

CHAPTER I

PSYCHOLOGY OF CHILDREN'S DRAWINGS

Child and Art:

Art in the twentieth century has become so technical that to think of children as artists would appear paradoxical to a common man. When psychologists like Perez, Preyer and Sully started observing and interpreting child behaviour for understanding adult development, it was found, however, that aesthetic development of the child leading to art-appreciation and art-production goes on in his day to day contact with the environment. Sully¹ points out that the manifestations of art-impulse cannot be always recognised as activities of genuine art-production and even the appearance of rudimentary art are

1. Studies of Childhood, Sully, p. 298.

so uncertain and sporadic that the art activity of children, as we understand the term, cannot be reckoned as a common characteristic of children. Nevertheless, it is beyond doubt that the understanding of various objects and situations such as form, colour, rhythm, perspective etc. which is essential for art appreciation and art production is developed through various activities of child-life - conscious or unconscious. A child's characteristic fascination for rhythm in sound and action is an indication of his latent capacity to at least appreciate the arts of music and dancing at a later stage. A child learns to recognise various colours and develops specific attitudes towards them without any special training or coaching therein. A number of psychologists, for instance Preyer, Baldwin and Binet² have studied the colour preferences in children. Understanding of representative art starts slowly. The child learns to recognise an image in mirror, or a photograph, as representation of the object and not duplication of the object. While realising this he automatically compares the two objects and is slowly led to recognise and reproduce 'likeness' of various familiar objects. The characteristic activity of children of pinching the bread till it resembles some known form,

2. Studies of Childhood, Sully, p. 301.

or carving figures of rivers and trees and other familiar objects in their environment on articles of food like rice and dāl is quite spontaneous. When the child grows a little older and is able to handle pencil and paper, he spontaneously starts amusing himself by scribbling on paper. Thus even the activity of drawing begins with the characteristic spontaneity of a self-taught activity of childhood. As stated before, the production at this stage cannot be described as artistic according to the adult standards of art judgement. Still one cannot deny that they are the natural manifestations of art-impulse, and hence the spring-hold of all later development of art appreciation and art production.

Drawing - An Innate Ability:

Ability to represent a particular object, or at a later stage an idea, is one of the innate abilities of human beings. Prof. H.R. Marshall, who holds that art impulse is a blind impulse 'leading men to create with little or no notion of the end they have in view', thinks that this impulse, so wonderful in some of its genial developments, is in one form or another, a common heritage for all members of our race.³ Every child does show some

3. The Child : A Study in the Evolution of Man,
A.P. Chamberlain, Marshall quoted on page 184.

tendency to produce works, which in their developed form, give us our best art-products. Almost every adult feels some tendency to write verses or to compose melodies or to dabble with the brush and a palette or to represent his thoughts with the draughtman's pencil. If we study the history of the art of primitive races we get ample illustrations of their drawings on the barks of trees, stones, clay-pottery, instruments and weapons they used. J.D. McGuire who has studied primitive art writes: "The ornamentations upon the ivory drill-bows - a characteristic instrument of the Eskimo - is extremely varied in its range, from mere scratches or notches made in the ivory to ornamented carving and etching. These designs, etchings and carvings appear to constitute quite an elaborate aboriginal school of art. At one place we encounter bows covered with lines, circles, angles or curves, drawn with precision and elaborated carefully. In another place we see animal life portrayed with remarkable fidelity to nature; hunting and trapping scenes are delineated with minute precision, and caricatures of daily life are often portrayed with no mean artistic ability."⁴

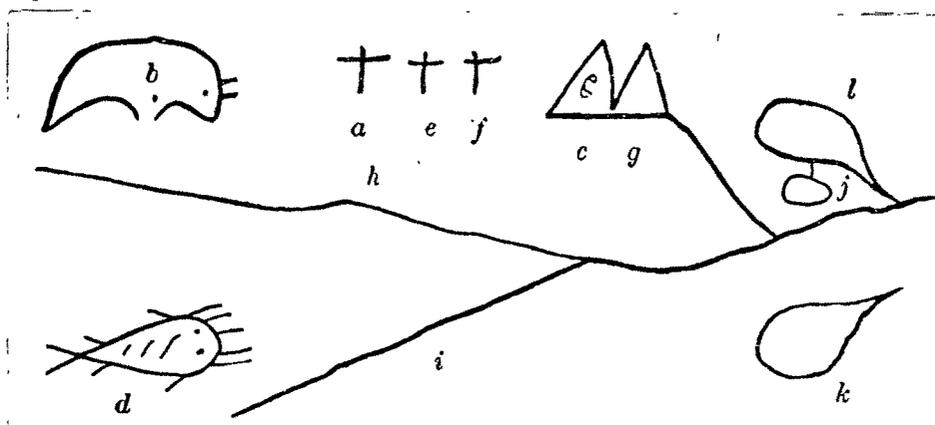
In the case of advanced races, the development of written language is an outcome of the ability and craving

4. The Child: A Study in the Evolution of Man, A.P. Chamberlain, McGuire, quoted on page 184 ff.

to represent objects, sounds and ideas in pictures and symbols. Written language is a system of stabilised symbols to represent particular sounds used in spoken language. Pictography or picture writing is an important intermediary stage in the development of language. Charles H. Judd has brought out this point very clearly in his article on 'Written language'.⁵ He observed that pictographic forms were used during the earliest stages of writing. A direct picture, reproducing as nearly as possible the kind of impression made upon the observer by the object itself was drawn upon the writing surface. The drawing used to represent the object was a fairly direct image of it and not an exact reproduction. There was direct appeal to the eye. Hence it was possible for a person to read a document written in this pictographic form if he had seen the object referred to in the pictures. Judd has illustrated this point by the record reproduced on the following page.

5. Readings in General Psychology: Edited by Robinson and Robinson, pp. 380-383.

An Objiwa love letter, recorded and explained by Garrick Mallery⁶ in the Annual Report of the Bureau of the Bureau of Ethnology (1888-1889), p. 363.



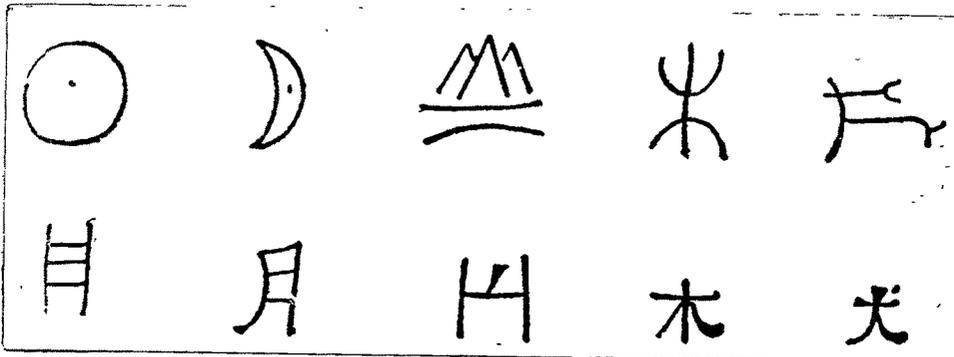
The writer, a girl of Bear totem, b, summons her lover, who belongs to the Mud Puppy totem, d, along the various trails indicated, to the lodge c, from which the beckoning hand protrudes. The inclosed figures at l, j, and k are lakes. The crosses indicate that the girl and her companions are Christians. "The clear indications of locality", writes Mallery, "serve as well as if in a city a young woman had sent an invitation to her young man to call at a certain street and number".

At this stage of development there was no special relation between the picture drawn and the sounds used in articulate language. Concrete examples of it are found in ancient Chinese forms where the moon was represented by the crescent, a king by the drawing of a man wearing a

6. *Readings in General Psychology*: Edited by Robinson and Robinson, p. 380.

crown etc. The following are some illustrations from ancient and modern Chinese writing :

Ancient and Modern Chinese Writing⁷



The upper line shows ancient forms of Chinese writing; the lower line shows the derived modern forms. Reading from left to right, the characters signify 'sun', 'moon', 'mountain', 'tree' (or 'wood'), 'dog'.

The next stage of development in written language started with simplification of complex pictographic forms to lines. The simplification was possible because of the ability of the reader to contribute the necessary interpretations to a few lines, which would suggest the

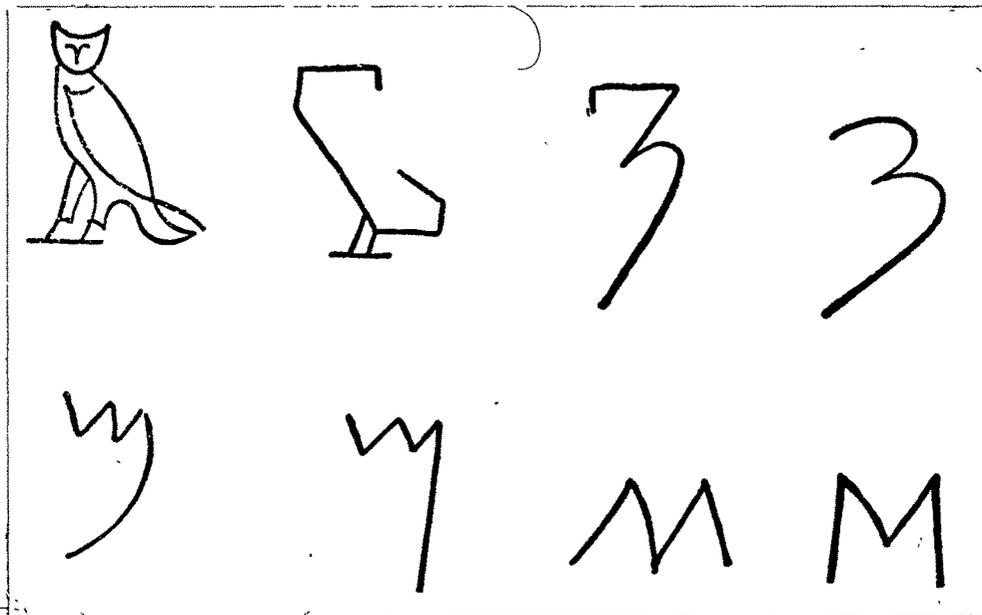
7. Readings in General Psychology : Edited by Robinson and Robinson, p. 361.

idea to the reader. The simplification of the written form is seen even in the figures which are used by savage tribes: e.g. the number of an enemy's army is represented by single straight lines with some brief indication at the beginning of the series of lines to show that each line stands for an individual enemy. This type of written symbol allowed larger possibilities of entering into new relations in the mind of the reader; it invited a number of different interpretations by its simple character as no specific drawing was related to any specific object. A straight line could also represent the number of sheep in a flock, or a number of tents in a village or anything which was capable of enumeration.

Slowly the drawing began to lose its significance as a direct perceptual reproduction and got broader meaning through the associations attached to it. The written form gradually became the symbol representing something without any appeal to direct visual image. Soon the written symbol entered into relation with oral speech. The picture of an object was intended to call to the mind of the reader not the special group of ideas appropriate to the object represented, but the sound which served as the name of the object. When the sound is suggested, the reader was supposed to connect with it certain associations

appropriate to the sound. Thus the relationship between the picture and the idea for which it stood was established through the sound of the name of the object depicted. To take a modern illustration from the symbols in rebus puzzles, we may use the picture of the eye to stand for the first personal pronoun. The Egyptians who established such relations wrote at times with pictures standing for sounds. The derivation of the Roman letter M which is shown below is an example of the development of such relations

Derivation of the Roman letter M from
the ancient Egyptian hieroglyphic owl.



The four forms in the upper part of the figure are Egyptian forms. The first on the left is the usual hieroglyphic picture of the owl, or as it was called in the Egyptian language, *mulak*. The three remaining upper forms are found in the writings of the Egyptian priests. The form on the left of the lower series is an ancient Semitic form. Then follow in order an ancient Greek form and two later Greek forms. (From I. Taylor's "The Alphabet", pp. 9, 10).

The complete development of a sound-alphabet from the rebus writing is attained after continuous attempts in bringing together groups of visual and auditory contents in new relations by association.

The Development of Drawing:

The stages of development of spontaneous drawings have been studied by some pioneers among psychologists. Even today the stages of development described by Rouma are accepted basically. As human form is the most common object of spontaneous drawings, the investigators have specially referred to the development of human form. Below are reproduced the stages of development given by Rouma.

"(I) Preliminary stage -

1. Adaptation of the hand to the instrument.
2. The child gives a definite name to the incoherent lines which he traces.
3. The child announces in advance that which he intends to represent.
4. The child sees a resemblance between the lines obtained by chance and certain objects.

(II) Evolution of the representation of the human form-

1. First tentative attempts at representation, similar to the preliminary stages.
 2. The 'tadpole' stage.
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3. Transitional stage.
4. Complete representation of the human figure as seen in full face.
5. Transitional stage between full face and profile.
6. The profile."⁸

Bell,⁹ has summarised the various studies on developmental stages, with reference to characteristics of certain age levels, and of the meaning of art expression to the individual at different ages. Bell has distinguished the following stages in general :

"(A) The Scribbling Stage -

1. Random dots and dashes. Wolff claims that even in these random expressions pressure, speed, regularity, rhythm, direction, narrowness or breadth are characteristic of the individual.
2. Discovery of the line technique, accompanying development in strength and control.
3. The lateral whirl. Krautter claims this to be the product of motor impulses, as described by Fabin, and also by Bender, who

8. Measurement of Intelligence by Drawing: Goodenough, pp.6,7.

9. Projective Techniques: Bell, pp. 350 ff.

- points out that vertical rotation is a more fundamental motion for the child than horizontal movement, as illustrated by his sidewalk drawings and games and by his early manipulation of plastic materials (with Woltmann). The lateral whirl reflects, in graphic motion, the body image of the child in his development of space orientation.
4. Circular tending forms, as rhythm becomes freer and more expansive. Both true circles and angular circles may be distinguished and are developments from the lateral whirl.
 5. Sloughing off meaningless lines, as the conscious control by the child increases.

(B) Subjective Representation:

1. Drawing of the human face - crude attempts.
2. Crude representations of the human form as a stick man. At this stage there may be difficulty in placing the arms and legs and in controlling the number of fingers and limbs. Evolution to the point where discrepancies disappear normally takes a year (usually from four to five years of age). Even after this period there may be proportional

misrepresentations, interpreted by Lowenfeld and Wolff as deviations according to the value placed on the particular body-area by the child, rather than as visual representations.

3. Once the stick-man is mastered there is an outburst of creation and rapid development of skill. By five to six years the normal child can depict almost any simple object in a crude but recognisable way. Sex differences and racial differences begin to show at this stage.
4. Increasing concern with reproducing what is seen rather than what is felt, reaching a transitional peak by the age of nine leading to the next stage.

(C) Realistic Representation:

A decrease in self-expression accompanying increasing awareness of the world, "organismic and social conservatism" and the development of written language, especially noticeable between eight and ten years. This frequently terminates drawing activity in the individual, although continuance of subjective representation is manifest in abstract drawing."¹⁰

The Process of Development in Drawing:

The first attempts at drawing are playful efforts. They are no more than aimless manipulation with some long object, be it a spoon or pencil, at the start, but later when the connection between the motions of the hand and the results on paper has been grasped, the child begins to derive pleasure from producing lines, and the period of scribbling starts. Thus when the child first starts using the pencil he is not conscious of the use he will be making of this new ability that he is acquiring.

Soon the child passes over this stage of activity and develops the ability to see some similarity of shape in lines he has drawn and some external object. In his criss-cross lines some shape reminds him of a familiar object and then scribbling takes up a different meaning. Once this stage has been reached, a general result becomes apparent within a few further attempts. The child makes further efforts with the intention of portraying something. This is objectively apparent in the names the child begins to give to its drawings. The child, for example, draws a man and explains that a certain arrangement of lines represents the head, others represent other parts of the body, although to a grown up person there is no similarity visible between the picture drawn and the object it represents

Lowenfeld says: " 'Naming of Scribbling' represents one of the most important stages in human development. It indicates a change of thinking from a mere kinaesthetic to an imaginative. -- --- While the child previously was concerned with motions only, he now refers in his scribbling to mental pictures."¹¹

The child automatically practises the resembling scribbles and soon reaches the final stage of representing in his drawing whatever he sees, observes and imagines. Certain combinations of lines as representing a particular object get stabilised and the child uses these 'schemas' in his later attempts to draw. Thus out of his scribbles the child develops his first representation of a man - circular motion for head and longitudinal for legs. These head and foot representations are common for a five year old⁹ child.

Parallelism between Development of Drawing and Language Development:

Drawing is a primitive mode of writing and hence can be described as the preparatory stage for writing. It is naturally closely related to the language development of the child in its form and content - speech and concepts.

Development of Drawing and Speech:

Lukens has indicated the parallelism in the stages of development of spoken language and drawing right from

11. Projective Technique: Bell, p. 350 ff.

the beginning to the acquirement of the skill in both the activities. The table compiled by Lukens is given below.¹²

TABLE I

Comparison of the Stages of Development in
Drawing and Speech

Stage No.	Drawing	Speech
I	Automatic and aimless scribbles.	Automatic cries and reflex or impulsive sounds.
II	Scribbling localisations and imitations of movements of other person's hands.	Imitation of sound, but without meaning: child babbles back when addressed.
III	Understands pictures, but does not yet draw beyond the simplest localisation of features by scribbling.	Understands words, but does not yet speak beyond such words as 'mama', 'papa', 'no' etc.
IV	Copies from others to see how to get the right effect in the use of lines.	Repeats words as mere sounds when they are said to him. (Brief stage and of little importance).
V	Picture writing, illustrated stories, scenes, etc.	Uses words to express his thoughts.
VI	Studies technique of drawing - perspective, proportion, shading etc.	Studies grammar and rhetoric.

12. The Child: A Study in the Evolution of Man:
Reproduced by Chamberlain, p. 168.

The above table clearly indicates how the two characteristic activities of childhood - drawing and speaking - follow a similar process of development.

Drawing Development & Concept Development:

The review of the process of development in drawing from a slightly different angle will bring out how the process follows the three stages which are also observed in the development of concept in children. The scribbling of the child may be described as an 'experience'. Seeing the similarity between the scribbles and some external known object may be taken as 'the education of relations'. The third stage of synthesising starts when the child develops schemas and uses them to represent particular objects consistently. The similarity of these stages with the stages of development of concepts will be clear when we realise how concepts are formed. "A concept is a process which represents similarities in otherwise diverse objects, situations or events. Concepts are products of reasoning and, once developed, play an important role in further thinking. A large proportion of the words in any complex language represent concepts. Words such as 'tree', 'dog', 'liquid', 'beauty', and thousands of others in our language, represent common aspects of things that are in many respects quite different one from the other."¹³

13. Psychology : N.L. Munn, p. 181.

The development of concepts requires two processes, namely, abstracting and generalising. Abstracting is observing the similarity in otherwise different things. The person who has formed the concept of 'vegetables' must have observed that all vegetables have something in common. The child's first acquaintance may be with a rose flower with which he hears the word 'flower' associated. Later on the child hears the same word attached to 'sunflower', a flower different in appearance. Later still he hears the word flower associated with a variety of flowers. After having many similar experiences, if a child recognises a new variety as a flower, he must have observed something similar in all the flowers already known to him. But in the observations of similarity he must have put some aspects of his previous experiences and then recognised the similarity leading to the designation of the new thing as a flower. This process of deriving a principle from varied experiences is generalising. Formation of a concept is not possible unless it is preceded by abstraction. Generalisation is a necessary process for the development of concepts. However, a person may fail to attain the level of generalisation required for the proper development of concepts. This suggests one more similarity between

the concept development and drawing development. Even in drawing there is a possibility of a child not reaching the final stage of generalisation. Degeneration to scribbling is often observed after using a 'schema' or 'formula' for sometime.

Development in Drawing is a Natural Process of Learning:

Characteristic drawing activity in childhood starts with scribbling and unconsciously develops to the stage of formalised drawings. This development normally takes place without any direct training. The characteristics of a natural process of learning are, however, observed while the process is going on. The child imbibes a great deal from his surroundings and is led to draw spontaneously; but in his surroundings there are numerous situations and objects which induce him to imitation. In the initial stage he tries to imitate the movements of elders or equals. Occasionally he imitates his own past movements which have given him satisfaction by way of achievement. As imitation on the part of the child is not necessarily induced by others, he does it in his own way. Hence, although he appears to imitate someone else, he is having an automatic self-expression. Helga Eng observes: "The child's scribbling is spontaneous, for it has never seen a model for this

peculiar wavy scribbling. The development of its scribbling is an unfolding of itself, although imitation may play a certain part, for example, as in the transition to circular scribbling."¹⁴

Repetition of the same activity goes on till it is mastered to the satisfaction of the child. The repetition is sometimes isolated; but generally it goes on with combinations of new movements. In the beginning the child repeats the scribbles endlessly. While repeating the activity he acquires new forms of scribbles. Practice with such varied combinations culminates in fixing up patterns to represent particular objects. These patterns are known as 'schemas'. Helga Eng describes her observations with reference to the point of practice in the drawings by her niece, Margaret. She writes, "A curious phenomenon, which much surprises the observer, is the apparently planned and purposeful practice, even in the child's first years of life. Margaret practised circles and straight lines and drew her first formula at the age of 1 year and 10 months. She practised angles and rectangles and reached her goal of drawing a tram."¹⁵

14. The Psychology of Children's Drawing, Helga Eng, p.184

15. The Psychology of Children's Drawing, Helga Eng, p.185.

For some time the child has limited motives and practised forms of drawings and hence he concentrates upon repetition of the same. But soon the horizon of his motives widens and he tries to bring novelty into his drawings. He tries to represent a variety of experiences, making use of the schemas either in new adjustment or with desirable modifications. Thus the chief characteristics of imitation, self-expression, repetition and new acquisition are all followed by every child in his drawing development with more or less clarity.

World Unity:

Whatever may be the discriminating features of various levels of civilisation, one cannot deny the unity of the human race all over the world. Whatever may be the differences among the nations, races, communities, creeds and castes, one cannot but accept that the process of development of the innate capacities of all persons is fundamentally the same. The development of drawing ability in children closely follows the characteristic process of development of human abilities, such as speech and learning. Strikingly enough the particular process of development in drawing is universally observed. In an international exhibition of children's drawings held at Cheltenham in 1935 there was ample evidence of

the oneness of human nature. All the world over children draw the human figure in the same schematic way. This will be seen from the drawing of the human form reproduced in Appendix I from the works of some of the investigators in different countries.

Factors involved in the Development of Drawing:

In psychological studies of children the various aspects of development such as physical, intellectual, emotional etc., are discussed. All these developments go on simultaneously and hence development of one aspect of life affects the other aspects. Similarly the development of the ability to draw does not go on in isolation. There are a number of factors which affect this development.

Perception leading to visual apprehension of the object is the very foundation of the act of reproducing it in pictorial form. Unless the child has developed the ability to perceive an object and also to form its visual image, it is not possible for him to educe the similarity between the scribbling and the object. Power of observing and attending to any object is linked with the additions of more details or particulars to the drawings.

Handling a pencil - a small object - with little fingers so as to create the desired effect on paper is a development necessary for drawing. Minor muscle control and better motor co-ordination make the child's drawing of lines steady and firm.

Eduction of relation is one of the basic factors of reasoning. The development of this power is manifested in children's drawings, when they are able to find out some similarity between their scribbling and the outside objects; and then only they further develop schemas. Development of the power of imagination is also indicated by the child's attempt to depict a theme with his crude material - schemas. Memory also plays a part in this. Formalised drawings or established schemas are not possible unless the power of remembering or memory is at work.

Thus we find the development of the following abilities of the child which are involved in the development of his capacity to draw:

1. Perception and power of observing and attending.
2. Minor muscle control and motor-co-ordination.
3. Imagery.
4. Imagination.
5. Reasoning.
6. Memory.

Development of Drawing and Intelligence:

Although psychologists have not yet been able to give a precise definition of the intelligence, the factors involved in intelligence have been clearly demonstrated in the twentieth century attempts to measure it. It is not necessary to discuss here in detail the structural and the functional aspects of intelligence. There is a good deal of agreement that among the abilities which constitute what we call intelligence - perception, imagination, memory, reasoning and judgement are prominent. Hence most of the intelligence tests include items which require the manifestations of these abilities. Manifestations of these abilities are the results of two major processes; (i) education of relations, and (ii) education of correlates, both directed to the attainment of some aim. Rex Knight's definition of intelligence that 'it is the capacity for relational constructive thinking, directed to the attainment of some aim',¹⁶ brings out the function of the above-mentioned factors in intelligence.

The discussion about the factors involved in the development of the ability to draw has made it clear how perception, imagery, imagination, education of relations -

16. Intelligence and Intelligence Testing:
Rex Knight, p. 17.

reasoning - and memory are at work in the process of development in drawing. These are the constituents of structural and functional aspects of intelligence as well. Hence the relation between the growth of intelligence and the development of drawing ability appears to be convincing. Psychologists consider intelligence as the most important factor in children's drawings upto the age of about nine and hence the way in which the child draws is a rough and ready test of his mental ability.

Mental Background of Children's Drawings:

The observational work with reference to children's drawings is quite extensive. In the initial period research workers concentrated on observing the development of drawing in its form and content. Incidentally they noted the interests of children as seen through the objects they chose for their drawings. The human form was found to be the most popular object of drawing by many workers and therefore it was studied in details. The workers in this field concentrated their studies on the cognitive aspect of development. They noted the discrepancy in the child's representation of an object and drew the conclusion that the child draws not what he sees but what he knows. Buhler explains it as a domination of man's intellectual power over all other

aspects of life. He writes: "As soon as objects have received their names, the formation of concepts begins, and these take the place of concrete images. Conceptual knowledge, which is formulated in language, dominates the memory of the child. As a rule the concrete images fade, but as far as the facts are capable of being expressed in language, we remember them. This development begins as early as the second year in the child when it begins to draw - in its third or fourth year - its memory is by no means a store house of separate pictures, but an encyclopedia of knowledge. The child draws from knowledge, that is how his schematic drawings come about".¹⁷

Some psychologists explain the discrepancy as the result of the child's perceptual immaturity. In his introduction to H.W. Oldham's work, A.W. Wolters writes: "The oddity of his sketches is not due to muscular incapacity (for that we can disregard) but to the perceptual immaturity. He is still compelled to strive to reduce the wealth of visual material about him to patterns which he can control. This he must do before he can manage his world to any practical purpose."¹⁸

17. Mental Development of the Child: Buhler, p. 114.

18. Child Expression in Colour and Form:
H.W. Oldham, Introduction, p. 7.

Schaefer — Simmern who has studied drawings of several hundred children concludes: "A child's drawing is dependant upon a process which he calls 'Visual Conceiving' which is based on perception rather than on abstract thinking, and which conforms to the principles of Gestalt psychology. He regards visual conceiving as an emergent process, in which respect it resembles intelligence, but he maintains that it is a process in its own right, not a manifestation of intelligence, a form of language, or a medium for the expression of emotions."¹⁹

Modern psychologists tend to stress the conative aspect of children's drawings. They accept the stages of development in general, but emphasise the study of individual differences therein. As Lowenfeld states, "The human schema is the form concept of a man at which the child has arrived and which he repeats whenever no intentional experiences influence him to change his concept."²⁰ In drawings the child deviates from the accepted schema according to the importance of experience

19. Psychological Bulletin, September, 1950:
Goodenough, p. 381.

20. The Nature of Creative Activity: V. Lowenfeld, p. 38.

in any particular drawing. "Even a very young child knows that a man is more than a head with legs and arms attached to it; he knows that a man has features, fingers, and even finger nails; but in his representation the child expresses what is actively important to him during the process of creating."²¹ Thus the schema is never a rigid symbol. The modifications in the schema, which are referred to as schematic - indicate the immediate force of experience. They are intimately related to both bodily and mental constitution. Lowenfeld has illustrated this view in his studies,²² and shown how the study of the kind of modification undergone by the schema, allows one to understand the intention underlying the representation. He has tried to establish certain types of personality - visual and haptic - on the strength of the children's drawings.

The analytical studies of child-mind value the subjective drawings and see in them a rich expression of child's emotions. The maxim, 'the child draws what he knows actively,' is further modified and expressed as 'the child draws what he feels'. A drawing drawn during an emotional disturbance or in a state of tension is a

21. Creative and Mental Growth: V. Lowenfeld, p. 25.

22. The Nature of Creative Activity: V. Lowenfeld.

revelation of the emotional experience the child might be going through. To an expert, it becomes a symbolic unveiling of the unconscious.²³

Summary :

The psychology of children's drawings reviewed above may be summarised as follows :

1. The preparation for artistic production goes on unconsciously during the childhood.
2. Art-impulse is manifested through some of the play activities of children.
3. Representation in picture - drawing - of objects or of thoughts is an innate ability of a human being.
4. The following are the stages of development:²⁴
 - (i) Scribbling
 - (ii) Pre-schematic
 - (iii) Schematic
 - (iv) Dawning realism.
5. Parallelism between drawing development and language development - speech and concepts - is noted by some psychologists.
6. Drawing development follows the natural process of learning.

23. The Life of Childhood: Michael Fordham, p. 96.

24. Creative and Mental Growth: Lowenfeld, pp.284, 285(Table).

7. Development in crawling depends upon:

- (i) Perception and power of observing and attending
- (ii) Minor muscle control and motor co-ordination
- (iii) Imagery
- (iv) Imagination
- (v) Reasoning - education of relations
- (vi) Memory.

Hence it is closely related to intelligence.

8. The schema of the human form goes through the same stages of development with children all over the world.

9. The evolution of the theory of children's drawings can be summed up as follows :

- (i) The child draws not what he sees but what he knows.
- (ii) The child is not capable of seeing the thing properly due to perceptual immaturity.
- (iii) The child draws what he knows actively or what he experiences.
- (iv) The child draws what he feels.