended on.

In another study carried out in Sudan during the fifties, but published during the sixties, Fahmy (1965) applied the Draw-a-Man test to 291 children belonging to the shilok tribes in south Sudan. There were 231 male and 60 female children ranging in age from 7 to 12 years. He found that the test was not useful for measuring the intelligence of the shilok children, especially not for the illiterate sample of 107 children. Those children drew the man like a stick, and Fahmy interpreted this phenomenon as reflecting some conceptual disabilities in those children. These disabilities may reflect the lack of environmental enrichment of the child.

Badri (1965) investigated the influence of modernization on the drawings of Sudanese children. For Badri, the term " modernization" referred to that " complex of changes that take place as a group progresses from a more primitive, traditional way of life to one based largely

on modern industry and technology" (Badri & Dennis, 1964). Badri assumed also that the changes which constitute modernization do not take place voluntarily " unless positive attitudes toward modernization are present in the population undergoing changes. " Badri was deeply interested in the measurement of these attitudes toward change. He thought that the drawings of the human figure provided a useful research tool. Drawings were obtained from four boys' schools in Omdurman and Khartoum, the major cities in Sudan. In addition, a boy's school in each of two villages was tested. Results showed that the group of children designated as more advanced in modernization has the higher percentage of modern drawings . Badri and Dennis also found that traditional, as opposed to modern, appearance in the human figure drawings of Sudanese children reflects the extent to which children favor one kind of dress over the other, hence, the degree of their adaptation to a modern style of life.

In another study based on the same sample, Badri found that the children producing modern dress drawings had a higher mean IQ than the children producing drawings

in which traditional dress was depicted. Badri recommended that "for the use of the draw-a-Man test in the Sudan, special techniques should be devised for scoring the drawings of an man in native traditional costume" (badri, 1965).

Raafat (1968) applied the Draw-a-Man test to a sample of Kuwaiti children. He tried to provide two types of norms: one suitable for men wearing traditional Knwaiti dress, and the other, suitable for the western costume. He found the test is more usefule in measuring the mental age based upon the drawings of the western dress than the drawings of the kuwaiti or khaleeji dress (Abou- Hatab, 1977).

Abdel- Ghaffar and Al- Azamy (1969) applied the Draw-a-Man test to 1855 male and female Lebanese children ranging in age from 6 to 12 years. They found sighificant differences across age and provided mental age norms for Lebanese children.

In Yemen, Abdel-Raheim (1975) cited in AbouOHatab, 1977)carried out a study in which used only forty items of the Draw-a-Man test, as Fahmy had in the fifties, His

sample included 1482 children from the senha region, ranging in age from 6 to 12 years. He compared American norms against Yemeni and Egyptian norms, finding that the American norms were higher than the Yemeni and the Egyptian ones. However, the Yemeni norms were equal to the Egyptian norms. These results were discussed in the light of economic and social factors.

Al-Zobaie (1965;in Iraq) and El Batayna (in Jordan; see Abou-Hatab, 1977) found significant correlations between the scores of the children on the Draw-a-Man test and academic achievement in Iraqi and Jordanian schools.

Abou Hatab (1977) obtained drawings on the Draw-a-Man test from 2167 female and male Saudi children ranging in age from 3 to 15 years. some of the Saudi children drew the wearing western clothes. He eliminated these drawings and concentrated his study on the drawings of traditional Saudi dress. The results indicated insignificant gender differences with respect to preschool children, but there were some significant gender differences in intelligence for the primary school children, especially after the age of ten. Abou Hatab identified 66 items as being the

most useful for determining intelligence through drawings of the man wearing traditional Saudi dress, In his study, there is also a wealth of information concerning norms and standardization of this test in Saudi society.

Sadek (1979) extracted a special sample from Abou Hatab's Saudi sample. It consisted of 1588 children who drew the man in traditional Saudi dress and 345 children who drew the man in western dress. She found a significant superiority of intelligence for the children producing a modern dress in their drawings. she discussed these differences in light of cultural and social factors.

Atiyeh (1982) in Lebanon attempted to maximize objectivity in the scoring of the Draw-a-Man test. He excluded those items which demanded personal opinion in scoring. His attempt places him closer to Harris' effort (1963) than to Goodenough's original effort. Also, Atiyeh tried to make the test application sessions well controlled. He restricted the session to a small number of children, asking them to draw two drawings of men, not only one as the original test required . he paid much attention to the ambiguous and incompleted parts and asked the children to

complete them. He also asked them to draw a profile drawing in addition to a face forward drawing, and he did not neglect the profile drawings as happened in the original test.

Atiyeh's sample consisted of 329 male and female children, ranging in age between 4 to 9 years. His results convinced him to broaden the limits in explaining the data collected through the Draw-a-Man test, and not to restrict interpretations of drawings to intelligence only. He asserts that previous research has neglected important explanatory factors such as concept formation, mental organization through analysis and synthesis, space perception, quantitative abilities, expressive abilities, motor coordination, and special creativity factors.

In Egypt, Farag (1986) studied drawing in samples of normal and exceptional children to reveal performance differences resulting from sensory and cognitive deficits. The sample of normal children consisted of 1794 male and female children, ranging in age from 4 to 7 years. The mentally retarded sample included 51 male and female children ranging in age from 4 to 6 years, and the sensory

deficits sample contained 42 male and female children with a mean age of 4.3 years.

Faraq's results showed that the draw-a-Man test is a good measure for identifying the development of intelligence in children. It can also discriminate between normal and mentally retarded children. Faraq found significant correlations between the scores on the Draw-a-Man and the stanford- Binet tests in normal and mentally retarded samples.

Khalil (1992) used the Draw-a-Man test together with other cognitive and sensory measures to compare normal children with children suffering from attention and emotion disorders, such as lack of concentration, hyperactivity, impulsiveness, restlessness, lack of Task completion, and gross-motor overactivity. The sample consisted of 23 normal children and 23 children with attention deficits (18 males and 5 females in each) . the results showed that the Draw-a-Man test differentiates well between normal children and those with attention deficits. It can be used as a criterion for establishing improvement or deterioration in attentional functions.

As we have seen, the vast majority of research efforts in studying the relationships between children's drawings and intelligence were confined to one measure; the Draw-a-Man test. It is a measure well known to Arab psychologists. It has been well standardized in countries such as Egypt (Fahmy, in the fifties; Gonemah, 1976; Farraag, El- Sayed, & Magadi, 1976; Farag, 1986), Sudan (Badri, 1965; Badri & Dennis, 1964), Iraq (Al-Zobaie, 1965), Kuwait (Rafat, 1968), Lebanon (Abdel- Ghaffar & Al- Azamy, 1968; Atiyeh, 1982). Yemen Abdel- Raheim, 1975, in Abou-Hatab, 1977), and Saudi Arabia (Abou-Hatab, 1977).

Occasionally, researchers have tried to escape the overwhelming dominance of the Goodenough-harris test. Meleika is one of these researchers. He tried to weaken the extreme concentration on the Draw-a-Man test by translating into Arabic and standardizing the House - Tree- Person (H-T-P) test. He wrote a well known book in Arabic entitled studying personality through drawing (1990). His interpretations rely partly on projective and psychanalytic considerations. In one of his studies, Meleika (1970) aimed

at testing Badri's and Dennis' hypothesis concerning children's choice of dress when drawing. His samples included only a few children besides adults from Kuwait, Saudi Arabia, and Egypt. He concluded that drawing a special type of dress depended on a network of factors such as mental level, exposure to change or modernization influences, the emotional state of the test taker, environment, education, attitudes, values, and so on.

The El-Kamel and Abdel-Hamid study (1990) is another example of research which focused on the children's drawings and intelligence without being confined to the Draw-a-Man test. Their study was oriented through a piagetian perspective. The major aims of the study were: to trace causal thinking in children 6 to 12 years old, to detect the course of drawing development for that age range, and to establish possible correlations between casual thinking and drawing in the stage studied. He studied a sample of 37 male and female primary school children ranging in age from 6 to 12 years. They lived in the city of Muscat, Oman. The tools included piagetian tasks to measure logical - casual thinking and the Draw-a-House -Tree test

(Kaylan-Masih, 1981). The results pointed to gradual, age related increments in the areas of drawing and casual thinking and included significant correlations between logical- casual thinking and drawing age, especially after the age of 8.

In summary, we that interest in children's drawings as a measure of interlligence in the Arab world goes, back at leastseventy years and the Goodenough- Harris Draw-a-Man test is the dominant tool which has been standardized and used in many Arab countries. The majority of studies on children's drawings intend to provide psychologists and educators with a simple test which can be used to measure intelligence and to discriminate between normal and mentally retarded children. Its simplicity has been favorably compared to the relatively difficult stanford-Bonet test which was standardized in Egypt in 1956.

Some of the studies using childern's drawings were concened with such factors as modernization, environment, education, and cross- cultural determinants which are thought to play a significant role in the thinking and life of Arab children, Most of the research on children's drawing

and intelligence in the Arab world was carried out in the Asian areas, especially in Lebanon, Iraq, Jordan, Kuwait, Saudi Arabia, and Yemen. Other important research and standardization studies were carried out in Egypt and Sudan, countries which form the center of the Arab world and the eastern part of its African area. None, to our limited knowledge, was carried out in the Greater Maghreb (Libya, Tunisia, Algeria, Morocco). This last piece of information may be gleaned from El-Ghali's (1992) survey of general intelligence measures in Arabic psychological studies.

Children's Drawing and personality

In spite of the fact that the Arab studies in the area of children's drawing and personality are few, the research covers many topics such as the dynamics of schizophrenia (Meleika, 1990), traits associated with delinquency (Khidir, 1989), emotional disorders (Aglan, 1978, cited in Meleika, 1990), and emotional stability (Osman, 1973).

Osman considered drawing an tension releasing activity which reestablishes psychological equilibrium in the child. She asked 800 male and female children ranging in age from 6 to 16 years, to draw their family members such as

mom and dad, and their teacher (s). Osman found that children's drawings are vivid, imaginative, and full of distortions during the ages 10 to 16 years. In each case, drawings should be considered a means for perceiving the self and others, and for expressing this perception through personal styles.

Aglan carried out a cross-cultural study in which she compared the drawings of 100 Egyptian male and female children with the drawings of 100 Belgian male and female children. All children were around 9 years old. She found similarities and differences in the drawings of the two cultures. The different characteristics were much influenced by culture, the gender of the child, and the Arabic style of writing which proceeds from right to left. Aglan paid much attention to drawing characteristics such as distortion, exaggeration, omission, considering these characteristics as indicators of emotional disorder.

Khidir (1986) explored the implications of a child drawing himself together with others. He interpreted such drawings as reflecting the level of the child's personality adjustment. Khidir asked 520 Egyptian male and female

children ranging in age from 10 to 11 years to draw themselves with others. He also used some personality and intelligence measures. Khidir's results showed that the poorly adjusted children tended to omit many items of the human figure such as dresses, hair, nose, and arms . In contrast, these elements were highly apparent in the drawings of the well adjusted children. Poorly adjusted children also tended to draw distorted human figures, while the well adjusted children drew more realistic and harmonious figures. In another study, Khidir (1989) noticed that delinquent adolescents formed and organized the components of the human figure in accordance to their personality traits. They were inclined to distort and exaggerate some parts of the human body. For instance, some of them drew people walking in opposite directions at the same time.

El- Maufy and Khidir (1990) investigated the items in the Draw-a-Man test which discriminate between children of high and low intelligence. They also investigated the extent to which various cognitive and emotional factors are correlated with the children's performance on the

Draw-a-Man test. Their sample consisted of 250 male and female Egyptian children ranging in age from 9 to 10 years. They used the Draw-a-Man test and several additional personality and cognitive measures. Their results revealed the following; (a) existence of statistically significant differences between poorly and well adjusted children on 7 out of 73 items. The drawings of the well adjusted children were better and more accurate on these items. (b) existence of statistically significant differences on 15 items between more or less intelligent children. The drawings of the highly intelligent children were better and more accurate. (c) on only four items were there statistically significant differences between the highly intelligent and the better adjusted children. The drawings of the highly intelligent children were better and more harmonious. (d) There were no significant differences between the drawings of the less intelligent and the poorly adjusted children. (e) There were some gender differences on twelve items of the Draw-a-Man test (on nine of them, the drawings of the males were better and more accurate) (f) There were some statistically significant correlations between the IQ scores of

those who took the Draw-a-Man test and the IQ extracted from other mental abilities tests. However, there were no statistically significant correlations between personality measures and the Draw- test. El-Maufy and Khidir concluded that the Goodenough-Harris test is a good measure of "Basic intelligence." but not of personality adjustment or traits, They also indicated that the test results may be distorted by certain emotional tendencies of the test taker El-Sayed (1992) asked 30 male and female Egyptian children ranging in age from 5 to 6 years to draw themselves. Each child was asked to draw himself alone. El-Sayed aimed at detecting the artistic characteristics and sex differences in drawing the self- picture . She found that the drawing of the male children has better organized lines, while the drawings of females were superior in composition, detail and coloring. Due to the relatively small sample and the lack of information concerning scoring procedures and psychometric criteria, the results of this study must be considered preliminary in nature.

Children's Drawings and Creativity

It was already mentioned that Arab psychological

studies investigating the relationship between children's drawings and personality traits are few. Now we can add that there exists little Arab research focusing on relationships between children's drawings and creativity. We find some writings and studies which attempt to discover these relationships from the point of view of art education, but not from a purely psychological point of view. Several of these writings and studies were highly influenced by the views of leading educational specialists in this area such as Lowenfeld and Brittain (1982), Arnheim(1954), and Read (1945). El- Basyony (1984), Ibrahim (1980), El-Adaway (1976), and El-Hauseny (1971) are some of the more important writers in this context.

El-Hauseny, for example, carried out a study from the point of view of art education, in which he tried to study relationships between the phenomenon of distortion in children's drawings and creativity. He asked 18 children ranging in age from 5 to 12 years to draw figures such as the father, the mother, the self, a teacher, etc. He considered omission, addition, abstraction, reduction, and enlargement as signs of distortion. El-Hauseny concluded that there is no

creativity without distortion, a conclusion which may be sounder for adult art than for children's drawings. In children, the phenomenon of distortion may mainly result from a lack of perceptual and cognitive maturation and development.

In the mid 1980s, the present author began a comprehensive project on the relationships between children's drawings and creativity. This project was supported by the Kuwaiti society for The Advancement of Arabic childhood. This project was carried out in Egypt and published in Kuwait in 1989. Because this may be the only research investigating these relationships in the Arab world, we will present it here in some detail.

The major aims of this project were: (1) to investigate the main course of development in drawing and creativity in preschool and elementary school age children; (2) to detect the main types of interaction between divergent thinking abilities and children's drawings; (3) to detect which divergent thinking abilities are most important in the drawing activity of these children; (4) to detect the interactions between drawing activity and variables such as

age, sex, and intelligence.

The study was cross-sectional in nature. Subjects were 625 male and 566 female Egyptian preschool and elementary school children ranging in age from 3 to 12 years. They mainly came from lower- middle class families. Several divergent thinking tests derived from the Guilford and Torrance batteries were used to assess fluency, flexibility, and originality of thinking in these children. The researcher also used the Draw-a-Man test to arrive at a global assessment of the children's intellectual levels. The children were asked to draw three objects: their family, their dining room and any other objects they preferred to draw. The selection of drawing objects was based on previous findings which indicated that children like to draw their family, and that dining table drawings are especially suitable for studying the development of perspective and three dimensional space in children's drawings (Willats, 1977). Children were given pastel colors to paint these objects. Every child's painting was analyzed with the aid of art experts, and according to 14 variables. The variables included number of colors, color intensity,

number of shapes, geometry of lines, shape naming, completion of drawings, perceptions of proportions, perception of details, perception of name-shape relationships, self perception, repetition, transparency, mixing plan and elevation, and perspective.

The research project was greatly influenced by the Gestalt approach to the study of art (Arnheim, 1954, 1963, 1969). It also took into consideration the important views of Lowenfeld and Brittain (1982), Goodnow (1977), and Paivio's (1971) dual coding theory on mental imagery, which proved useful in the interpretation of many results. Statistical tools included analysis of variance, t-test, stepwise regression, correlation coefficients and factor analysis.

Among the results were the following: (1) There were few significant differences between preschool male and female children in drawing activity. The differences were most apparent during the school years, and most of these differences favored females. (2) The development of competence in drawing goes through ups and downs; most of the ups occurred at the ages 5, 8, and 12, while most of the downs occurred at the ages of 6, 7, and 9. (3) variables

such as transparency, mixing place and surface, and perspective negatively influenced the drawing competence of the children, especially during the ages 3 to years. (4) There were significant interactions between the figural and linguistic parts of the drawing activity (hence the importance of Piaget's theory). (5) development of general intelligence is fast during the ages 3 to 8 and 11 to 12 years, but slows during the ages of 9 to 10. (6) Fluency, originality, and flexibility gradually improve during the years 3 to 12, but the three skills develop unevenly. Fluency develops steadily, but originality and flexibility develop more slowly, particularly at the ages of 4, 6, and 7. These results are in accordance with the findings of Torrance (1965, 1969) concerning the ups and downs in the development of creativity in childhood. (7) Flexibility is the basic creative ability which most influences the performance manifested in children's drawings. This may be due to the adaptive function of this creative ability. (8) with increasing age, there is a gradual increment in the correlations between age, there is a gradual increment in the correlations between drawing characteristics, creativity, and

intelligence. (9) Age, sex, intelligence, and creativity have major effects on drawing activity across age. (10) The four principal component factors forming and articulating the field of children's drawings are: the figural factor, the color factor, the linguistic factor, and the social factor which reflects perception of self and others through drawing. (11) Repetition, rhythm and experimentation play important roles in children's drawing activity. (12) At all age levels, children's free drawings tend to be better, more accurate, more colorful and vivid, varied and attractive than the directed drawings.

In conclusion, the relationship between children's drawing and creativity is still unexplored territory, in spite of the plentiful writings about it in Arab countries, especially in the area of art education. Apart from the present author's empirical investigation, we encounter in the relevant writings only speculation and the expression of hazy prospects and good intentions.

Summary and Suggestions

Children's drawings are a rich area for psychological research. Arab research efforts to investigate children's

drawings go back at least 70 years. In the Arab world, most psychological research on children's drawing concentrated on intelligence, personality, and creativity. Research on intelligence is most abundant, personality is less frequently investigated, and creativity research is rare. Most of the research in the area of children's drawings and intelligence was based on Goodenough's Draw-a-Man test . These studies covered many topics such as standardization, gender differences, development , modernization, traditional and European dresses, and the differences between normal and mentally retarded children.

The few psychological efforts regarding relations between children's drawings and personality focused on emotional stability, adjustment, emotional disorders, and factors leading to delinquency.

As for children's drawing and creativity, a few efforts concentrated on the development of drawing abilities and their correlation with creativity, the ups and downs of their deveopment, the main components of drawing activity , and the types of interactions between creativity and drawings.

In spite of the existence of many psychological studies

in the area of children's drawings and intelligence, one can see that they represent scattered efforts. Every researcher begins with the first step, without any attempt to integrate previous findings. In Egypt, for example, we can find four or five attempts at standardizing the Draw-a-Man test, but each attempt appears isolated from the others. In this context, Atiyeh (1982) made the following suggestions: (a) The Draw-a-Man test should be applied in many Arab countries to attain an integrated Arabic standardization; (b) research should be carried out beyond the age of ten since most of the Arab studies were confined to earlier ages; (c) the empirical validity of the test should be studied in many Arab countries; and (d) gender differences should be explored more thoroughly.

No efforts have been made to meet these suggestions since they were offered ten years ago. In addition, we need integrated efforts bringing together Arab specialists in children's drawings and the arts from the fields of psychology, art education, and sociology.

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