

CHILDRENS' JUSTIFICATIONS OF
PREFERENCE FOR OTHER
CHILDRENS' DRAWINGS

by

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PREFACE

The experimental work described in this thesis was carried out in the Department of Psychology, University of Natal, Durban, from January 1979 to March 1982, under the supervision of Dr. P.D. Krige and Prof. P.A. Sharratt.

This thesis represents original work by the author and has not been submitted in any form to another University. Where use was made of the work of others it has been duly acknowledged in the text.

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ABSTRACT

The present study sought to establish the justifications of preference offered by children when evaluating other childrens' drawings. The sample consisted of seventy children, divided into seven age groups, of 6 to 12 years, having ten subjects in each, with five females and five males. The five stimulus drawings were selected according to specified criteria, and had not been produced by any of the sample. The paired comparisons method was used for presentation, a content analysis undertaken on the transcript of the subjects tape-recorded verbal justifications, and appropriate analysis of variance and significance tests undertaken on this data.

Findings show:

- (i) there to be predominant categories of response - subject matter and colour, with the subject matter taking precedence over colour and usually provocative of identification therewith
- (ii) that children had distinct preferences for certain pictures
- (iii) the age and sex of the child to have an influence upon both criteria of preference (for categories of preference age significant at 0,01 level, sex at 0,05), and the frequency of choice of particular drawings (for drawing choice age significant at 0,01 level, sex at 0,05).

The study also presents an extensive review of the literature in the area and of the Clinical Method (Piaget 1973) as appropriate to the present study.

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PREAMBLE

Academic interest in the art of children has focused upon data derived from three major sources :

- (i) examination of the childrens' drawings;
- (ii) examination of the judgements of childrens' art by adults, and
- (iii) examination of childrens' appreciation of art, other than their own.

To augment (iii) above the present study is an examination of what children themselves say about their own productions.

In order to illustrate how the present findings might relate to the areas designated by (i), (ii) and (iii) above, it will be necessary first to undertake an extensive review of the status of child art in psychology, and to consider questions such as :

- (i) what have been the major research directions of the past?
- (ii) why is it necessary to understand the way children think about art?
- (iii) do children themselves produce "works of art"?

The study itself is largely exploratory and as such is divided into two parts. The first is to be regarded as a pilot study, data from which will be used insofar as it contributes to the qualitative nature of the research. It will cover therefore inter alia :

- (i) the method used for data collection, where Piaget's method of clinical examination, with modification, is used;

- (ii) the psychological factors involved, i.e. the childrens' behaviour in and attitudes toward the examination itself, and
- (iii) appropriate techniques for the analysis of the data, bearing in mind the need to quantify qualitative responses, while not discounting the highly qualitative nature of the study.

Data from the second part will be used in the quantitative analysis and will address the following questions :

- (i) what are the dominating factors within the drawings which influence childrens' judgements of drawings by their peers?
- (ii) is this judgement influenced by their age or sex?
- (iii) do they have distinct preferences for certain drawings?

PART I REVIEW OF LITERATURE

1.1 Child Art and Psychology

Of the psychology of children's art it has been said :

"Art is important for the child. It is important for his thinking process, for his perceptual development, for his emotional development, for his increasing social awareness, and for his creative development". (Lowenfeld and Brittain, 1970).

"my point ... has been to consider children's scribbling, drawing and such like, as fulfilling general developmental needs". (Louis Arnaud Reid, 1969, p277).

"While human personalities vary markedly across cultures and scientific thought differs in status and sophistication in various regions, the arts appear in roughly comparable forms in all known civilizations and hence are pertinent to human development everywhere. Indeed participation in the arts is so natural and integral a part of human growth that an understanding of this process should provide important clues to many pivotal questions of human development". (Gardner, 1973, p.23)

1.2 Research Directions

Research and theory has covered, inter alia :

- (i) pre-representational development trends (Kellogg, 1969),
- (ii) investigation of consistent patterns or stages characterizing the representational efforts of children, in the interests of understanding :
 - (a) cognitive and intellectual development (Goodenough, 1926; Luquet, 1927; Piaget, 1954).
 - (b) mental and creative growth (Burt, 1921; Lowenfeld and Brittain, 1970; Gaitskill and Hurwitz, 1958).
- (iii) emotional and learning problems (Machover, 1949; di Leo 1973; Silver, 1978),

- (iv) art in education (Read, 1961; Reid, 1969),
- (v) correlation of attitudes, traits or demographic variables of the individual with the quality or stage of artistic development (Alschuler and Hattwick, 1969).

It is the importance of the child's artistic activity in particular that bears the interesting and informative links with other developmental phenomena i.e. developmental stages are inferred in terms of what the child actually does, be it drawing, painting or clay modelling.

Parallels in levels of cognitive development and in stages of graphic representation are well documented. Psychologists such as Sully (1901), Thorndike (1913) and Burt (1921) presented global indices for the assessment of children's mental growth from their drawings. The simple, straightforward assumption that a child's drawing reflects his conception of the things portrayed emerges from the writing of many psychologists. This has been Goodenough's (1926) contention: it underlines the interpretation of the Draw-a-Man Test and it continues through the revision of the test by Harris (1963).

Some authors (Arnheim, 1954; Meili-Dworeski, 1957) have questioned the adequacy of the "conceptual" interpretation. Arnheim's theory defines the process of artistic representation as a search for equivalence of form in a given medium. From this vantage point the child's representations are seen as the early efforts of an inexperienced artist who explores the graphic medium until he invents adequate forms which can stand for the object. Both the conceptual and perceptual ideas are representative of an interest in the active production and the accompanying cognitive components in children's art.

Research and theory in the area of the child's active participation quantitatively supercedes that found in the area of his more

passive participation in the arts i.e. his artistic appreciation, or what he thinks about art. However, there has been some consideration given to this area. On a theoretical level Gardner (1973) describes the "audience member" and "critic" as roles occupied by the child in the course of development. It is essentially the "affective changes" within the child which make him an audience member, and the "capacity to communicate his emotions" that makes him the critic.

Several researchers have studied the child's preference among paintings (Mellinger, 1932; Katz, 1944; Subes, 1958) while a number of others have been concerned with the changes in the criteria by which paintings are judged (Lascaris, 1928; Lark-Horovitz, 1937; Schwartz, 1953). A narrower focus in research (Cantor and Kubose, 1969; Roubertoux, Carlier and Chaguiboff, 1971) attempts to enumerate more specifically the cognitive, personal or emotional factors involved in aesthetic appreciation. Machotka (1966) in an analysis of criteria by which children evaluate paintings suggested developmental levels which presuppose the different types of intellectual functioning described by Piaget. Roubertoux (1970) has suggested that there is a central set of variables which direct a person toward art in general. The set, he claims, is accompanied by a greater number of personality variables determining interest in one form of art rather than another.

Berlyne's work (1971; 1974) which he terms "experimental aesthetics" represents an attempt to "uncover the determinants of hedonic processes and unravel the role of hedonic processes in the determination of behaviour". Berlyne suggests that there may be underlying general factors to all matters of individual "taste" when it comes to art. Eysenck (1940) located what he termed the "general factor" in aesthetic judgments. This is similar to the view that individual differences in "aesthetic criteria" may be underpinned by overall cognitive development.

Research and theoretical explanation for the above has covered the following :

- (i) The use of adult art as stimulus objects for assessing what the child thinks of art.
- (ii) The use of designed stimulus items that enable particular factors to be isolated and manipulated for study.

It is thought, therefore, that the use of children's art itself, being different from the above, will give rise to responses of a different nature, and in so doing, contribute to a fuller understanding of both the psychology of children's art and their thinking processes, perceptual and emotional development, and creative development, as referred to by Lowenfeld and Brittain (1970).

In the following two sections a more extensive discussion on the way children think about, and on whether they in fact produce, "works of art" will be undertaken.

1.3 Understanding the Way Children Think about Art

1.3.1 Introduction

It is the question of what art is concerned with or what it means for the child that is important. Lowenfeld (1970) commented that art is not the same for a child as it is for an adult, because art for the adult is usually concerned with the area of aesthetics or external beauty. One must therefore suppose that, for the child, art is concerned with something quite different.

It may be more specific to ask what the child is using to make aesthetic judgments and how he is using them. One may gain insight to this from the art produced by a child. The child's choice of subject matter, medium and method of application of that medium will indicate not only his attitude toward such an activity but also hint at the meaning or value he attaches to that activity.

Extensive attention to what the child actually does has occupied two major areas. The first is to document developmental stages evidenced in the drawing or models produced by the child and to relate these to other aspects of development. The second is to use art as a therapeutic aid through examining what the child chooses to draw and how he goes about drawing it. What the child thinks of his own work does not appear to have received attention, i.e. what are the aesthetic criteria he may or may not be using?

1.3.2 Aesthetic Criteria : Adults vs Children

Aesthetic criteria used by adults as indices of excellence will follow what they consider art to be concerned with i.e. "external beauty" for example. The "aesthetic criteria" used by the child may follow what he sees art to be concerned with. Children do not react to the environment in the way that adults do. Their drawings differ markedly from one age to the next and the objects they appreciate also vary. Lowenfeld (1970) claims that, unfortunately, many teachers try to grade art. This, he continues, is harmful to the child because spontaneity is affected. Alluding to how adults evaluate art Lowenfeld indicates that often the grading system is decided by a teacher on an arbitrary and subjective level; he puts a high mark on the works that he himself enjoys and grades other work lower on the same arbitrary scale. Any system, he claims, is quite meaningless to the child.

According to Reid (1969) the too exclusive emphasis on the "art" of young children may lead to too much emphasis being placed upon their final product, and therefore underate the aesthetic discoveries made by children in their active progressive experiments. Jane Cooper Bland, writing of children of three says: "The child at this age does not usually regard what he has made as a painting...he lives through a series of experiences as he paints... and his final creation might be compared to a motion picture of

which we see only the last frame. The finished product reveals very little of the variety or richness of experience the child has gained in the process". (In Reid, 1969, p.281).

Art means something quite different for the child. It is, for him, an immediate expressive and creative experience. An activity during which he firstly experiments within the chosen medium to develop forms that can best represent external reality, and later during which he selects certain subjects and media to communicate something about himself to his social world. It is in all respects a growth experience and is therefore essentially different from the highly sophisticated activity indulged in by adult artists. From this then, it can be said that the child will be drawing upon quite different resources to produce a drawing or painting, and certainly it may be presumed that his appreciation of art will be coloured by his particular mode of expression or present developmental level.

Reid (1969), in quoting Graezinger, sharply criticizes the interfering adult. He claims that it is interference because any art activity indulged in by the child means different things and fulfills different needs for the child. "At each stage in its drawing and painting, except at the scribbling stage, the child is a realist and thinks it is portraying the world perfectly...The 'realism' is not the 'realism' of the constructed world of the adult...It is the imaginative construction of the child himself, which is neither bare fact nor merely subjective, but a compound of the impingement of the world upon him, and his own attempts to come to terms with the world in his own various ways". (p.274).

The question raised by the above would be, "Are children themselves the better judges to set standards of excellence

as far as their own art is concerned?" An answer in the affirmative is suggested by:

"There are no set standards or rules that are applicable to aesthetics, rather the aesthetic criteria are based on the individual, the particular work or art...and the intent or purpose behind the art form". (Lowenfeld, 1970, p.31).

The individual in this case is the child himself, the work is that produced by him and the intent and purpose part of his psychological make-up. It would therefore not be inappropriate if the child now becomes the judge as to what, in his work, is good, bad or indifferent.

1.3.3 The Derivation of Aesthetic Criteria

Of investigation into the criteria used by children Lowenfeldt (1970) comments that there is a tremendous variety of organization (of form) in art and that young children organize (lines, textures and colours) intuitively. One may therefore expect that every piece of work produced by the child is as diversely individual as the child who produces it. Therefore to use these products as stimulus objects may give rise to an equally diverse and heterogeneous set of responses.

Greenberg (1967) hints at the impracticability of analysis of such responses:

"Because aesthetic judgments are immediate, undeliberate, intuitive and involuntary, they leave no room for the conscious application of standards, criteria, rules or precepts. That qualitative principles or norms are there somewhere, in subliminal operation, is certain;

otherwise aesthetic judgments would be purely subjective...Yet these objective qualitative principles, such as they are, remain hidden from discursive consciousness: they cannot be defined or exhibited". (from Kellogg, 1969, p.247).

In beginning to consider the implications of the above one may turn to an examination of what the child is making use of in the drawing when he makes aesthetic judgments. If there is some universality or uniformity to the drawings in the first place this would at least suggest that working with uniform perceptual stimulus should give rise to a certain uniformity of response.

In terms of what is available to the child in a drawing which he must evaluate in some way, Kellogg (1969) suggested it was form. In her extensive analysis of pre-representational art Kellogg discovered universal graphic forms which evolved in a developmental sequence. It was the mastery of these forms, she held, that allowed the child to represent something recognisable in his drawings.

Kellogg went on to say that....

"the basic line formation and motifs that are appealing in child art are also found in the art of adults;...child art contains the aesthetic forms most commonly used in all art". (p.44).

The forms used can therefore not be considered idiosyncratic. Their combination perhaps, but not their construction, is uniquely individual. It is this combination which is the source of an aesthetic reaction.

Fry (1956) offers the argument that:

"in all cases our reactions to works of art are reactions to relationships and not to isolated sensations, objects, persons or events". (from Gaitskill and Hurwitz, 1958, p.455).

All elements of a work of art are related in some way to one another - be they laws of perspective, occlusion, proximity and so on; and a child will therefore make use of such perceived relationships in making aesthetic judgments. He will also rely on underlying cognitive development.

1.3.4 Underlying Cognitive Development & Aesthetic Growth

The developmental stages which have been found to exist in children's art suggest that at certain ages all children, of a particular age group, are tending to draw in the same way and to choose predictable subject matter.¹

It has been claimed that the way a child draws is under the influence of his conceptual analysis of space i.e. his cognitive mode at the time. This is evident in Piaget's (1969) sense of the development of graphic representation:

"Although 'the intellectual realism' of the child's drawing shows no awareness of perspective...it does show topological relationships...and these topological intuitions are followed, after the age of 7 and 8 by both projective intuitions and a sense of Euclidian geometry". (p.67) (present writer's underlining).

-
1. Kellogg (1969). "Aside from the Humans, the early pictorialism of child art may be grouped under the following headings: Animals, Buildings, Vegetation and Transportation". p.114.

Three major stages appear to be evident in the development of graphic representation. Firstly, a period of introduction to the graphic medium and increasing manipulatory control through maturation and experience; secondly, the differentiation of certain forms from one another and the use of these forms to represent external objects; lastly, a stage whose origin has no apparent beginning, but when occupied is evident. This is the period during which sex differences, personality styles, emotional, intellectual and social experiences are evidenced in the method of production and the choice of subject matter. It may essentially be considered a period during which the child is now somewhat free of technical inadequacy and can choose to depict objects or scenes in a way more indicative of personality, emotional state and attitude to the art which reflects his inner and outer world.

The second stage has been broken down by some theorists (Burt, 1921; Kellogg, 1969) into periods indicative of finer developmental levels.

By virtue of their universality and the uniform progression evidenced through them, children of any one particular developmental level are producing what may be regarded as equivalent forms of art. This intrinsic standard must presumably be made use of by the child who is required to evaluate a collection of drawings from any one age group. If the child is viewing drawings which are spread over a wide age range, he may presumably draw upon what he is capable of producing i.e. use criteria derived from his present level of development.

Alluding to this aspect of evaluating drawings Vernon (1965) indicates from her research that it is not until ten or eleven that children can interpret what is happening in a picture.

This inability to see relationships, she claims, roughly parallels the ability in drawing, for the six and seven year old will draw objects, but these objects are related in the picture only by being placed one beside the other, and it is not until later that overlaps begin to occur. (Lowenfeld and Brittain, 1970, p.328). Related to this would be the conceptual explanation put forward by Piaget. According to Piaget the child draws what he knows rather than what he sees. "The emphasis on the child's knowledge rather than his perception of the object is needed to account for the discrepancy between the child's accurate perception of the object and his 'distorted' portrayal in the drawing". (Golomb, 1973, p.201-202).

The point being made is that there may exist models or frames of references, be they external or internal, which the child is making use of in arriving at a decision or in explaining why he thinks a certain drawing is "good". This frame of reference could therefore be seen to organize the "immediate, undeliberate and intuitive" aesthetic judgments referred to by Greenberg above.

The above suggests that the child's developing cognitive capacities may indicate certain "critical abilities". However to account for a child's evaluation of the merits of a drawing purely in terms of his cognitive abilities is to overlook the aesthetic development of the child, which must, in some way, contribute to the acquisition and utilisation of critical powers.

Aesthetic growth is often considered the basic ingredient of any art experience (Lowenfeld, 1970). For Lowenfeld aesthetics refers only to the perception and appreciation of art. Quoting Fry (1962), Kellogg (1969) implies that children do have "aesthetic sensitivity":

"the form of a work of art has meaning of its own and the contemplation of the form in and for itself

gives rise...to a special emotion which does not depend upon the association of the form with anything else whatsoever...A child's reaction to his own drawings is an aesthetic one" (Kellogg, 1969, p.227).

1.3.5 The Child as Critic

Requiring a child to say what he likes about a certain drawing presupposes that the child is an objective viewer who can externalize reasons for his enjoyment of a piece of work. However in the light of Piaget's writings on egocentrism one may assume that a decrease in egocentric thought must precede the development of objectivity.¹

Lowenfeld (1970) has stated that:

"There is a difference between aesthetic preference and aesthetic judgment. Most children can tell which picture they like best...but the ability to judge one picture as better than another is a different problem" (p.328).

-
1. Machotka (1966): A study analyzing the basis on which children evaluated paintings showed that although younger children would establish an emotional relationship to a painting, it was usually in terms of a personal relationship. It was not until the age of 12 that an emotional relationship was established with a picture that was outside the youngster himself. Machotka related this change to a decrease in the egocentrism which occurs at about the age of 11 when thought loses its dependence on concrete data.

Gardner (1973) certainly regards the child as an accomplished critic by the age of 8. His theory is an attempt to link developmental questions and aesthetics. He sees the end-point in the development of the child as "full participation in the artistic process" i.e. the capacity to be a creator, performer, critic and audience member with respect to an art form. By the ages of 7 and 8 years Gardner holds that the child has become a full participant and need not pass through any further qualitative changes. A critic according to Gardner is one who can communicate the outcome of their observation of an art form with others. In this vein Ducasse (1948) claims:

"The critics evaluations then ultimately are just as purely matters of his individual taste as are those of the unsophisticated amateur. The great difference even when both of them have the same taste is...that the naive observer is pleased and displeased without knowing exactly why, whereas the critic does know what specific features are responsible for his own pleasure or displeasure in a given work of art" (from Kellogg, 1969, p.246).

The important point is that the child has the ability to justify why he regards a drawing as good or why he says he likes it at all. It is however necessary for the researcher to be sensitive to justifications offered by the child by virtue of his being forced, in the investigation situation, to say why he likes a particular drawing. The researcher must not suggest answers to the child by asking questions such as "Is it the light red that you like in this drawing?" The answer "yes" may mean either he does in fact or he feels obliged to give an answer by virtue of the situation he is placed in.

1.3.6 Conclusion

To summarize the above the following points can be made:

- (i) The way a child thinks about art is uniquely different from the way an adult thinks about art.
- (ii) His thinking is influenced or organized in some way by his level of cognitive development
- (iii) His thinking changes according to the specific psychological needs art activities of a particular developmental level may be fulfilling
- (iv) His aesthetic growth awakens in him a sensitivity toward art and his developing objectivity allows him to communicate his feelings.

1.4 Do Children Produce "Works of Art"?

1.4.1 Introduction

Most of the preceding discussion has concerned itself with the appreciation of adult art by children. The theoretical explanations are all concerned with the feelings and justifications evoked in children by the art of adults. The question to ask is "Are the same feelings and justifications evoked in children by other children's art and do the theoretical explanations for the basis of such responses hold equally well for child art as for adult art?"

If the adult and the child are producing essentially the same thing, and this is called 'art' in both instances, then it would not be improbable that the same feelings are evoked and that the same theoretical explanations are tenable. However it does not require an expert to see the fundamental differences between, and presumably to 'feel' quite different about, "A Day at the Beach" drawn by 8 year old, for example, and "Bathers at Asnières" by Seurat. One may be tempted to consider "A Day at the Beach" as a, developmentally speaking, primitive version of the Seurat in that it lacks the technical sophistication of such. However, technical sophistication

as a criterion for an adult work is not adequate - especially if it means adherence to the classical rules of painting, in the interest of producing visually realistic two dimensional representations of a three-dimensional world.

1.4.2 The Process of Discovery

Louis Arnaud Reid (1969) offers an illuminating discussion as he sets himself the question - "Is it 'art' that children do?"

Reid begins to answer this question by stating that children have what are in fact aesthetic experiences¹ from very early days, though they give no labels to it. A child may get intense aesthetic delight from things that happen to him, or from things that he does. More specifically, of the aesthetic experiences associated with their art Reid says:

"It is the delight in the fresh meaning which comes of the union between the seeking active self of the child, and the medium whose independent characteristics are a facet of the independent external world".
(p.279).

-
1. "In the course of time...the term "art" has taken on in most modern societies the implication of aesthetic appreciation, that is, of enjoyment through what are considered the nobler senses of sight and hearing". (from Art: A History of Painting, Sculpture and Architecture by Frederick Hartt (1976, p.13). Most definitions of art include the use of the word "aesthetic" without attempting to define such a word and more strictly than done so by Hartt. With reference to the psychology of art, terms such as "aesthetic experience" are also used in much the same way.

Barbara Hepworth says of the child engaged in an art activity:

"The child...is discovering the independent world with his interaction with the medium. His contemplative enjoyment of the new meaning which he finds in this, even if it is only momentary, is aesthetic, and has a common character with the aesthetic in all art making; a discovery in union". (from Reid, 1969, p.279).

Reid goes on to say that these rudimentary experiences can have an aesthetic quality; but they are not 'art' in any serious recognized sense. 'Art' seems, for Reid, to imply some measure of intention - intention to make and give form to something.

"It involves some element of self-criticism: if the thing is not quite right, it must be altered...The making does not of course exclude accident...but it is the use of accident...which distinguishes the aesthetically pleasing in itself from the aesthetically pleasing in art" (Reid, 1969, p.279).

To refer once again to cognitive factors implicated in childrens' art, this notion of the making use of accident is not at all dissimilar to what is happening during the development of the primary, secondary and tertiary circular reactions described by Piaget. Certainly it views development in the arts as facilitated by the child's interaction with the environment and more specifically the art medium.

Gardner's definition of an art form strongly implies intention on behalf of the artist:

"Every art form involves communication on the part of one person to another by means of a symbolic object that the first has created and that the second is able in some way to understand, react to or appreciate". (Gardner, 1973, p.30).

With reference to "A Day at the Beach" and "Bathers at Asnieres" Reid states:

"From this (childhood experimentation) to making of 'works of art' there is no division but only a difference of degree - the degree of planning, complexity, insistence on unity. Very young children do not attain this and are not interested in doing so. Older children may go a long way towards it, though distinction in it can only be expected at a fairly mature age". (p.278).

A recent study by Carothers and Gardner (1979) investigated the manner in which and the time at which children begin to produce works of art or make a transition to aesthetic production and perception within the sphere of graphic expression. This study come to the following general conclusion:

"For the present, we have secured evidence documenting significant transitions in childrens' drawings along two fundamental dimensions of the aesthetic.¹ These findings suggest that although

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1. "According to Goodman (1968) four symbolic characteristics are symptomatic of the aesthetic. These symptoms - syntactic repleteness, exemplification and semantic and syntactic density - do not rigidly categorize experiences or objects as aesthetic and nonaesthetic, but serve rather to illuminate the essential properties that underline works of all styles and media. As symptoms they tend to be present rather than absent in aesthetic works" pp.570-571

The study by Carothers and Gardner followed two aesthetic properties or symptoms: syntactic repleteness and expression (metaphorical exemplification). "Syntactic repleteness is the property whereby all aspects of the lines in a drawing are constitutive.

contd...

children work extensively in the drawing medium from an early age, it is only during the pre-adolescent years that children can produce drawings exhibiting certain fundamental aesthetic characteristics". (p.580).

1.4.3 Berlyne's Definition of a 'Work of Art'

Berlyne (1974) gives three definitions for a 'work of art', each of which will be taken separately, but all of which must be seen to be mutually dependent and complementary.

- (i) A work of art is analyzed as an assemblage of elements, each of which can transmit information from four distinct sources:

If a squiggle is construed as the outline of Mount Fujiyama, with every variation in thickness, lightness and shading relevant to its interpretation, that line is functioning in a syntactically replete fashion. If on the other hand the same squiggle is taken to be an EEG reading, in which only the absolute values on the ordinate and abscissa matter, such a symbol is syntactically nonreplete and is not functioning aesthetically". p.571

"Expression...is the property whereby drawings convey feelings, moods or ideas...There is no sharp dividing line between expressive and nonexpressive drawings. Rather, like repleteness, the aesthetic property of expressiveness is a continuum along which drawings vary". p.571

- (a) characteristics of an external object,
- (b) psychological processes within the artist,
- (c) social norms,
- (d) characteristics of other elements of the same work.

It cannot be denied that when a child has completed a drawing or painting, this work contains elements which transmit information from all four of the above. In response to the above, it has been noted:

- (i) (a) "the aim of the child's apparently artistic development is not art, but reality".
(Groezinger in Reid, 1969, p.274).
- (i) (b) "Insofar as human figure drawing represents a concept of body image as experienced at that time, it will tend to express, unconsciously and symbolically, the hurt that is making the child painfully aware of his feelings". (Di Leo, 1973, p.36).
- (i) (c) "The development of social awareness goes on also in the portrayal of parts of our society with which the child can identify". (Lowenfeld and Brittain, 1970, p.29).
- (i) (d) "Up to this point, we have considered the relationships of parts of drawings to one another and to the page. The concepts we have drawn upon such as economy of units, number of parts, type of line, arrangements, allow each part its own boundary and its own space". (Goodnow, 1977, p.57).
- (ii) A work of art is regarded as a collection...of symbols in accordance with the conception of signs and symbols developed by the semiotic movement. Aesthetic symbols

have two distinguishing characteristics:

- (a) they are iconic i.e. they have properties in common with the objects or events that they signify,
- (b) they serve to communicate "value properities" i.e. aesthetic symbols communicate intrinsic values - the artist's views on what objects, real or ideal, deserve attention.

Of the above it can be said:

- (ii) (a) "At about 8 or 9..."visual realism"...presents two new features. First, the drawing now represents only what is visible from one per-
-spective...Also objects in the background are made gradually smaller in relation to objects in the foreground. Second, the objects in the drawing are arranged according to an over-
-all plan and to their geometrical proportions". (Piaget, 1969, p.65).
 - (ii) (b) "To the extent that art experience can help children project anger or fear indirectly through symbols, it can help them express unwanted feelings...Signs are linked to con-
-scious thought and simply denote the objects to which they are assigned. Symbols express indirectly by means of metaphor". (Silver, 1978, p.33).
 - (iii) A work of art is regarded as a stimulus pattern whose collective properties...give it a positive intrinsic hedonic value i.e. contact with the work is pleasurable and rewarding in itself and not because it affords access to other events with beneficial or noxious qualities.
- Kellogg's (1969) quotation of Fry (1962) can best be seen as a response to this :

"Forms of art have sources and emotional effects of their own. In child art, the sequence of line formation appears independent of any pictorial associations" and again "...the contemplation of form in and for itself gives rise in some people to a special emotion which does not depend upon the association of the form with anything else whatsoever". (Kellogg, 1969, p.228).

1.4.4 Conclusion

It is suggested above that children's drawings could be considered "works of art". However it must be borne in mind that while the child is still experimenting within the medium, and practising the technical rules, he is not altogether free in what he chooses to depict or how he chooses to do this. Therefore, his finished product must be considered, (at least up to the stage where the incumbrances, previously mentioned, are shed) as the end result of the interaction between his overall ability, as set by motivation and experience, and his psychological-emotional states.

Arnheim (1970) comments on this interaction when he claims:

"At the same time, ofcourse, a beautiful drawing has qualities of art. It tells not only about diving (for example); it also conveys the "sense", the live experience of the event. This effect is obtained by the aesthetic qualities of balance, order, and expression ... However, all this is by no means alien to the visual lesson worked out by the child. Here, as everywhere else in art, "beauty" is not an added decoration, a mere bonus for the beholder, but an integral part of the statement. Every aspect of the picture, informational or evocative, is in perfect fit with what the child understood, felt and tells." (pp.259-260) (present writer's underlining)

The general impression that may be derived from the above is that children's graphic productions are essentially an externalization of their internal states, where these states include:

- (i) internal cognitive representations of the external world;
- (ii) affective connotations attached to elements of this external world and
- (iii) preferences for either classes of subject matter or modes of representation.

The drawings may be analysed or interpreted therefore on two levels:

- (i) the extent to which the child has learned ways in which to represent his environment symbolically - the "visual lesson" and
- (ii) what the child "feels" about this environment - the "live experience of the event".

However, whichever level is adopted, it should not be denied that a child's drawing is remarkably similar to the adult's work of art in terms of what both "do" for the artist.

PART II THE STUDY

Summary of the Method

Since there did not appear to be any selection procedures available for a study of this nature it was necessary to examine over one thousand children's drawings and to establish protocols for the selection of the stimulus drawings used in the present study.

Following the above the subjects viewed the stimulus drawings, indicated their preferences and gave reasons for these preferences. Subjects were of the age range 6 to 12 years, with 5 male and 5 female subjects per age group, making 70 subjects altogether.

Two data collection sessions, separated by two days, and using the same sample in each, were held. The first session was useful as an introduction for both the subjects and the examiner to the examination situation, and it provided guidelines for the subjective application of Piaget's clinical method of examination to the second session. Data from the first session was not used in the final analysis. The second session provided all data used in the present study.

Explanation of procedural details follows, therefore, the following plan:

- 2.1 Session One : The Pilot Study
- 2.2 Justification for & discussion of Session One
- 2.3 The Clinical Method
- 2.4 Session Two : The Study

2.1 Session One : The Pilot Study

2.1.1 Sample

The sample consisted of five Asiatic boys and five Asiatic girls¹ from each of seven age groups, being 6 to 12 years. Subjects were chosen arbitrarily by teachers at the school who had no knowledge of the nature of the research.

The school drew children from a relatively homogeneous socio-economic community, low to middle class.

All subjects participated in art lessons in accordance with the school syllabus, none having extra-curricula lessons.

2.1.2 Stimulus Drawings

Children aged 6 to 12 years who did not participate in the research were asked to depict the topic "Things I like Doing or Seeing" in crayon on white cartridge paper, 30 x 40 cm. Approximately 40 specimens per age group were collected. Five drawings from each of the seven age groups were selected to satisfy the following criteria:

- i. Inspection of over 600 drawings² prior to the commencement of this study familiarized the researcher with drawings which were average in standard for each age group.

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1. Any cross-cultural considerations are entirely beyond the scope of the present study. Asiatic subjects were used because of their accessibility and the co-operation shown both by the Department of Indian Education, and the school from which the sample was drawn.
 2. These drawings were drawn from two schools. The first not involved in the research, and the second the school from which the sample was taken. Both schools were comparable in terms of socio-economic backgrounds of children.

ii. A physical analysis of the 35 drawings used in the research revealed general developmental features typical of each age group, according to Lowenfeld (1970) and Luquet (1927)¹.

iii. Within each age group i.e. for each set of 5 drawings, any one alone, or together with another or more, would contain the evaluative criteria children may use.

These being:

(a) Content (subject matter):

Identification with the subject or activity represented e.g. "I like to ride horses".

(b) Content:

Affective tone or the character of the picture, e.g. "It's sad".

(c) Content:

Other than (a) or (b) e.g. "There's lots of flowers".

(d) realistic representation e.g. "You can see it's a.."

(e) clarity e.g. "It's neat"

(f) contrast e.g. "I like black and yellow"

(g) harmony e.g. "The colours look nice together"

(h) colour e.g. "I like purple"

(i) composition e.g. "All the flowers are falling over"

(j) luminosity e.g. "A very pretty effect of light"

(k) other e.g. "I like looking at it"; "it's beautiful"

The above categories are taken from Mackotka (1966).

1. See Lowenfeld (1970) for a detailed exposition and Piaget and Inhelder (1969), pp.63-65.

2.1.3 Procedure

2.1.3.1 Method of Presentation

During this session each of the seven age groups viewed the five drawings, done by children of the same age i.e. six year olds saw drawings done by six year olds, seven year olds saw drawings by seven year olds, etc. Therefore each age group saw a different set of drawings. Drawings were labelled A to E and the paired comparisons method of presentation was used. Each subject therefore viewed 10 pairs, in the following sequence :

	<u>To left of S</u>	<u>To right of S</u>
(i)	A	B
(ii)	C	D
(iii)	E	A
(iv)	D	B
(v)	E	C
(vi)	A	D
(vii)	B	C
(viii)	D	E
(ix)	C	A
(x)	B	E

To control for any possible order effects order of presentation was reversed for alternate subjects.

2.1.3.2 Instructions to Subject

Upon each successive pair the subject was requested to point out which of the pair he or she liked and to say why they liked it. If necessary, the subject was prompted. It would be considered necessary to prompt if :

- (i) the subject appeared at a loss to say why,
- (ii) the researcher wished to press for a more specific answer or a richer variety of reasons given.

Prompting included the following :

- (i) Repetition of the subjects' "It's a house" in an inquisitorial tone.
- (ii) "Why don't you like this one?" with reference to the drawing not chosen.
- (iii) "What makes this one nicer than that one?" with reference to the drawing chosen.
- (iv) "Is it a better drawing?".
- (v) "What makes it a better drawing?" : if reply to (iv) was "yes".
- (vi) "What's nice about/what do you like about..." if the subject simply named the central element or an element in the drawing.

2.1.3.3 Recording of Responses

The subjects' reasons were tape-recorded and a verbatim transcript of these responses was taken down.

2.2 Justification for and Discussion of Session One

2.2.1 Rationale

During Session I subjects from different age groups viewed different sets of drawings. For this reason the comparison of one age group with another was not possible. However, Session I allowed the following requirements to be satisfied:

- (i) Familiarization of the subjects with the investigation procedures and task demands.
- (ii) Noting of idiosyncratic features of either individual subjects or particular age groups.
- (iii) Providing of material which would be suggestive of the most appropriate areas for the subjective application of the Clinical Method (Piaget 1973)¹ for Session II.

1. From The Childs Conception of the World ; Piaget (1973)

2.2.2 Observations

The following behavioural observations were made in the light of the above :

- (i) For all age groups, subjects were restless and did not appear to understand that they were "free to say what they liked". This restlessness and inhibition led the researcher to believe that subjects displayed behaviour clearly indicative of feeling threatened or at least uneasy in the situation. As questioning progressed this gave rise to a greater degree of cooperation, spontaneity and, therefore, it is assumed authenticity of response. For Session II therefore all subjects were familiar with the situation and began immediately, feeling relaxed and enthusiastic.
- (ii) In so far as attention was concerned there appeared to be a drop off in distractibility and a complementary development of concentration and interest with increase of age. In Session II therefore, the type of prompting used was varied for the younger groups, in the interests of maintaining interest and attention; whereas for the older groups an established line of questioning was persisted with.
- (iii) Only two subjects in seventy commented that they had seen certain pictures before, and the younger the subject the more the tendency to "change the mind" as to which picture they preferred i.e. when a previously preferred picture was paired with another, different picture, the "other" picture would be selected. It was suspected that subjects, especially the younger groups, felt that they could not choose the same picture more than once. Therefore remarks such as "When you see these two pictures together now" or "You've seen this picture, but when you see it with this one, which one do you like?" were addressed to subjects during Session II.

- (iv) For all age groups, but predominating for the older groups, subjects appeared to anticipate the request to justify their preference. A "response style" was adopted by such subjects in order to satisfy the requirements of the situation. Such responses included the repetition of a particular reason for liking the drawing, e.g. "It's beautiful" or "I like it" irrespective of the type of drawing, and in some cases offered without having examined the pair of drawings at all. During Session II two approaches attempted to overcome the above.
- (a) requests for justification did not follow every successive paired presentation, but alternative presentations,
 - (b) subjects were persuaded to extend such reasons beyond merely "It's beautiful" by being asked "What makes it beautiful" or "Why is it beautiful?".
- (v) Artefacts such as the influence of a particular experience were noted during Session I.

For the eight year old group an introductory talk (largely in the interests of familiarization) on the subject's favourite colours gave rise to instances of this being used as a justification for preference e.g. "It has my favourite colour in it". It was decided therefore not to indulge in any such introduction during Session II.

The eleven year olds had recently been part of a "Conservation Awareness" programme. Justifications which included direct reference to conservation elements, and which, it was felt, were not couched in the idiom of speech usually used by the subject, were evidenced for this group. An example would be "I like trees, because they give us work, shade and beautify our country".

For Session II an attempt was made to circumvent this type of response by drawing the subjects' attention to more aesthetic criteria, or to ascertain why the other picture was not liked. In this way other criteria used by the subject would be evidenced. Although the specific experiences have an interesting and important influence upon the type of justification, not all groups could be compared on this criterion - it therefore being necessary to be aware of and attempt to control for such during Session II for the eleven year old group.

- (vi) It was noted that the younger subjects tended to name an element in the preferred drawing, which was not in the other, when asked to justify their preference.

An example from the transcript for a seven year old :

"Because this one (the preferred drawing) has a bird in it".

The majority of subjects (sixty-five percent) were observed to alternate attention from one drawing to the other, and appeared to attend to only one part of each drawing at a time. It was thought that the subjects systematically matched elements between the drawings in an attempt to locate elements which may or may not be common to both. Once an element, which was not common to both, and which was included only in the preferred drawing, was located, its presence was used as a referent for justifying preference.

This type of behaviour i.e. the alternating attention, is intrinsic to the method of paired comparison. However the type of response i.e. the pointing out of a single element, is not necessarily intrinsic to the method of examination but given rise to by the nature of the task demands.

The drawings contained many elements which were graphically discrete and which, it may be assumed, conceptually belonged to a unit i.e. they comprise a "picture of something". Their connections with each other would be indicated by technical factors such as perspective, scale, occlusion etc.

In that the younger child has not himself fully mastered such technical rules, and tends to draw haphazardly with little or no regard for scale and proportion,¹ he may not be sensitive to the operations of such rules within a completed work. Therefore it may be ventured that he does not really "see" a drawing as a unitary piece of work, but rather as a collection of graphically discrete elements, each of which is a drawing on its own. He does not appreciate any thematic or scenic unity.

As an illustrative example the following extract is taken from the transcript. The subject (in Session I) was a 6 year old.

Question: Which drawing do you like?

Answer: (Points to selected drawing).

Q: Why is that?

A: There is a clown.

Q: Can you tell me what the drawing is about?

A: A clown.

Q: Anything else?

A: And a lion.

Q: What can you see the whole picture to be of?

A: A bird and an umbrella, and a man.

The drawing was of a circus scene.

1. "Very young children do not attain this (degree of planning, complexity, insistence on unity) and are not interested in doing so". Reid (1969) p.278.

In addition to the subjects' lack of awareness of thematic or scenic unity it is suggested that this type of response, and the tentative explanation offered for such, is relevant only insofar as children's drawings, as stimulus objects themselves, are concerned.

As mentioned previously, elements are drawn as the child feels they should be, structured in the main only in terms of the availability of space (Goodnow, 1977). In their drawings there is, especially for younger children, not much concern for backgrounds, and certainly no concern for perspective or proportion. The placing of elements over the page, although not random, does not follow any technical system and therefore elements appear disconnected and both perceptually and conceptually remote from each other. Elements are only part of the same drawing because :

- (a) For the artist, the child himself "knows" what the complete picture represents and knows how elements are related but is not able to, at least until nine or ten years old, indicate relative positions of elements technically and,
- (b) For the viewer, the elements are simply on the same piece of paper i.e. within the same borders and therefore, physically speaking only, part of a unit. This however does not appear to be an influential cue for the child viewer.

Thus as stimulus objects the young child's drawing can be regarded as conducive to the type of response noted. This type of response is however not necessarily as purely artefactual, as the above suggests. It follows the pattern described by Piaget (1973) as "liberated conviction".

"The liberated conviction is necessarily influenced by the examination, since the particular way in which the question is worded and presented to the child forces it to reason along a certain line and to systematize its knowledge in a particular manner, but nonetheless it is an original product of the child's thought, since neither the reasoning it performs in order to answer the question nor the sum total of the previous knowledge on which it draws during its reflection are directly influenced by the experimenter". (p.22).

As interesting as the above may be it was considered necessary to draw the attention of the subject, in Session II, to the whole picture if he continually responded in terms of the relative presence of an element. Questions such as "What is the picture about/of?" were addressed to the subject. This was done in an attempt to overcome the possibility that the response was artefactual in that the child felt coerced to say something, anything in reply. This would be "answering at random" and such "(is) to be severely rejected...since it merely reveals the subject's lack of comprehension". (Piaget, 1973, pp.28-29).

The value of Session I for Session II may be summarized under five main points :

- (i) Noting that subjects were restless and inhibited, it being necessary for them to be more relaxed and spontaneous.
- (ii) The adaptation of the style of questioning for the purposes of :
 - (a) maintenance of the younger subjects attention and probing more consistently as far as the older subjects were concerned and

- (b) circumvention of the subjects anticipating being requested to justify their preference and so contrive answers to satisfy the examiner.
- (iii) It provided knowledge of the influence specific experiences had on the responses given by the subjects.
- (iv) Observation that subjects were not making comparative statements when justifying preference and it being necessary to draw the subjects attention to the comparative nature of the examination where possible.
- (v) Noting of the "relative presence" response and consideration of its experimental value.

2.2.3 Conclusion

Since the above discussion devolves upon the subjective observations in the examination situation, and that the approach in Session II would be modified in ways suggested by the above, it is necessary to review those aspects of Piaget's clinical method which would guide the method of Session II.

2.3 The Clinical Method

The discussion above touched upon issues raised by Piaget (1973) in his consideration of the problems and methods of gathering data from and about children.

Piaget described defects and shortcomings of both the test and the method of pure observation concluding :

"With this in view we shall use a third method which claims to unite what is most expedient in the methods of test and of direct observations, while avoiding their respective disadvantages: this is the method of clinical examination..."¹

1. Piaget (1973), The Child's Conception of the World, p.19.

At this point it must be emphasised that the phenomena discussed by Piaget arise from clinical examination where the child is required to draw on his memory and imagination and to rely on his present level of cognitive development when answering questions like "Where does night come from?" The difference between that and the present study is that here the subjects have concrete stimuli to look at and to talk about. Here too they must draw upon the above named capacities, but, it is argued, in a different way and for different reasons.

Nevertheless, it is also felt, that knowledge of the types of answers and the criteria for recognizing them, is particularly relevant to the present study. Observation is here also combined with individualized questioning and the subjects may be required to answer a question, the rationale for which, they cannot comprehend - and hence may indulge in some types of answers which Piaget claims are to be rejected, or to lead the experimenter to ask questions, guided by the child's answers which lead to other answers, also to be rejected.

The present research therefore was particularly mindful of the clinical examination as a method of gathering information and of three other very important points, also made by Piaget:

- (i) "A good experimenter must...unite two often incompatible qualities: he must know how to observe...to let the child talk freely..., and at the same time he must constantly be alert for something definitive...".¹
- (ii) "The greatest enemies of the clinical method are those who unduly simplify the results of an interrogation, those who either accept every answer the child makes as pure gold, or those on the other hand who class all as dross".²

1. Piaget (1973) p.20

2. Ibid., pp.20-21

(iii) "It is impossible to state here the precise rules for the diagnosis of these individual reactions; this must be the result of practice...since the clinical method can only be learned by long practice".¹

Piaget classified the various possible types of answers a child can offer in an interrogatory situation, into certain broad categories. These will be outlined and discussed, together with examples from the present study where possible. All examples have been selected from the transcripts of Session I.

2.3.1 Answer at Random

"When the child appears uninterested in the question and is not stimulated to any effort of adaptation, he replies at random with whatever first comes into his head".²

It is strongly implied, by the above description, that behavioural observations are the more significant in deciding upon the type of answer given by the child.

Piaget also claimed of this type of answer that "there is no systematization in the invention nor does the child take any interest in it".³

It has been previously pointed out that the younger the child the more restless and threatened by the situation he appeared to be. These children were also observed to be easily distracted and to indulge in their own distracting behaviour this possibly indicative of disinterest, in the situation.

1. Piaget (1973) p.21

2. Ibid., p.21

3. Ibid., p.28

Where possible i.e. if the subject "warmed" to the interrogation, the following two rules guided cross-examination:

- (i) To probe all around the suspect answer to see whether or not its roots were solid.
- (ii) To ask the question under as many different guises as possible.

Example:

The subject chooses a picture and the following question and answer dialogue proceeds :

- Q: Why do you like that one?
- A: It's beautiful.
- Q: What makes it beautiful?
- A: The trees and flowers in it.
- Q: Do you like looking at drawings of trees and flowers?
- A: Yes.
- Q: Are all drawings with trees and flowers beautiful?
- A: Yes.
- Q: Is there anything else in this drawing that makes it beautiful?
- A: The people

At this point it can be seen that the subject has answered-at-random initially, and held onto this line of answer, even illogically with the question "Are all drawings with trees and flowers beautiful?," and then to elect "people" as well, which make the drawing beautiful.

It will be acknowledged that there appears to be systematization in the answers; it is the behavioural observation together with this, which make for a more sensitive detection of answer-at-random.

However, it is frequently very difficult to separate answer-at-random from suggested conviction by perseveration, which will be discussed later.

2.3.2 Romancing

Here the child, "without further reflection, replies to the question by inventing an answer in which he does not really believe, or in which he believes merely by force of saying it".¹

Although Piaget describes criteria for recognizing romancing, he also however points out that "the only method of tracking it down is to multiply cases. In dealing with a large number of subjects, romancing may be distinguished from the liberated and the spontaneous convictions...".²

Quite what constitutes a suitably large enough number of cases is unclear, but bearing in mind the previous claim that proficiency with the clinical examination takes many years to achieve, and therefore it may be added, considerable numbers of cases, the present investigation is inclined to regard the present sample as inadequate in number for accurate detection of romancing as a type of answer.

However, behavioural observations are implied by "When the questions are set to children, ...it often happens that, while looking perfectly candid and serious, they really make fun of the question and invent an answer simply because they like the sound of it". (present writer's italics).

At the expense of making sweeping generalizations, it will be pointed out that some behaviours exhibited by the subjects could suggest their "romancing".

In addition to the above, the distinction between answer-at-random and romancing may aid the experienced user of the clinical method in detecting romancing. The distinction is:

1. Piaget (1973) p.21

2. Ibid. p.30

"As regards the answer-at-random and romancing, they are easily distinguished even independently of the context: romancing is much richer and more systematized". (present writer's italics).

If systematization is evidenced by systematizing the answers so that they were always of the same kind, and appeared to be following a pattern, then consistent references made by the subjects to elements of a drawing could indicate such a type of answer. It is however acknowledged that such responses could possibly arise from the task demands only i.e. *inter alia* to satisfy the examiner.

Example:

The subject selects a drawing as "liked" and is questioned as follows :

Q: "Why do you like that one?"

A: (Pointing at the element named) "The flowers".

Q: "Is that all that makes it nice?"

A: "The people".

Q: "Anything else?"

A: "The sky".

However if one examines richness and systematization the following example suggests romancing.

For this example the two quotations are answers given when asked why the subject preferred the drawing over the other one, on two separate occasions i.e. paired with two different drawings:

A: "My uncle, he has a goat and I always play with the goat".

A: "Because the birds are sitting on the goat and the goat is looking at beautiful flowers".

In conclusion Piaget says of romancing :

"One would like to be able to rule out romancing with the same severity. But the question of romancing is one of the most delicate raised by the clinical study of the child" and....

"The problem is exceedingly complex, and from the beginning of our research we must be especially careful not to prejudice the nature of romancing. It is interesting in so far as it does not for the child bear the same relation to conviction as it does for us. We must therefore study it".¹

2.3.3 Suggested Conviction

"When the child makes an effort to reply to the question but either the question is suggestive or the child is simply trying to satisfy the examiner without attempting to think for himself, we shall use the term suggested conviction".²

To some extent the novelty of the interview during Session I could be seen to foster reactions of the second kind i.e. trying to satisfy the examiner.

Piaget describes two varieties of suggested conviction :

- (i) Verbal suggestion - here the examiner may in fact use words which are foreign to the subject or suggest possible answers, such as simple agreement or disagreement, by the choice of words in the question.
- (ii) Suggestion by perseveration - "continuing the conversation after the child's first answer tends to make him persevere along the line he has already adopted".³

Perseveration is also regarded as a form of the answer-at-random answer.

1. Piaget (1973) p.28

2. Ibid., p.22

3. Ibid., p.26

The example which follows illustrates both of the above. The upper case letters preceding the upper case Q and A, denoting question and answer respectively, denote the drawing chosen by the subject, usually by pointing at the drawing. Note especially the subject's answers to further examination upon choosing the same drawing more than once.

E....Q: "Why do you choose that one?"

A: "Because I like bunnies".

A....Q: "Why?"

A: (After a long pause the subject is prompted with the question "Do you just like looking at it?")
"I just like looking at it."

E....Q: "Because you like bunnies?"

A: "Yes."

B....Q: "Why that drawing?"

A: "I like colourful things."

A....Q: "Why?"

A: "I like to look at it."

Q: "Why don't you like the other one?"

A: "I don't like Guy Fawkes."

E.... Subject not cross-examined.

B.... Subject not cross-examined.

E....Q: "Why?"

A: "Because I like bunnies."

Q: "And this one now, it's got lots of colours and you said you liked it just now?"

A: (No reply)

C....Q: "Why?"

A: "Because I like cats."

- B....Q: "Why do you choose that one?"
 A: "I like colourful things."
 Q: "But that one (other drawing of pair) is also
 colourful - is this one (B) more colourful?"
 A: "Yes."

It can be seen that "bunnies" is an example of perseveration, as is "just like looking at it" - which is also however an example of verbal suggestion, as is "colourful".

In conclusion two points can be taken from Piaget :

- (i) "It must not be thought that suggestion is easily avoided. A long apprenticeship is necessary before one can learn to recognize and avoid the numerous forms of suggestion possible."¹
 (ii) "The suggested conviction is of no interest to the psychologist...(it) reveals nothing beyond the child's suggestibility..."²

2.3.4 Liberated Conviction

"When the child replies after reflection, drawing the answer from the stores of his own mind, without suggestion, although the question is new to him, we shall say there is liberated conviction."³ (present writer's italics).

Once again "after reflection" implies behavioural observations on behalf of the examiner. Frequently there were long delays between requesting reasons for preference and answers given, although this decreased with increase in age. This is shown below :

-
1. Piaget (1973) p.25
 2. Ibid., p.26
 3. Ibid., p.22

Age in Years	No. of Subjects per Age Group Who Delayed in Answering
6	7
7	7
8	6
9	6
10	4
11	3
12	3

If such delays can validly be taken to indicate "reflection" and not pure confusion, then the younger subjects were more inclined to answer with liberated conviction than the older subjects.

It will be suggested however that the instances of delays in answering may be indicative of confusion as opposed to reflection. This is indicated by the increase in delay in choosing which drawing was preferred as age increased. It is suggested that simply choosing a drawing as "liked" followed by pauses before offering justification for such preference indicates being pressurized into making a choice (which is artefactual of the method of paired comparisons) and then "being at a loss" as to reasons for that choice. However, delay in choosing initially may be taken to indicate a greater degree of reflection and comparison of the two drawings before the subject at that time.

The inconsistent but interesting decrease in delay before making a choice is shown below :

Age in Years	No. of Subjects per Age Group
6	2
7	3
8	4
9	4
10	7
11	3
12	6

It is felt that an examination of inter-judge agreement will throw more light upon this discussion. This however is not

altogether possible since each age group of subjects saw different sets of drawings. This however does not detract from the preceding discussion where comparisons between age groups have been made since these are behavioural observations which must be seen as situation dependent in a general sense and not drawing dependent in a specific sense.

However, discussion of the above issues will follow on the presentation of results for Session II.

2.3.5 Spontaneous Conviction

"Finally, when the child has no need of reasoning to answer the question, but can give an answer forthwith because it is already formulated or capable of being formulated there is spontaneous conviction".¹

Of liberated and spontaneous convictions the following points can be taken from Piaget :

- (i) "...this is the only real difficulty we encountered in applying the method - to distinguish the spontaneous from the liberated conviction..."²
- (ii) "The only means of distinguishing the spontaneous from the liberated is by having recourse to pure observation. It is here that every inquiry must end, just as observation must be the inspiration from which every research starts."³ (present writer's italics)

From experience in the examination situation it can be said that clearly distinguishable authentic examples of both the liberated and the spontaneous convictions were evidenced.

- 1. Piaget (1973) p.22
- 2. Ibid., p.32
- 3. Ibid., p.32

In conclusion it may be quoted, once more of Piaget :

"But the question whether it is possible in every case to distinguish the spontaneous conviction from the liberated conviction is not very important. The study of the liberated conviction is, however, of the greatest interest... It is a question of fact beyond challenge by any theoretical argument that the liberated conviction shows the same uniformity as the spontaneous conviction".¹

2.4 Session Two : The Study

2.4.1 Sample

As in Session I.

2.4.2 Stimulus Drawings

Drawings for the second half of the investigation were chosen from the above, such that they too satisfied the criteria described in Session I.

One drawing from each of the following age groups was selected: 6, 7, 9, 11 and 12 years. Age groups 7 and 8, and 10 and 11 were collapsed. This was for the following reasons :

- (i) According to Piaget's stages of cognitive development, there are no changes in cognitive functions between 7 and 8, and 10 and 11. Therefore by collapsing these ages it was hoped to establish clearer divisions in terms of the representational attempts at different levels of cognitive development.
- (ii) To represent all seven age groups would result in 21 paired-comparisons being made. This was not considered conducive to the maintenance of attention and interest - two factors important to this type of investigation. (Lowenfeld 1970; Berlyne, 1974).

1. Piaget (1973) p.24

2.4.3 Procedure

2.4.3.1 Method of Presentation

As in Session I, the paired comparisons method was used, however here all 7 age groups saw the same set of drawings. For both sessions investigation was commenced with the six year old group.

2.4.3.2 Instructions to Subject

As in Session I,

2.4.3.3 Recording of Responses

As in Session I, except here content analysis and subsequent appropriate analysis was undertaken on the data from transcripts.

2.4.4 Content Analysis

A preliminary examination of the transcripts indicated that not all the categories described by Machotka (1966) were evidenced in the present study.¹

The reason for this is unclear. It is proposed that the discrepancy is due to differences in both the sample and stimulus objects between this and Machotka's study.

Machotka used an equivalent age range i.e. 6 to 12 years, however all subjects were male. In the present study male and female subjects were used. The existence of possible sex differences could contribute to a difference in the quality or pattern of response between the two samples.

The stimulus objects for Machotka's study were colour reproductions of old masters', as opposed to original childrens' drawings in the present research. Qualitative differences these two types of stimuli could account for different categories being evidenced.

1. "Categories constructed without prior inspection of documents would no doubt exclude many important categories and include many that are superfluous and unnecessary." Bailey (1978)

The following eight categories were extracted for the purposes of the content analysis for the present study.¹

(i) Empathetic Content

Machotka (1966) separated references made to the subject matter of a picture into three qualitatively different types: Empathetic Content, Affective Tone and Other Content.

For the present study Empathetic Content was defined in terms of the child's relation to or identification with the subject matter. If the child saw himself as "part of" the picture, he would have justified his preference using a narrative story i.e. a story suggestive of his involvement in or participation with the depicted action or scene.

1. Guidelines for the selection of categories were taken from Bailey (1978). From the following quotations, and bearing in mind the nature of the present data, some of the difficulties encountered when striving for the goals of mutual exclusivity and exhaustiveness of categories, should become apparent. In the main, difficulty concerned the definition of the recording unit.

"Content analysis is any research technique for making references by systematically and objectively identifying characteristics within text (Stone et al. 1966, p.5)p.276.

"For any given recording unit (e.g. a word), it may sometimes be difficult or impossible to tell in which category the unit belongs without considering the context in which it is found...Thus if the recording unit is the word, the context unit may be a sentence, paragraph, theme, chapter, or the entire volume...However, when necessary, it must be chosen subjectively by the researcher, in the same manner as the set of categories and the recording unit." pp.282-283. (present writer's underlining)

"The complete elucidation of a theme may take only a few words or part of a sentence...The point is that determining the boundaries of a theme may be much more difficult and subjective than determining the boundaries of some other recording unit such as a word." p.281

Examples:

- (a) "You can ride fast on a horse, and it can take you far away."
- (b) "You can grow vegetables and take them to the market and sell them to get money to buy clothes."

(ii) Other Content

This category indicated by the subjects' commenting upon the presence or absence of a depicted object or part of a scene, without any further qualification or elaboration.

Examples:

- (a) "That is a horse".
- (b) "There are lots of people doing things".
- (c) "There are no flowers in this one".

(iii) Realism

When reference was made to the realistic representation as justification for preference this category would be evidenced.

Examples:

- (a) "That looks like a real horse".
- (b) "You can see this is a real saddle".

(iv) Clarity

This category would include references to clarity of line, the relative clarity of one drawing as opposed to the other, and to the "neat" appearance of a drawing.

Examples:

- (a) "This is drawn nicely".
- (b) "This one is just scribbled but this one is not".

(v) Contrast

For this category the subject would comment upon the juxtaposition of contrasting areas of brightness or colour. The intensity or richness of colour referred to, as being "coloured darkly" was also included here.

Examples:

- (a) "I like purple and yellow together".
- (b) "These colours are too light, but this one is coloured dark".

(vi) Colour

Category indicated if subject referred to either the "colourful" appearance of the picture or any specific colours.

Examples:

- (a) "It's a beautiful colour picture".
- (b) "This one has got all the colours in it".
- (c) "I like red".

(vii) Style

Included references to composition or the way in which the picture was drawn.

Examples:

- (a) "It's shaded/drawn nicely/beautifully".
- (b) "The flowers are drawn falling over".

(viii) Miscellaneous

This category included any non-specific reason for preference. Reference was made neither to any element nor manner of execution.

Examples:

- (a) "It's nice/beautiful/pretty".
- (b) "I like looking at it".
- (c) "I like the drawing/picture".

All examples quoted above have been drawn from the present study.

Subsequent to completion of the content analysis it was decided to reduce four of the above categories into a single category called Technical. The four categories condensed included Realism, Contrast, Style and Clarity.

By doing this a more appropriate comparison between the relative frequencies of response in categories which referred to "interest factors" as opposed to "technical factors" could be made.

PART III RESULTS & DISCUSSION

3.1 Questions Addressed

To determine what influences childrens' preferences for other childrens' drawings the following questions were asked :

- (i) Was the subject presented in the picture the dominating factor in judgment, and if so, in which way?
- (ii) To what extent was their judgment determined by design in the picture, by lines or arrangement i.e. technical criteria?
- (iii) Was the judgment influenced by purely personal interests, which the picture seemed to represent, according to their age or sex?
- (iv) Was there evidence of distinct preferences for certain pictures, and if so, what influenced these preferences?

The above questions were used to structure the presentation of results and discussion into four major sections:

- 3.2 Primary Criteria
- 3.3 Technical Aspects
- 3.4 Influences Upon Judgment
- 3.5 Distinct Picture Preferences

3.2 Primary Criteria

TABLE I RAW SCORES AND RELATIVE PERCENTAGE FREQUENCY OF APPEARANCE OF CATEGORIES

Age	Content		Colour	Tech. ¹	Misc.	Total	
	Empathetic	Other					
6	R.S	18	27	32	6	16	99
	%	18,2	27,3	32,3	6,1	16,2	100
7	R.S	13	8	6	0	5	32
	%	40,6	25	18,8	0	15,6	100
8	R.S	29	17	18	11	6	81
	%	35,8	21	22,2	13,6	7,4	100
9	R.S	8	17	17	12	9	63
	%	12,7	27	27	19	14,3	100
10	R.S	23	12	10	2	4	51
	%	45,1	23,5	19,6	3,9	7,8	100
11	R.S	25	6	19	2	7	59
	%	42,4	10,2	32,2	3,4	11,9	100
12	R.S	13	11	16	9	7	56
	%	23,2	19,6	28,6	16,1	12,5	100
TOT:R.S		129	98	118	42	54	441
TOT: %		29,3	22,2	26,8	9,5	12,2	100

It can be seen from Table I that the categories Empathetic Content, Other Content and Colour were used relatively more frequently than were the Technical or Other categories². The graph on following page illustrates this more clearly :

-
1. See Table III for breakdown of Technical Categories i.e. Realism, Clarity, Contrast and Style.
 2. Chi-square tests ($\chi^2 = 26,1$ at ,01 level) show there to be a significant relationship between the type of criteria used and the frequency with which it was used.

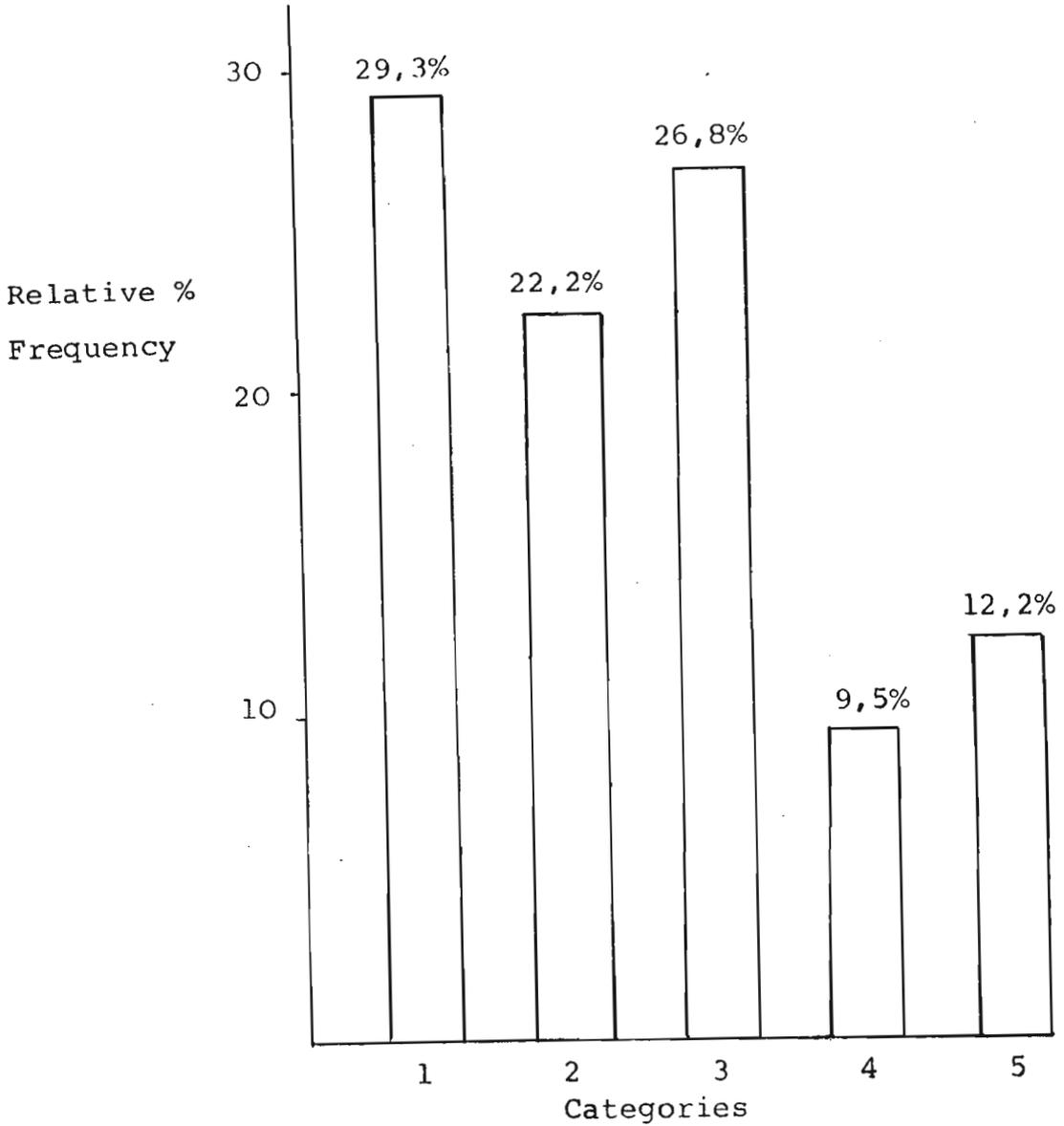


Fig.(i) Relative % Frequency of Categories for All Age Groups

Where: 1 ... Empathetic Content
 2 ... Other Content
 3 ... Colour
 4 ... Technical Aspects
 5 ... Miscellaneous

} These codes will be maintained for all tables and figures.

Fig.(i) seems to illustrate that subjects between the ages of 6 and 12 years make more reference to criteria of content and colour than of technical aspects such as style, clarity,

contrast and the accuracy of realistic representation.¹

However, the subject matter of the drawing was referred to in two qualitatively different ways i.e. either in terms of Empathetic criteria or Other criteria as defined earlier.

If the distinction between the two kinds of reference to the subject matter is not made i.e. if reference to subject matter per se is taken, references to subject matter exceed references to colour.

The scores below seem to show this trend:

TABLE II RAW SCORES AND RELATIVE PERCENTAGE
FREQUENCY OF CATEGORIES CONTENT AND COLOUR

Age in years	Content		Colour	
	R.S	%	R.S	%
6	45	58,4	32	41,6
7	21	77,8	6	22,2
8	46	62,2	18	24,3
9	25	59,5	17	40,4
10	35	77,8	10	22,2
11	31	62,0	19	38,0
12	24	60,0	16	40,0
X		65,4		32,7

-
1. This finding is in accord with that of Lark-Horovitz (1937): "Reasons determining the picture choice of the 6 to 10 year olds centre on the subject or content of the picture and it's colours." p.132.

Table II may be illustrated as follows :

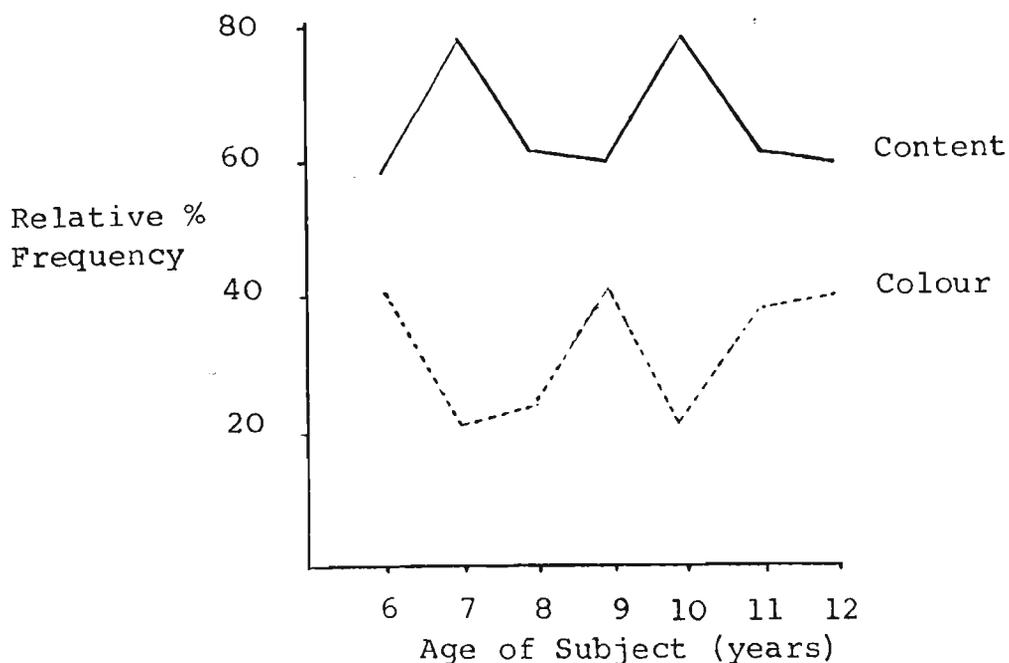


Fig. (ii) Relative % Frequencies of Categories Content and Colour

3.2.1 Discussion

According to the Piagetian school of thought, up to the age of twelve the child is still somewhat egocentric. It is suggested therefore that he will give reasons for his preference of certain pictures in terms of this egocentricity - i.e. his subjective way of thinking. These reasons would therefore not be an objective assessment of the objective merits of a drawing.

If one examines what is available to the child judge i.e. the drawing/s. the child judge is in fact judging between, one must see the drawing as rich in material which is an outpouring of another child's egocentric and subjective self.

"No art expression is possible without self-identification with the experience expressed as well as with the art material

by which it is expressed. This is one of the basic factors of any creative expression: it is the true expression of the self. The art materials are controlled and manipulated by one individual, and the completed project is his. This is as true at a very young age as it is for the adult artist." (Lowenfeld, 1970 p.15.)

The drawing, as the stimulus object, presents to the child judge, such material. The child has before him a "graphic description" of what another child felt like drawing and how he chose to go about it. Since there is little concern for formal or technical aspects in the art of children (Lowenfeld 1970), technical aspects, as evaluative criteria, are not as readily part of the stimulus object, as would be the evaluative criteria of content and colour.

In conclusion it would be valuable to quote Lark-Horovitz (1937):

"Just as the choice of picture indicates plainly the things around which interest centres at different age levels, the reasons given for choice show that aesthetic elements are only crudely present. The preferred picture tells most about the things the child likes and wants to know, the associations these interests evoke and the imaginings stirred by the picture.

The design in the picture, the structure of it, the affect achieved, count apparently only insofar as they accentuate the interesting subject." (present writer's underlining)
pp.133-134

It is suggested that the above discussion may have bearing upon the relatively more frequent appearance of the Empathetic content category than the Other content category.

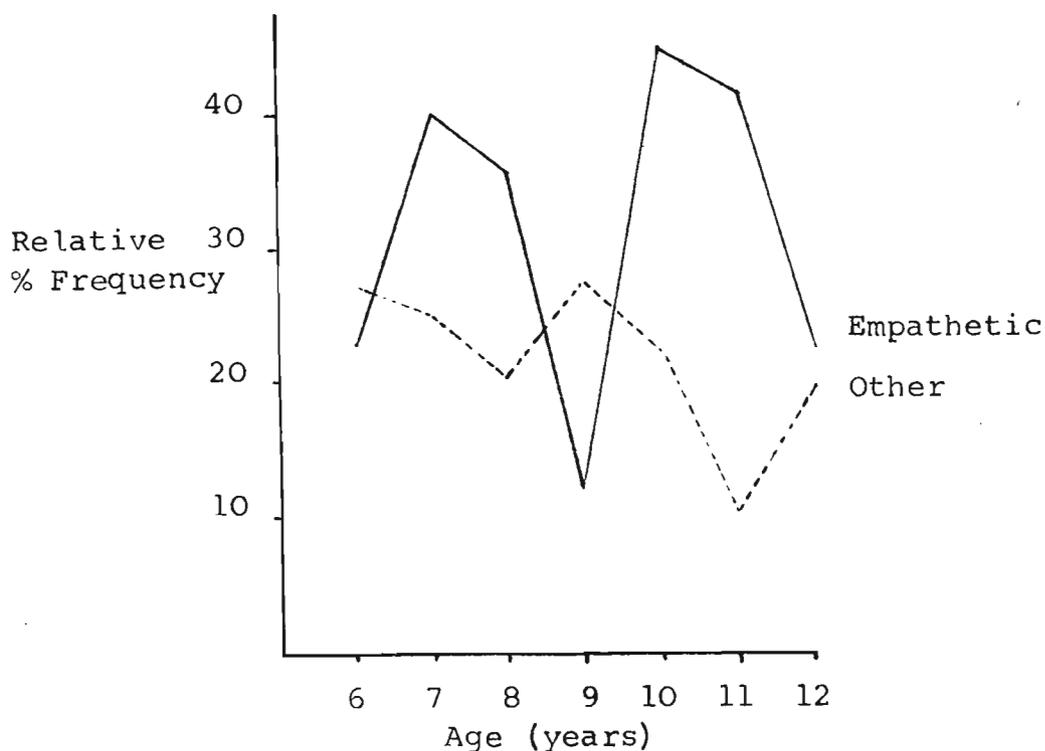


Fig. (iii) Relative % Frequency of Categories Empathetic and Other Content

Fig.(iii) illustrates that, with the exception of the 6 and 9 year old age groups, all other age groups relied more on Empathetic Content criteria than on Other Content criteria.

Criteria for Empathetic Content, being evidenced by responses which are suggestive of the subjects personal likes and dislikes, would in the light of the preceding discussion occur more frequently than would Other Content.

The excerpts below show quite clearly the distinction between Empathetic Content and Other Content.

The symbols (A, B, C, D or E) represent which drawing of the pair was chosen as preferred by the child, and the questions following that symbol, the questions addressed to the subject subsequent to his or her indicating which drawing was preferred.

The following excerpt illustrates an 8 year old female's reference to Empathetic Criteria. Sections in italics are representative of references to Empathetic Criteria.

B: Q - "Why do you like it?"

A - "I would like this one because I have seen a programme on TV and it's all about horses."

D: Q - "Why?"

A - "Because it has many pictures¹ and they're drawn neatly."

Q - "Why don't you like the other one (C)?"

A - "This one they just scribble."

E: Q - "Why do you choose that one?"

A - "Because it has flowers and when the wind blows it blows them that side."

Q - "Why don't you like this one (A)?"

A - "When I go into the forest I can get lost."

B: Q - "What makes this one nicer than the other?"

A - "This one is coloured dark but this one is coloured a bit light."

(Dark here refers to rich, bright colouring, as it seemed to for all subjects. Light, by contrast, to pale, somewhat translucent colours.)

E: Q - "What makes it nicer than the other one?"

A - "This one, when ... say now, this is a rose, you get the thorns, and when you hold it it looks attractive."

1. The subject is referring to the elements of a single composition. See Colour Plate 4.

- A: Q - "What makes this one better than the other one?"
A - "That one, (D) you see, people don't have a yellow face - and this one (A) it is darkly coloured and if I take a walk into the forest I can go with my parents."
- B: Q - "Is there anything that makes this one (B) nicer than that (C)?"
A - "I like the horse because when I go to my uncle's farm I have a ride on a horse."
Q - "Which one do you think is a better drawing?"
A - "This one (B)."
Q - "Why is that?"
A - "This one looks like a real horse and it looks attractive."
- E: Q - "Is it a better drawing?"
A - "Yes - because it has flowers, they are coloured a bit light and I like light flowers and you see in this one (D) they have a blue face."
- A: Q - "Why do you like it?"
A - "I like it because it has my room colour."
Q - "Do you like the colours in it then?"
A - "Yes."
Q - "And this one?" (C)
A - "I don't like this very much because you can't have blue and red mixed up, it will look horrible."
- B: Q - "Is it a better drawing?"
A - "Yes."
Q - "Is this one (E) not a good drawing?"
A - "No."
Q - "What makes it a bad drawing?"
A - "This drawing here, you see, in this portion it is going out of the lines."

To illustrate the use of category Other Content the following excerpt is chosen. Once again italic sections refer to Other Content. The subject was an 8 year old girl.

B: Q - "Why do you like it?"

A - "It's nice."

Q - "Isn't the other one nice?"

A - "This is a horse and that's only colour."

D: Q - "Why do you like it?"

A - "The plants, the bed and the people."

Q - "Why don't you like what's in this picture?"

A - "That's scribbled."

E: Q - "Why?"

A - "It's got plants."

Q - "Is it a better drawing than this one (A)?"

A - "Yes."

Q - "Why?"

A - "It's got all colours."

Q - "But this one has also got colours."

A - "This one (E) has a plant."

D: Q - "Why?"

A - "It's nice."

Q - "What makes it nice?"

A - "The plants."

Q - "But there are plants in this one also."

A - "The people."

C: Q - "Why?"

A - "This has got people, cars and a house."

Q - "Do you like those things in a drawing?"

A - "Yes."

A: Q - "Why?"

A - "It's got nice colours; it's coloured nice and dark."

B: Q - "Why do you like that one?"

A - "There's animals, and there (C) there's none."

3.2.2 Conclusion

In conclusion the following points can be made:

- (i) The subject matter or content of the drawing appeared to be the most important criterion of preference.
- (ii) There appeared to be two qualitatively different ways of referring to the subject matter i.e. either in terms of Empathetic or Other categories, where Empathetic Content was used more frequently, on the whole.
- (iii) Colour was of secondary importance to the subject matter, but was more important than Other Content i.e. the simple naming of elements or the central element of a drawing.
- (iv) Technical criteria did not appear to be important, but may be inferred as important by virtue of the representational clarity of the subject matter which subjects could easily recognize and identify.

3.3 Technical Aspects

TABLE III : RAW SCORES AND RELATIVE PERCENTAGE FREQUENCY OF APPEARANCE OF TECHNICAL CATEGORIES

Age		Realism	Clarity	Contrast	Style	Total
6	R.S	0	6	0	0	6
	%	0	100	0	0	100
7	R.S	0	0	0	0	0
	%	0	0	0	0	0
8	R.S	5	1	5	0	11
	%	45,5	9	45,5	0	100
9	R.S	0	5	3	4	12
	%	0	41,7	25	33,3	100
10	R.S	0	0	2	0	2
	%	0	0	100	0	100
11	R.S	0	0	2	0	2
	%	0	0	100	0	100
12	R.S	1	1	5	2	9
	%	11,1	11,1	55,6	22,2	100
T	R.S	6	13	17	6	42
	%	14,3	31,0	40,4	14,3	100

% = Relative Percentage Frequency

R.S= Raw Scores

T = Totals

It can be seen in Table III that of the Technical categories, Contrast has a higher relative frequency of appearance than does Clarity, Style and Realism.

Table III may be represented graphically as follows :

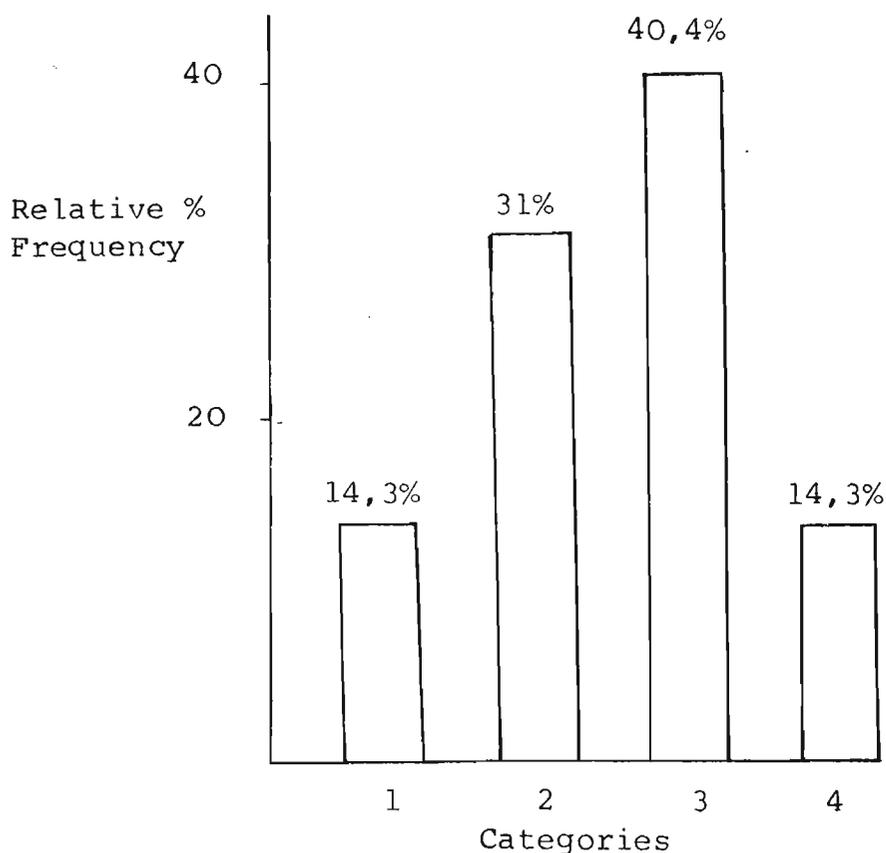


Fig. (iv) Relative % Frequency of Technical Aspects Category

Where: 1 ... Realism
 2 ... Clarity
 3 ... Contrast
 4 ... Style

Here again the child's lack of concern for the formal/technical aspects of art may hold as a tentative explanation for the relatively low frequencies of both Realism and Style.

A suggested explanation for the relatively high frequency of Contrast criteria may be that of the 17 instances, 12 made reference to different colours which produced a contrast, as opposed to contrasts in light and shade or different intensities of the same colours.

Belonging to a Technical category, the frequency of Contrast, as a criterion, appears inflated due to the interaction of two factors :

- (i) References to colour being 26,7% of references to all other categories, and this being the second highest relative frequency of appearance for a particular category.
- (ii) References to the way in which colours were used i.e. the contrasting of different colours.

It is suggested that Technical criteria are those which may be the most elusive to identify in the type of analysis undertaken on the present data. The following graph illustrates the highly erratic age related appearance of Technical categories.

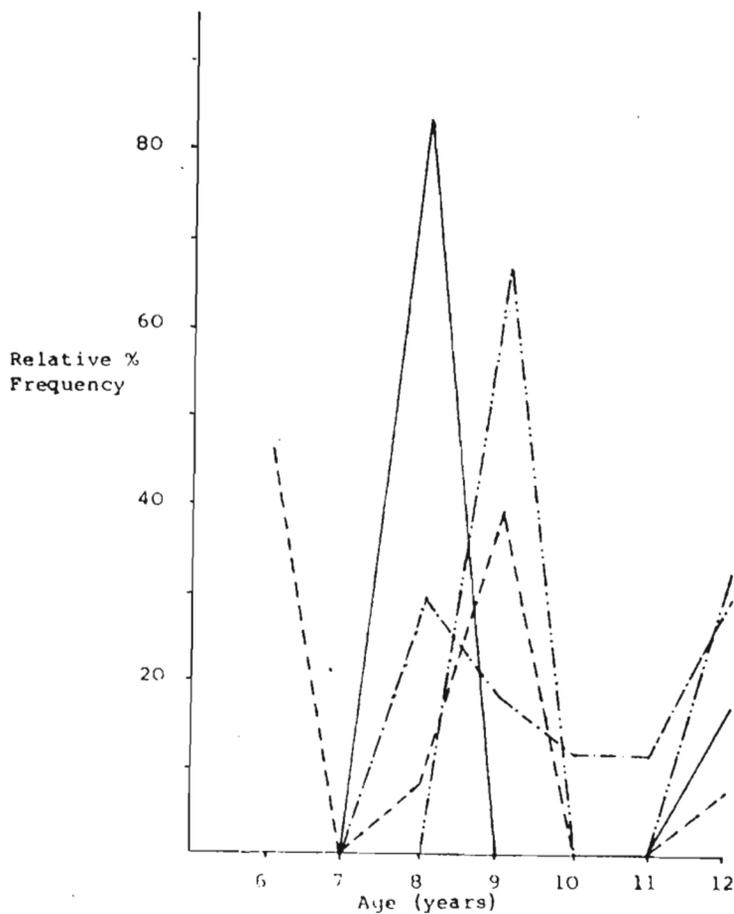


Fig. (v) Relative % Frequency of Technical Aspects Categories.

Where: Realism ———
 Clarity - - - - -
 Contrast - · - · -
 Style - - - - -

Fig. (v) illustrates :

- (i) No consistent age related increase or decrease for Technical categories, viewed either separately or collectively.
- (ii) A peaking at 8 and 9 years old for three of the four Technical categories i.e. for 8 year olds - Realism, and for 9 year olds - Clarity and Style.
- (iii) The absence of one or more of the Technical categories for the younger groups, whereas the presence of all four categories for the 12 year olds.

In the light of (i) above it is suggested that the development of reference to technical aspects is not a maturational development, common to the majority of children, but one which is influenced by individual differences i.e. experiential differences with respect to art. In addition to the above it must be pointed out that subjects' responses, included in the Technical categories, were ambiguous, requiring substantial inferences being made for their identification. For example, although a subject did not offer a response such as "The composition is good" he did say "It is drawn neatly" which is indicative of a sensitivity to the way in which the drawing was done, and it is suggested that this can be taken as reference to Style.

A second example will further indicate how difficult it was to be categorical.

When asked why one drawing was preferred over the other, an 8 year old male subject replied :

"Here they're just scribbling, and here the sun is shining and they do lovely trees."

Clearly reference is being made to the execution of the preferred drawing, as it is implied, by referring to the first

as scribbled, it is neater, more accurate, realistic, etc. However, reference is also being made to the content i.e. reference to the sun and trees.

It is suggested that the subject makes reference to Technical aspects by inference or implication, and not directly. This mitigates against attempts to be categorical i.e. to strictly maintain the mutual exclusivity of categories.

From the peaking at 8 and 9 years old, and the use of all four categories by the 12 year old group only the following tentative explanation is offered.

The young child, as previously discussed, when required to justify preference, resorts to criteria which are most immediate and meaningful to him. It is the subject matter, in and for itself, and not how it was depicted, that is of importance to the child.

However, as a result of formalized, or at least more structured art lessons (in the earlier standards - ages 8 to 10 years) the somewhat older child's attention is guided towards aspects of composition, perspective and other technical elements in the execution of his works of art. It is not suggested here that the child is trained in the use of such as criteria of excellence in art works, but that possibly he himself comes to recognize and then to use them, in addition to the more subjective criteria formerly used by him.

Therefore it is suggested that the child's repertoire of responses becomes extended (as has been the case for the 12 year olds) and not that there is necessarily a shift toward different categories of response. This will be discussed more fully in following sections.

Machotka (1966) offered an explanation for the relative absence of Technical criteria in children's responses by drawing upon Piagetian cognitive theory. It was argued that

the child's developing formal operational thought allows relative comparisons to be made upon more levels. Formal thought means the capacity to reason about verbal propositions, the propositions themselves need not be true but may remain as mere hypotheses. The criteria of style and composition appear to imply the hypothetical existence of several manners of representation, one of which (the style that the child is commenting upon) seems the most satisfactory. The child who has not reached the hypothetico-deductive level of thought should have difficulty in using such criteria.

In conclusion it may be stated that Technical aspects do not influence judgement as strongly as subject matter or colouring but that the older the child the more likely such aspects will be included in his repertoire of responses.

3.4 Influences on Justifications of Preference

The influences on justifications of preference were analyzed by submitting the frequency of the occurrences of the appearance of categories to a 3-way anova, with age, sex and category as factors thus constituting a 7 X 2 X 5 design, with repeated measures on the categories factor.

The anova yielded the following results:

- (i) There was a significant main effect for age ($F=5,110$; $df=6$; $p < 0,01$).
- (ii) There was a significant interaction between sex and category ($F=3,149$; $df=4$; $p < 0,05$).

All other main effects and interactions did not reach significance.

3.4.1 Influence of Age

The main effect of age indicated that the variance was not simply attributable to error variance.

Therefore variation in age of subject induced variation in the reference to the categories, across all subjects.

However the category frequencies may have been influenced by the verbosity scores for each age group i.e. by the nature of the content analysis, children who simply say more, are more verbose, will be saying more significant things - the frequency of criteria belonging to certain categories increases with the frequency of the words used by the subject.

By examining the correlation of verbosity scores with "category" scores, there did appear to be this relationship both within age groups and across, for both sexes.¹

TABLE IV : VERBOSITY AND CATEGORY SCORES

(Verbosity Scores are given first)

Subject	Age (yrs):	6	7	8	9	10	11	12
F	1	66- 13	4- 1	238- 13	49- 6	20- 3	24- 4	53- 9
	2	103- 15	28- 4	113- 14	81- 8	33- 6	26- 4	11- 3
	3	38- 8	10- 2	88- 14	81- 8	33- 4	34- 6	42- 7
	4	36- 6	30- 4	23- 4	2- 1	3- 1	39- 10	8- 2
	5	64- 14	49- 2	110- 8	34- 6	67- 11	38- 7	43- 3
		107- 56	121- 13	572- 53	247- 29	156- 25	161- 31	157- 24
M	6	100- 13	59- 6	71- 7	41- 10	51- 7	40- 6	39- 8
	7	75- 8	28- 5	38- 6	44- 9	79- 6	44- 5	53- 8
	8	75- 11	0- 0	30- 4	59- 3	5- 2	35- 6	20- 7
	9	19- 6	29- 4	58- 6	51- 9	9- 2	28- 4	66- 7
	10	43- 5	24- 3	41- 5	2- 1	36- 9	32- 7	17- 3
		312- 43	140- 18	238- 28	197- 32	180- 26	179- 28	195- 33

1. A two way analysis of covariance with repeated measures on one factor (category) showed there to be no significant changes in F-ratio from the anova without covariate analysis. Therefore verbosity scores, although eliminated as a covariate, were not distorting of results overall.

However there was no trend with age i.e. as age increased there was neither a consistent increase nor decrease in the verbosity scores. This would imply that if each age was looked at separately, legitimate comparisons between the category frequencies may be made. In this way a picture of the relative dependence of particular age groups on certain categories of response will be built up - thereby providing an indication of any changes in such dependence as age increases.

The following section therefore examines the relative percentage frequencies of categories for each age group separately.

3.4.1.1 Relative Frequencies for Each Age Group

I Six Year Old Subjects:

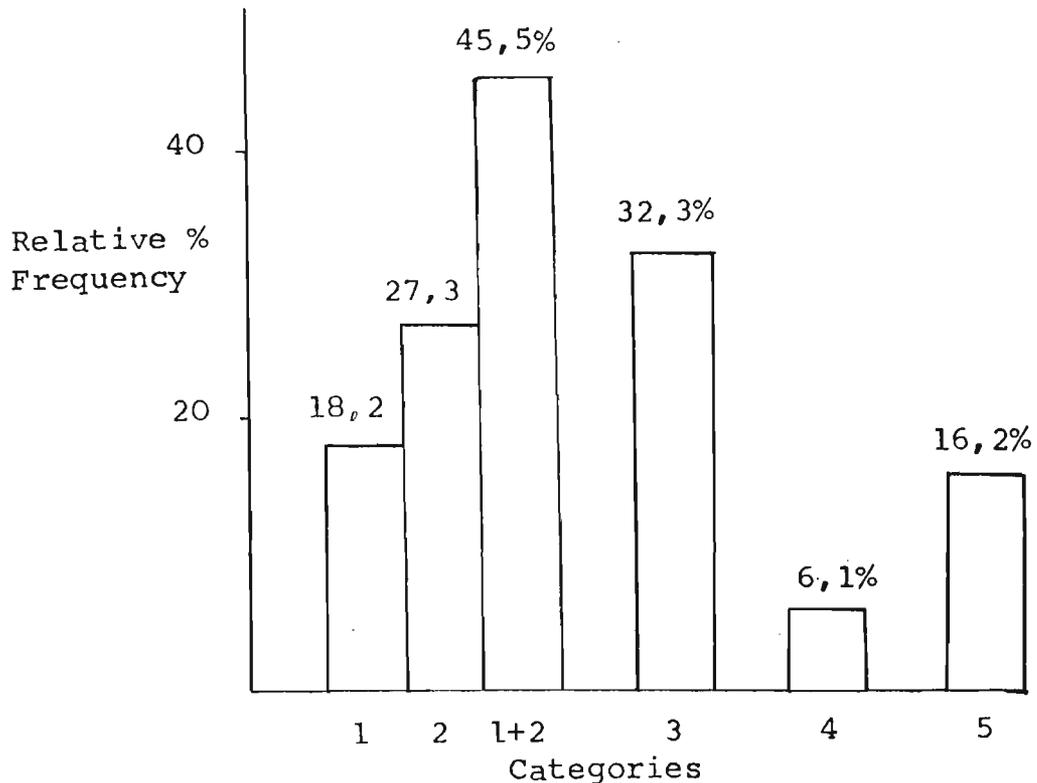


Fig. (vi) Relative % Frequency of Categories for Six Year Olds

Fig. (vi) shows:

- (i) A predominance of subject matter over all other categories.
- (ii) A higher frequency of references to the subject, in and for itself, without elaboration, over references characterized by identification with the subject matter.
- (iii) If the qualitatively different references to the subject matter are viewed separately, references to colour exceeded both.
- (iv) A low frequency of references to technical aspects of the drawings.

It may be concluded from the above that the six year subjects' judgements were influenced, in the main, by the subject matter. However individual differences between subjects gave rise to qualitatively different types of reference to the subject matter, where simply naming or describing the subject matter predominated over identification with it. Comparisons of each type, taken separately, with colour shows colour to pre-dominate over both. This suggests that the subjects were more comparable in the way in which colour influenced their judgements, than did subject matter.

II Seven Year Old Subjects:

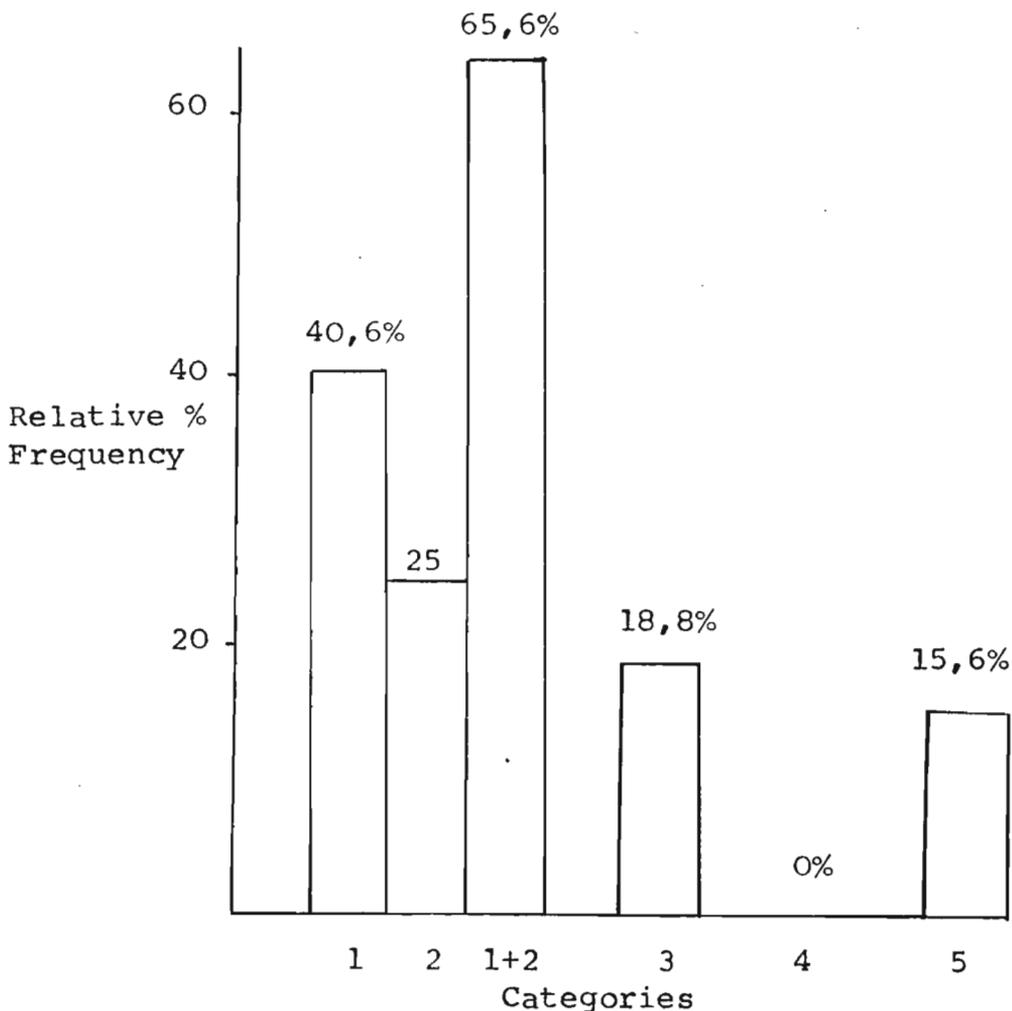


Fig. (vii) Relative % Frequency of Categories for Seven Year Olds

Fig.(vii) shows :

- (i) The predominance of subject matter over all other categories.
- (ii) Higher frequencies of references characterized by identification with the subject matter than referring to subject matter in and for itself.
- (iii) No references at all to technical aspects.

It would appear from the above that the seven year olds were influenced substantially more by the subject matter depicted in the drawing, than by any other aspect of the drawing.

Of note is the predominance of Empathetic Content over Other Content, which suggests that the seven year olds identified strongly with the subject matter and were stimulated to develop narrative stories around the subject matter. The absence of any reference to technical aspects reinforces this contention. The subject matter, and not it's mode of execution, provided strong cues for the justifications of preference offered by the seven year old subjects.

III Eight Year Old Subjects:

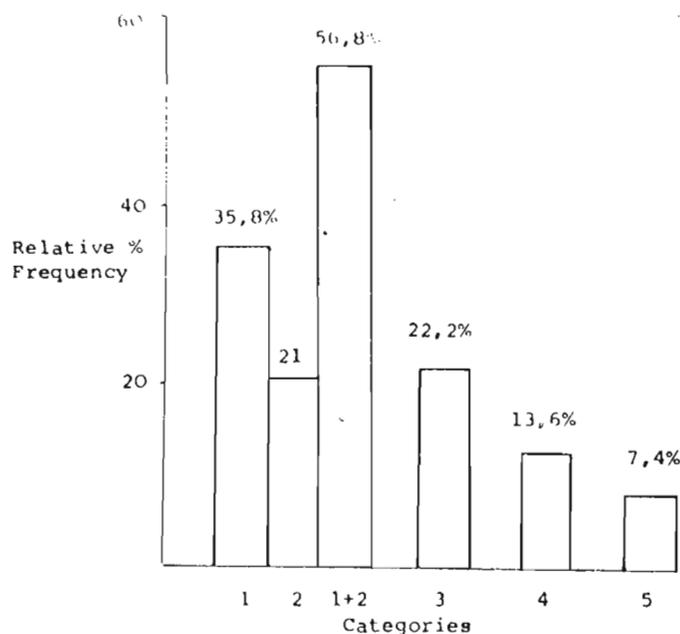


Fig.(viii) Relative % Frequency of Categories for Eight Year Olds

Fig. (viii) shows :

- (i) The predominance of subject matter over all other categories.
- (ii) A higher frequency of Empathetic Content over Other Content.
- (iii) Comparable frequencies of reference to Other Content and Colour.

As for the seven year olds, the subject matter was an important source for reasons of preference for the eight year olds - with references to the subject matter characterized by identification and story-telling in the main. Noted here also was that the subjects' referred equally often to the colour as they did to a simple naming of the subject matter. This would suggest that subjects were more or less comparable with respect to their degree of identification with the subject, with individual differences in response giving rise to some subjects referring to Other Content and other to Colour.

IV Nine Year Old Subjects :

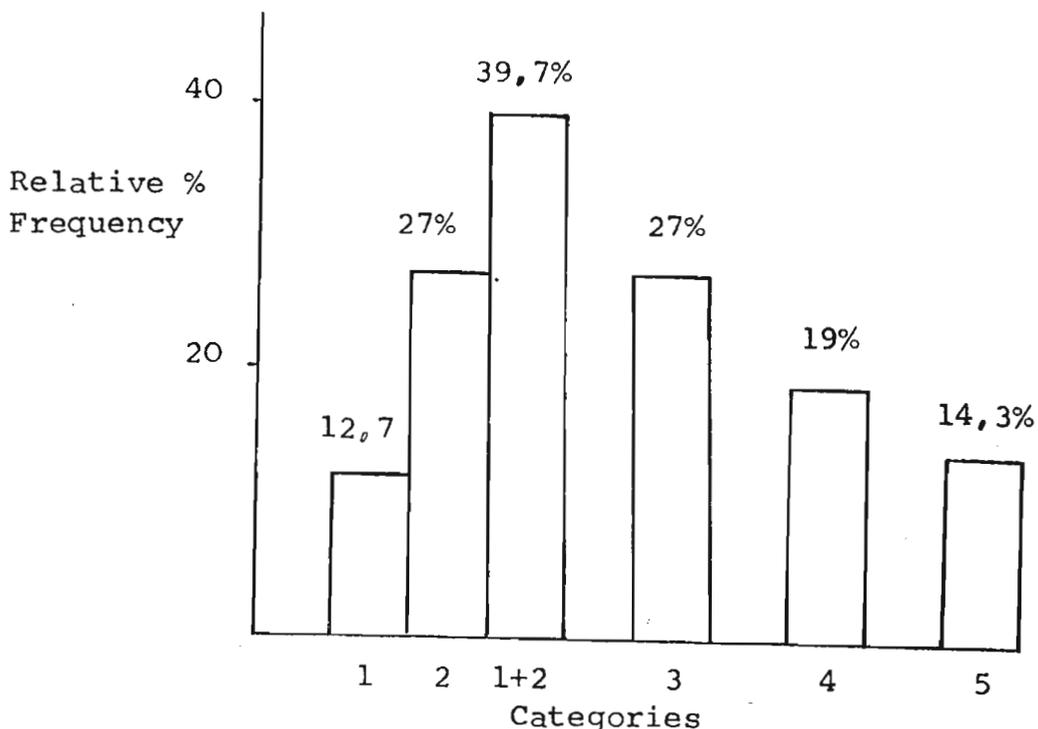


Fig. (ix) Relative % Frequency of Categories for Nine Year Olds

Fig.(ix) shows :

- (i) The predominance of subject matter over the other categories.
- (ii) If the types of reference to the subject matter are taken separately there is :
 - (a) as frequent references to Other Content and Colour;
 - (b) a predominance of Other Content over Empathetic Content and
 - (c) a predominance of Technical Aspects over Empathetic Content.

The most striking feature of the above is that for the nine year olds there was a departure from the trend which appeared to be characteristic of the three earlier age groups, in terms of the relative use of categories within each age group.

References to subject matter, although when viewed in an omnibus fashion exceeded references to other categories, were not as superior to other categories when viewed separately i.e. the differences between categories became less clear. With the predominance of references to technical aspects over references to Empathetic Content, the departure from previously mentioned trends became more significant.

It would appear that the repertoire of responses for the nine year old subjects was greater than that for the younger subjects. Nevertheless, it can still be seen that the subject matter and, in this case, the colouring of the drawing, are important sources for the justifications of preference offered by the nine year old subjects.

v Ten Year Old Subjects :

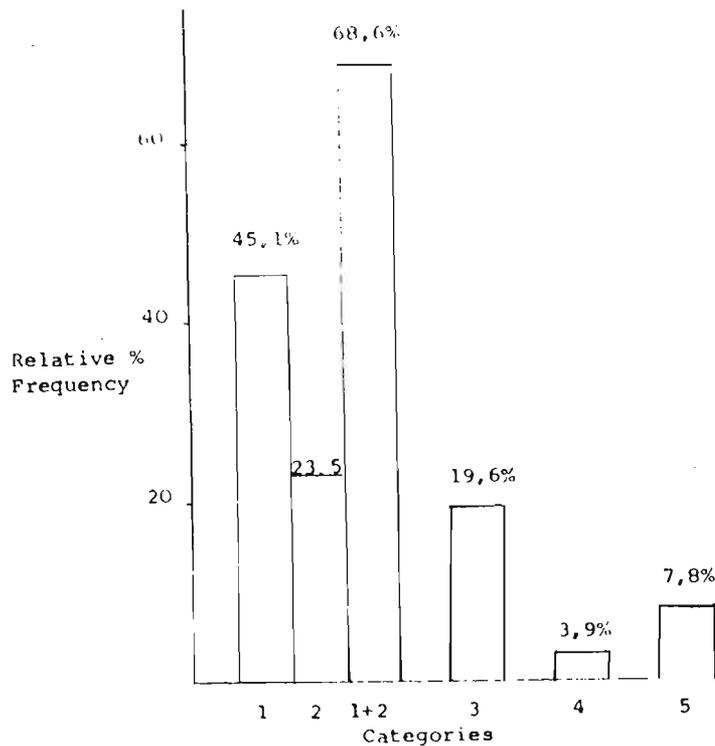


Fig. (x) Relative % Frequency of Categories for Ten Year Olds

Fig. (x) shows :

- (i) The predominance of the subject matter as a source of justification of preference over all other categories.
- (ii) Higher frequency of Empathetic Content over Other Content.
- (iii) Comparable frequencies for Colour and Other Content.

The relative use of categories for the ten year olds appeared to follow the trend established by the six, seven and eight year olds, and did not appear to continue the departure from that trend, established by the nine year olds. Once again here subject matter was far more frequently referred to than other categories, in particular Empathetic Content. This suggested that as for the seven year olds, the ten year olds tended to form an identification with the subject matter quite readily and to use this as a source for the reasons of preference.

Noted also was the low frequency of reference to Technical Aspects - a feature of the three younger groups as well.

It therefore appeared that the ten year olds were quite strongly motivated toward descriptive narrative built around the subject matter, and that they referred to the colouring of the drawing insofar as it enhanced the subject matter.

VI Eleven Year Old Subjects :

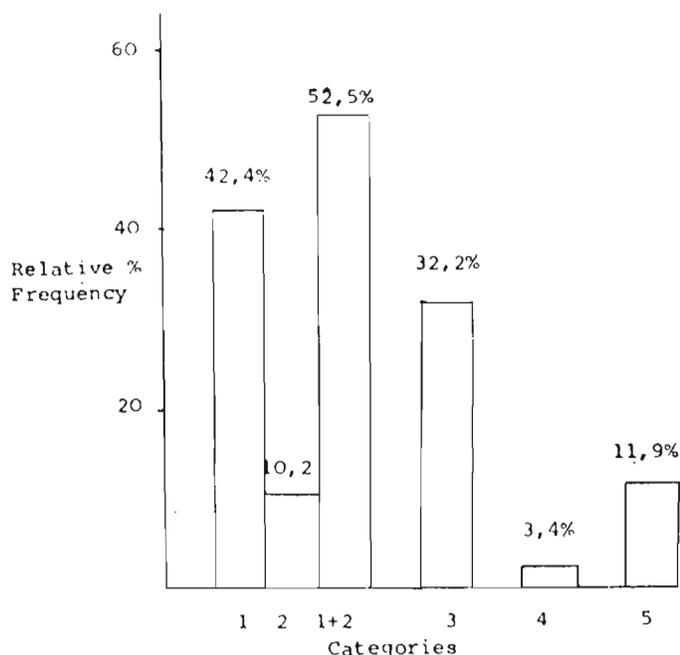


Fig. (xi) Relative % Frequency of Categories for Eleven Year Olds

Fig.(xi) shows :

- (i) The predominance of subject matter over all other categories.
- (ii) A substantial difference between the two types of references to the subject matter, with Empathetic Content predominating over Other Content.
- (iii) More frequent use of colour as a reason for preference than subject matter in and for itself.
- (iv) Comparable frequencies of other Content and miscellaneous justifications.

Here there appeared to be a comparable profile of frequencies across categories with the seven year olds, with subject matter being an important source for justifications of preference; this frequency being contributed to, in the main, by Empathetic Content. The eleven year olds therefore readily identified with the subject matter and were stimulated to build stories around the subject matter. The colouring of the drawing was referred to insofar as it enhanced the subject matter.

Individual differences between subjects however gave rise to some subjects referring to the subject matter in and for itself and also offering unqualified justifications e.g. "I just like it" comparably as often. Since these frequencies were substantially lower than that for Empathetic Content, this suggested that, on the whole, the eleven year old subjects were more motivated to develop stories around the subject matter than to offer justifications less indicative of identification with such subject matter.

VII Twelve Year Old Subjects :

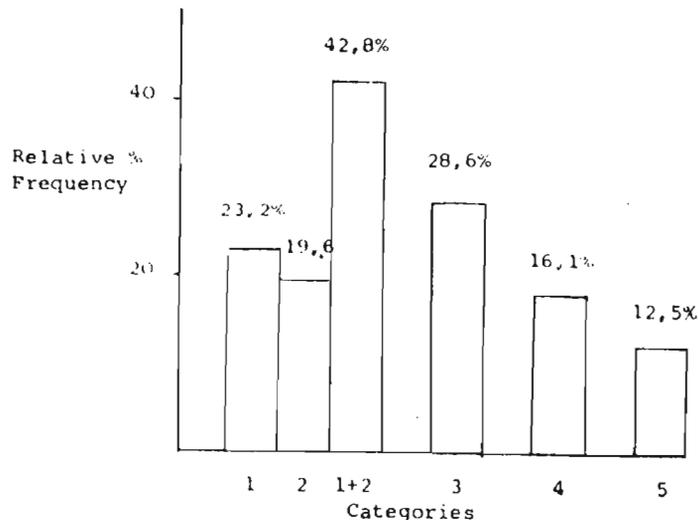


Fig. (xii) Relative % Frequency of Categories for Twelve Year Olds

Fig. (xii) shows :

- (i) The predominance of subject matter over all other categories.
- (ii) Comparable frequencies with which the two types of references to subject matter were made.
- (iii) The superiority of colour over both types of reference to subject matter if these are viewed separately.
- (iv) Comparable frequencies of references to Technical Aspects and Other Content.

The above profile was more reminiscent of the nine year old subjects than of any other age group.

There appeared to be no extremely marked difference between categories - certainly not of the kind evidenced by the seven and ten year olds, yet subject matter could still be regarded as an important source for justifying the preferences between drawings. However frequencies of the two types of reference were more comparable for the twelve year olds than for any other age group, with only the six year olds evidencing similar differential frequencies between the two categories of response.

It can be concluded that, for the twelve year old subjects, the repertoire of responses appeared extended, or at least richer, than for the other age groups, with the exception of the nine year olds, with which this repertoire was comparable.

Conclusion:

Analysis of age related influences upon judgement may also include an analysis of the ranking for all categories within each age group, where ranking is in terms of frequencies within categories. Significant Spearman Rank Correlation Coefficients between two different age groups would suggest that those age groups are comparable with respect to the criteria used when making judgements.

TABLE V : SPEARMAN RANK CORRELATION COEFFICIENTS
FOR ALL AGE GROUPS

AGE	6	7	8	9	10	11	12
6		0,71	0,74*	0,87*	0,63	0,69	0,88*
7			0,81*	0,56	0,51	0,43	0,60
8				0,56	0,46	0,58	0,82*
9					0,53	0,65	0,81*
10						0,70	0,67
11							0,72

* significant at 0,5 level

Table V does show that certain age groups were comparable with respect to their criteria of judgement.

The 6 year olds are significantly correlated with three other age groups viz., the 8, 9 and 12 year olds.

The comparability of the above age groups may be influenced by the "response style" of the 6 year olds.

Response style is used to refer to the way in which the subject answered the question put to them, subsequent to their having selected one of the pair of drawings as preferred. Piaget (1973) has pointed out five types of reaction revealed by clinical examination¹, three of which are regarded as being characteristic of children of the 6 and 7 year old age groups.

The three reactions are :

- i) answering at random
- ii) romancing
- iii) suggested conviction

Fig. (xiii) shows: the 6 year olds frequent use of miscellaneous criteria, which is considerably higher than that of all the remaining age groups.

1. See Section 2.3

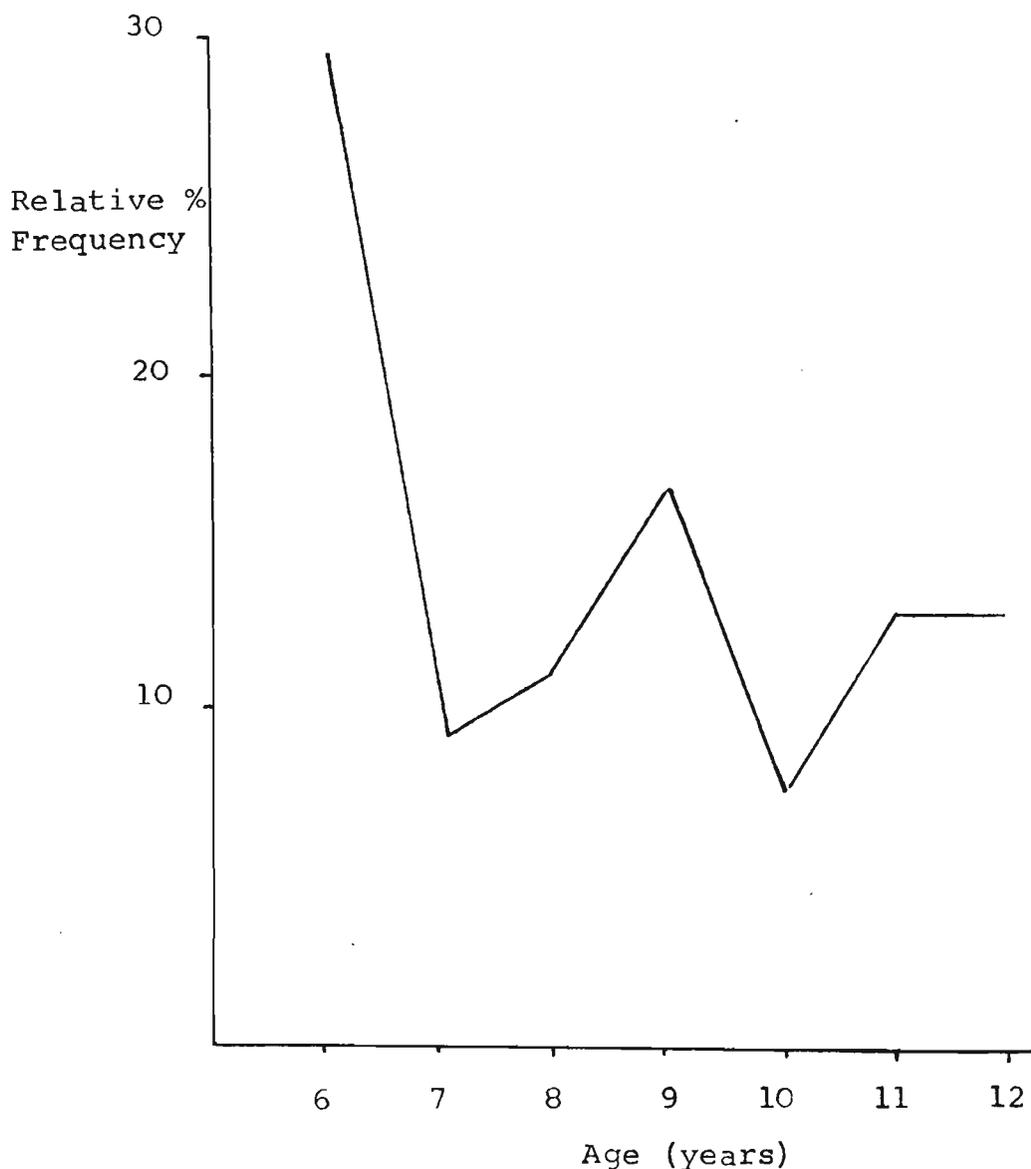


Fig.(xiii) Relative % Frequency of Miscellaneous Category for All Ages

"Miscellaneous" is that category into which justifications of an unqualified nature fall. It is regarded as a category to which criteria which cannot justifiably be assigned to any of the other categories, according to their definition, are assigned. It is offered that it is therefore made up of statements which qualify as "answers at random" and "romancing" in terms of the definition offered by Piaget (1973).

This being the case, it is suggested that in fact the six year old age group indulged in a great deal more responses of this kind i.e. answering at random and romancing, and in some cases their responses represented categories, according to definition, purely fortuitously, thus artificially inflating or at least distorting to some extent the data representative of each category.

In conclusion it is suggested therefore, that as a result of "response style" i.e. random answering and romancing, the criteria used by the six year old group could belong to any category depending on how the subject arrived at his reply. The criteria may therefore be representative of certain categories, either authentically or fortuitously, i.e. certain categories which would not have been represented, had the child not been answering at random for example, are now represented. These categories may in turn be those which by "liberated conviction"¹ are represented by the criteria used by the older subjects. Therefore those categories having been represented by both the younger and the older groups, if however for different reasons will lead to these age groups being significantly correlated with each other i.e. comparable with respect to their criteria of judgement.

Instances of intercorrelation between the younger age groups i.e. 6, 7, 8 and 9 year olds, suggests that these subjects are comparable in terms of the evaluative criteria being used. However the older groups are not significantly intercorrelated, and can therefore be regarded as less homogeneous than the younger groups for the criteria they use.

1. Liberated conviction - "When the child replies after reflection, drawing the answer from the stores of his own mind, without suggestion, although the question is new to him, there is liberated conviction of response style." Piaget (1973).

From the above it can be inferred that the younger subjects while not necessarily using categories of response which are different from the older subjects, are nevertheless largely comparable as to which criteria they use i.e. what they like about a drawing, whereas the older subjects can be considered less comparable, and it is suggested, less predictable.

3.4.1.2 Age Related Differences for Individual Categories: Empathetic Content, Other Content and Colour.

I Empathetic Content

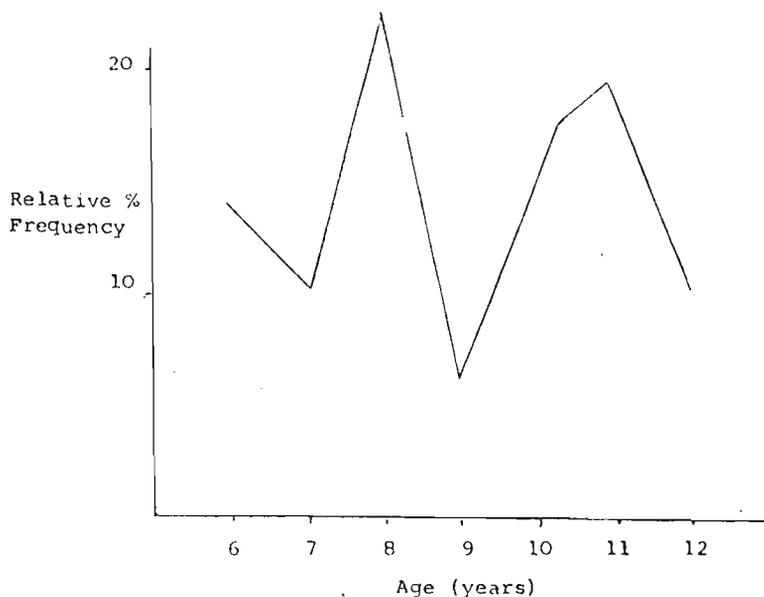


Fig.(xiv) Age Related Differences for Empathetic Content

Fig. (xiv) shows :

- (i) no consistent increase or decrease with age in the relative use of Empathetic criteria,
- (ii) in terms of the relative % frequency comparability of the 8, 10 and 11 year olds as one group; the 7, 9 and 12 year olds as another,

(iii) that the largest difference occurs between two chronologically close age groups i.e. 8 and 9 years old, and that both these age groups are responsible for the extremes in difference when compared with the other age groups. It is not clear why this is the case. It is suggested that due to the qualitative nature of the present research, it is particularly susceptible to individual differences between subjects. If, in any one age group, there were more subjects who were more voluble than in another age group, they would be responsible for contributing to a higher frequency of occurrence of a particular category of criteria.

The 8 year old group, when compared with the 9 year olds, was in fact characterized by volubility and loquacity. The mean number of words used by the 8 year olds was 8,1 per subject, whereas for the 9 year olds it was only 4,4 per subject. In fact, the 8 year old group had the highest mean across all age groups.

In addition to the above, if the mean number of words used per subject within the 8 year old group is taken it will be seen that 3 subjects contributed mainly to the high mean number of words.

TABLE VI : MEAN NUMBER OF WORDS PER SUBJECT (8-year olds)
FOR TEN PAIRED COMPARISONS

Subject	X
1	23,8
2	11,3
3	8,8
4	2,3
5	11,0
6	7,1
7	3,8
8	3,0
9	5,8
10	4,1

Therefore, it is concluded that differences in cognitive style or aesthetic sensitivity between the 8 and 9 year olds may not have been responsible for the large discrepancy, but rather factors such as individual differences and the susceptibility of qualitative research to idiosyncracies between subjects. From this it is suggested that for such age differences to be identified, without fear of contamination, subjects are to be selected by far more sensitive and rigid criteria than just age and sex. The size of the sample could also be increased. In this way possible idiosyncracies would not have as detrimental an influence on group "norms".

II Other Content

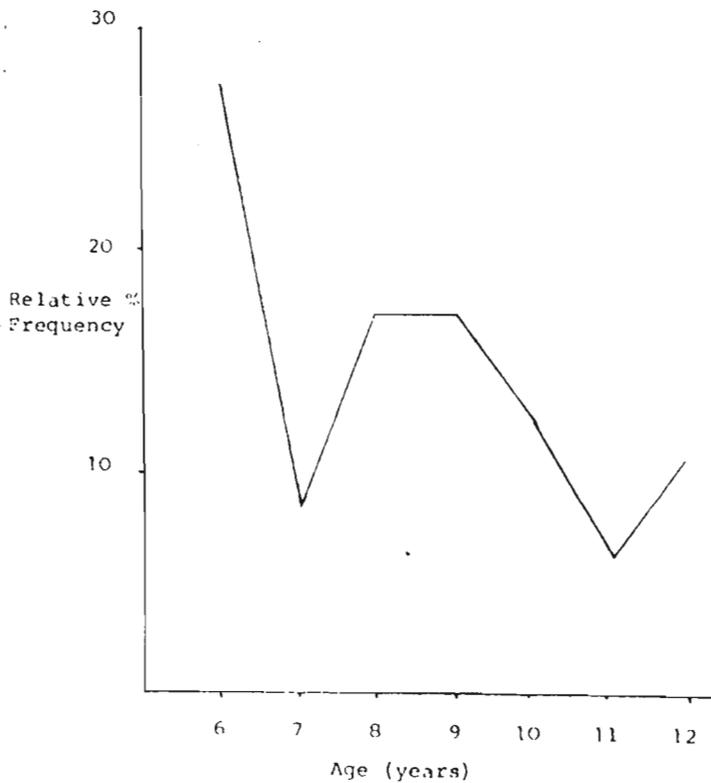


Fig. (xv) Age Related Differences for Other Content

Fig. (xv) shows that :

- (i) The 6 year old group used this category more often than all other age groups

- (ii) The 7, 10, 11 and 12 year olds can be considered comparable in terms of the frequency with which they used this category.
- (iii) For the 8 and 9 year olds, as opposed to the large difference in frequency of occurrence of Empathetic Content, are identical in the frequency with which they use Category Other Content.

Since Other Content as a category would be identified when a subject simply commented upon the relative absence or presence of certain forms or pictures in a drawing, it could be regarded as potentially contaminated by responses which Piaget (1973) identified as answer-at-random or suggested conviction.

III Colour Category

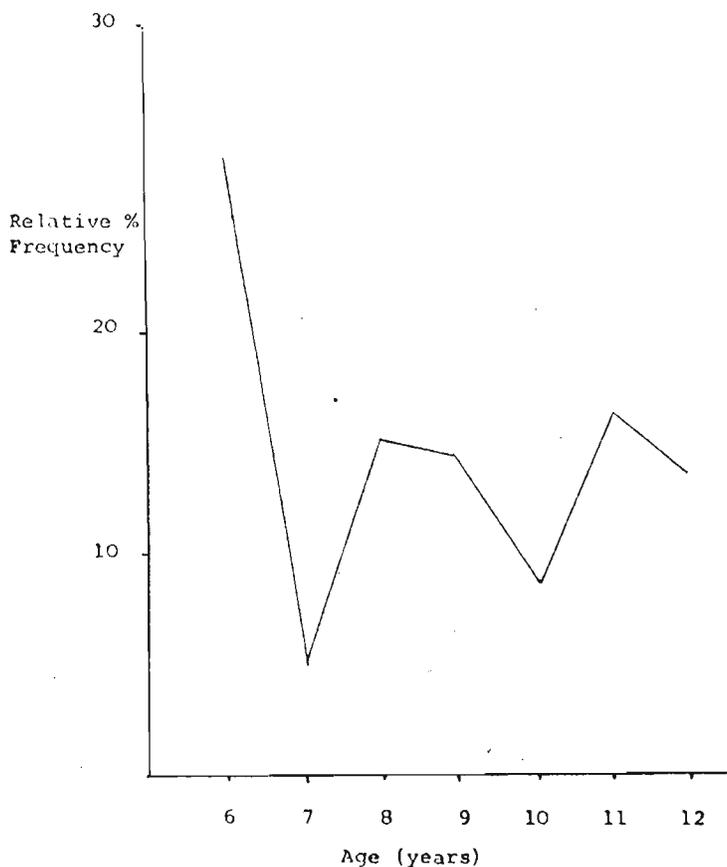


Fig. (xvi) Age Related Differences for Colour Category

Fig. (xvi) shows that :

- (i) the 6 year old subjects used colour as a criterion significantly more frequently than did all other age groups.
- (ii) no other age groups were comparable with respect to the frequency with which colour was used as a criterion.

That the 6 year old subjects used colour so extensively as a criterion is unusual in the light of the fact that at about this age the child's concern for accurate colour representation is subordinate to his concern for accurate representation of form. "During the stage of the first representational attempts, more interest and excitement are stimulated through the relationship of the drawings to an object than between colour and an object" (Lowenfeld 1970 p.122)

Lowenfeld (1970) goes on to say that "this does not mean that these colours do not have significance to the child who is using them. Lawler and Lawler (1965) found that nursery school children of about the age of four selected yellow crayons to colour a happy picture, whereas the same picture was coloured brown if the child was told a sad story about it".(p.122)

Although the study by Lawler refers to four year olds it also refers to children at nursery school. However, the majority of the subjects of the present study had not had a similar experience; one which, it is assumed, would introduce the nursery school child to art materials earlier than the child who had not been to nursery school - thus possibly accelerate development in certain areas of their artistic development. The subjects of the present study therefore, although not comparable directly with those of the above study, are nevertheless responding to colours and this may be on an emotional level, rather than on an aesthetic level. Therefore highly colourful drawings¹ would influence these subjects toward frequent use of colour as a criterion.

1. Drawing A was in fact chosen by the 6 year olds as preferred over all the other age groups, 15,6% of the time, second only to the 12 year old subjects.

3.4.1.3 Conclusion:

The high frequencies of the two types of reference to subject matter found at every age level supports the earlier findings i.e. that the subject matter of a drawing is an important source of preference.

Also out of the seven age groups, five had higher frequencies for Empathetic Content than Other Content, supporting the view held by Lark-Horovitz (1937) that the preferred picture tells most about the thing he likes, and about the associations these interests evoke in the drawings.

Within each age group references to colour were noted to exceed references to the technical merits of a drawing - suggesting that as a criterion for preference it is offered readily by children. Overall, the concern for the technical merits of a drawing were minimal.

The exceptional case of the nine year olds, and the comparability of this with the twelve year olds, warrants explanation but the reasons for these exceptions are unclear. It is suggested, very tentatively, that the division into chronological age levels of the sample for this particular study (and those of a similar nature) is misrepresentative of the developmental level grouping which can be made. That is, even though some subjects were assigned to the nine year old group by virtue of their chronological age, they in fact may have been at a higher or lower developmental level in terms of criteria which may be used to assign them to one or other developmental level. This presupposes that the reactions to the present examination situation are particularly influenced by the child's developmental level - and that children, in such a situation may have been rightly or wrongly assigned to particular levels, by chance. Quite what criteria may be

used to divide groups of children into developmental levels, which are not tied to their chronological age, and which may be more representative of their differences as groups for a task of the present nature, is not clear, owing, in the main, to the novel and exploratory nature of the present research.

3.4.2. Influence of Sex

The significant interaction of sex and frequency with which different categories were evidenced indicates that the sex of the subject seems to be related to

- (i) the frequency with which they refer to a particular category
- (ii) the relative frequencies across categories giving rise to some pattern, the patterns between the sex being different.

TABLE VII : RAW FREQUENCIES OF CATEGORIES FOR FEMALE AND MALE SUBJECTS

Category	1		2		3		4		5		Totals	
	F	M	F	M	F	M	F	M	F	M	F	M
Age 6	5	13	18	9	19	13	3	3	11	5	56	43
7	1	12	6	2	3	3	0	0	3	2	13	19
8	20	9	9	8	12	6	6	5	5	1	52	29
9	4	4	9	8	10	7	2	10	6	3	31	32
10	7	16	9	3	6	4	0	2	3	1	25	26
11	11	14	5	1	9	10	0	2	6	1	31	28
12	5	8	5	6	10	6	2	7	2	5	24	32
Totals	53	76	61	37	69	49	13	29	36	18	232	209

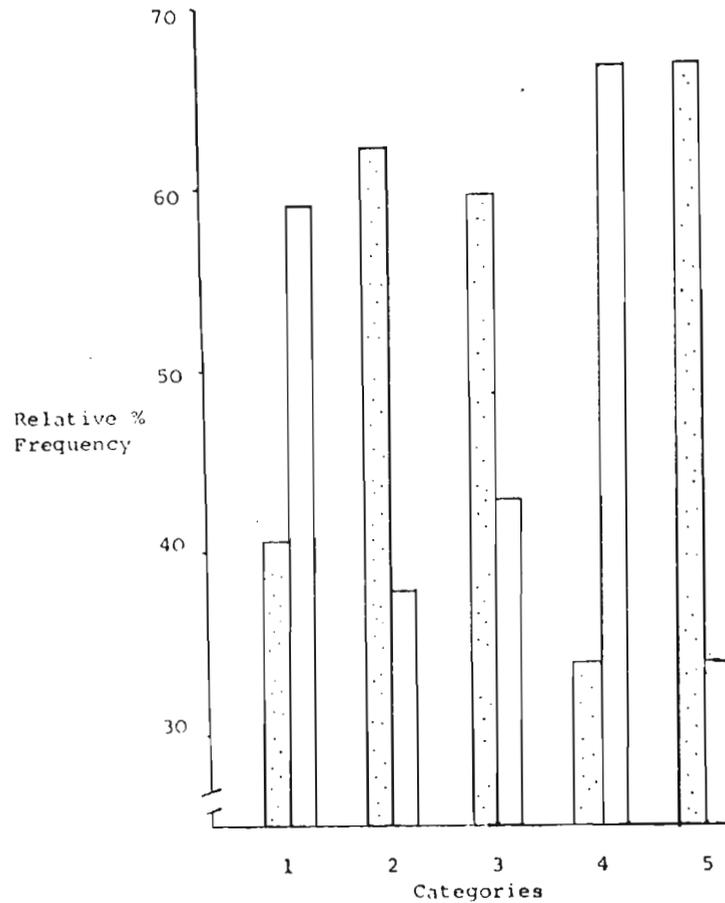


Fig. (xvii) Relative % Frequency of Categories:
Males and Females

Where:
Female (dotted)
Male (solid)

Fig. (xvii) shows that the sex of the respondent could account for :

- (i) Criteria of the Other Content, Colour and Miscellaneous Categories being offered more frequently by female subjects than by male subjects.
- (ii) Criteria of the Empathetic Content and Technical Aspects categories being offered more frequently by male subjects than by female subjects.

It would appear from the above that the difference between male and female subjects is characterized by both difference frequencies for certain categories, and by a difference in the overall pattern, as mentioned earlier.

It can be inferred therefore that it is the tendency of female subjects to refer to colour, and subject matter in and for itself, which sets them apart from the male subjects i.e. female subjects judgements are more influenced by the colouring of the drawing, and the subject matter, without this subject matter giving rise to identification therewith. (in terms of story-telling being stimulated), than by other aspects of the drawing. On the other hand, the male subjects show a tendency to be influenced by the subject matter but in a way which encourages identification therewith, hence giving rise to narrative stories centred around the subject matter. The male subjects are also more inclined to use criteria which refer to the technical aspects of the drawing.

Of particular note is the large difference between male and female subjects for the "miscellaneous" category - where females use it far more frequently than males. This can be seen in conjunction with the fact that for each age group, where male and female responses were pooled, there were significant coefficients of agreement¹ between them, however for frequency of drawing choice when separated into sexes, the females were less in agreement overall, with subjects of the 6, 7 and 9 year old age groups having insignificant coefficients of agreement. All male subjects had significant coefficients of agreement.

Although the following consideration is speculative, it is interesting to note certain points.

Firstly, female subjects referred far more frequently to the miscellaneous category i.e. they used justifications which could not be assigned to any other category, and were usually redundant comments such as "I just like looking at it."

1. See Appendix : Tables II, III and IV for Tables Of Measure of Agreement Between Judges.

Discussion as to why some subjects responded in this fashion has taken place earlier in the study (Section 2.2.2 (iv)), and it is believed that that discussion has bearing here also i.e. that the female subjects were not responding authentically in 100% of the cases, some responding only out of task demands in the situation. Here, hand-in-hand with this, is their lack of agreement as to which drawings they prefer, at the younger ages. It may be concluded that either the female subjects performed less reliably in the present study, or that such performance is reliable, but peculiar to the female subject.

As a general conclusion it may be restated that:

- (i) there do appear to exist sex differences in justifications of preference for drawings and
- (ii) that these sex differences are of the kind where female subjects are influenced more by colour and subject matter in and for itself, and male subjects by degree of identification with the subject matter, and technical aspects.

3.5. Distinct Picture Preferences

Aspects considered:

- (i) The existence of distinct preferences for particular drawings;
- (ii) The influence of age and sex of the subject on picture preference;
- (iii) The predominant categories of response associated with individual drawings.

3.5.1. Distinct Preferences

TABLE VIII : FREQUENCIES OF CHOICE OF DRAWINGS

Drawing	Sex	A G E							Total	M + F
		6	7	8	9	10	11	12		
A	F	11	11	10	10	5	10	13	70	147
	M	12	8	11	13	8	13	12	77	
B	F	16	15	17	16	16	18	15	113	245
	M	20	17	19	20	16	20	20	132	
C	F	10	8	6	6	11	7	10	58	116
	M	11	12	6	1	16	3	9	58	
D	F	2	5	5	6	3	3	4	28	55
	M	1	4	4	5	5	3	5	27	
E	F	11	11	12	11	14	12	8	79	137
	M	6	9	10	12	6	11	4	58	

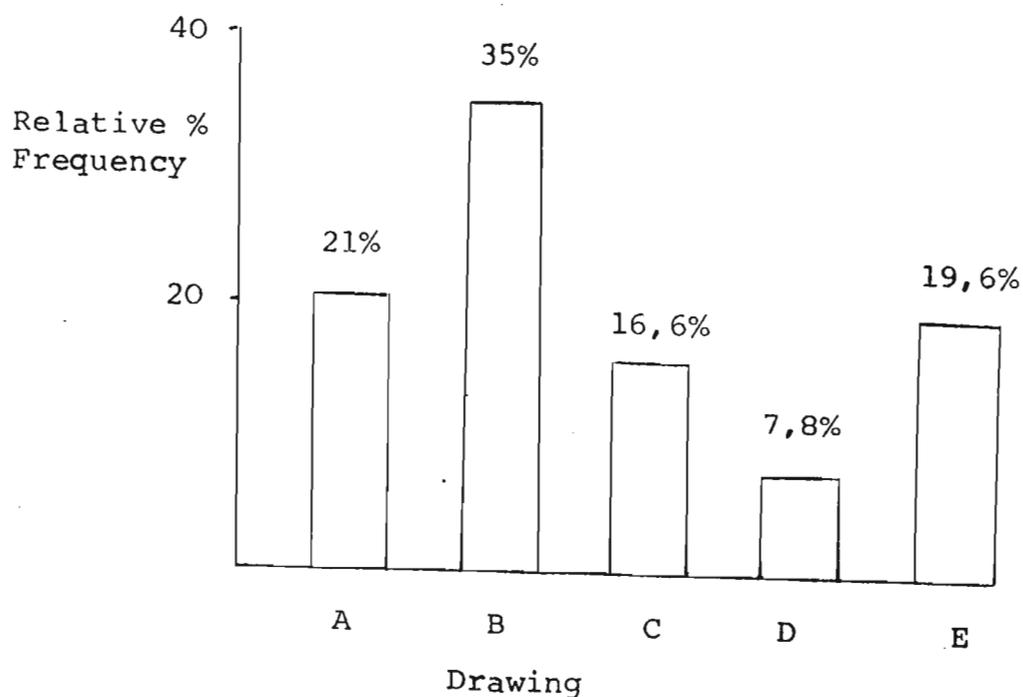


Fig. (xviii) Proportion Drawings Chosen As Preferred by All Ages

Fig. (xviii) clearly shows there to be a distinct preference for Drawing B, and that Drawing D was the least preferred by all subjects.

Drawing B was chosen significantly more frequently than any other drawing by all subjects. The following values of Tukey's q ratio¹ are all highly significant at the 0,01 level ($q \geq 4,60$).

TABLE IX : DRAWING B COMPARED WITH OTHER DRAWINGS

Age in years	Drawing Compared With, and Tukey's Q ratio			
	A	C	D	E
6	8,44	9,09	22,07	12,33
7	8,44	7,79	14,93	7,79
8	10,38	15,58	16,88	9,09
9	8,44	18,83	16,23	8,44
10	12,33	3,24	15,58	7,79
11	9,74	18,18	21,42	9,09
12	6,49	11,03	16,88	14,28

The above shows that, with the exception of the 9 year olds only, the difference in preference was most marked between Drawings B and D.

The figure below is the distribution of the frequency with which a particular drawing was chosen over all subjects. It illustrates more clearly the superiority of Drawing B over all the others. Closer inspection of the profiles indicates that although there did exist this marked preference for a particular drawing, the ranking was not the same within age groups for the other drawings.

1. This test followed both the 3 way Anova, and the Simple Effects of this Anova, for Drawing Preference, where the 3 factors were (i) Drawing (ii) Age (iii) Sex.

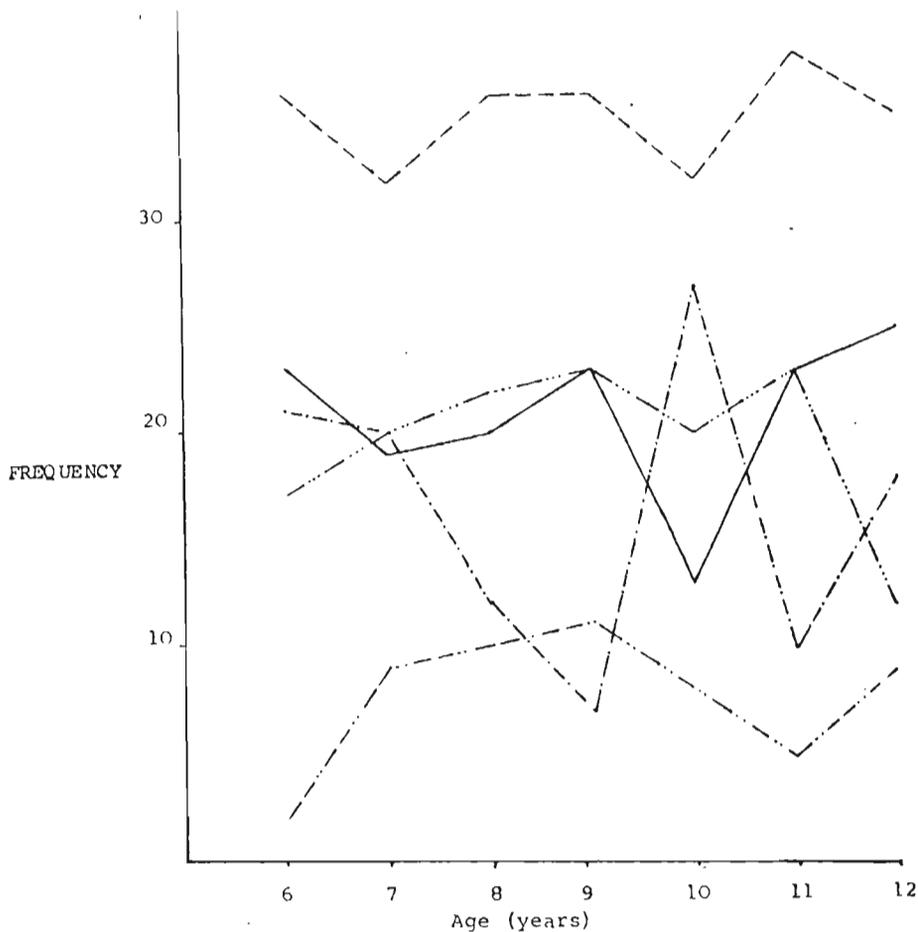


Fig. (xix) Frequency of Choice of Drawings for All Subjects

Where: Drawing A —————
 Drawing B - - - - -
 Drawing C - · - - -
 Drawing D · · · · ·
 Drawing E - - - - -

By looking at the differences between the means and applying Tukey's Honestly Significant Difference Test, it can be shown that although the graphs for Drawings A, C and E were erratic, which indicated a certain degree of uncertainty of preference across the ages, within individual age groups there did exist significant differences between certain means for particular drawings. Since many more differences achieved significance than did not, the following summary shows for which drawings within each age there existed no significant difference in the mean number of times chosen as preferred.

Age	Drawings	Tukey's q ratio
6	C & A	0,64
	C & E	3,24
7	C & A	0,64
	C & E	0,0
8	C & D	1,29
	E & A	1,29
9	C & D	2,59
	E & A	0,0
10	C & B	3,24
	D & A	3,24
11	C & D	3,24
	E & A	0,64
12	E & C	3,24

Level of significance 0,05 3,86

Level of significance 0,01 4,60

The above summary shows that there were no marked preferences between Drawings C, A and E when compared with each other; but that this does not hold true for all age groups i.e. within particular age groups the order of preference is peculiar to that age group. This will be expanded upon later however.

3.5.2

Influence of Age on Drawing Choice

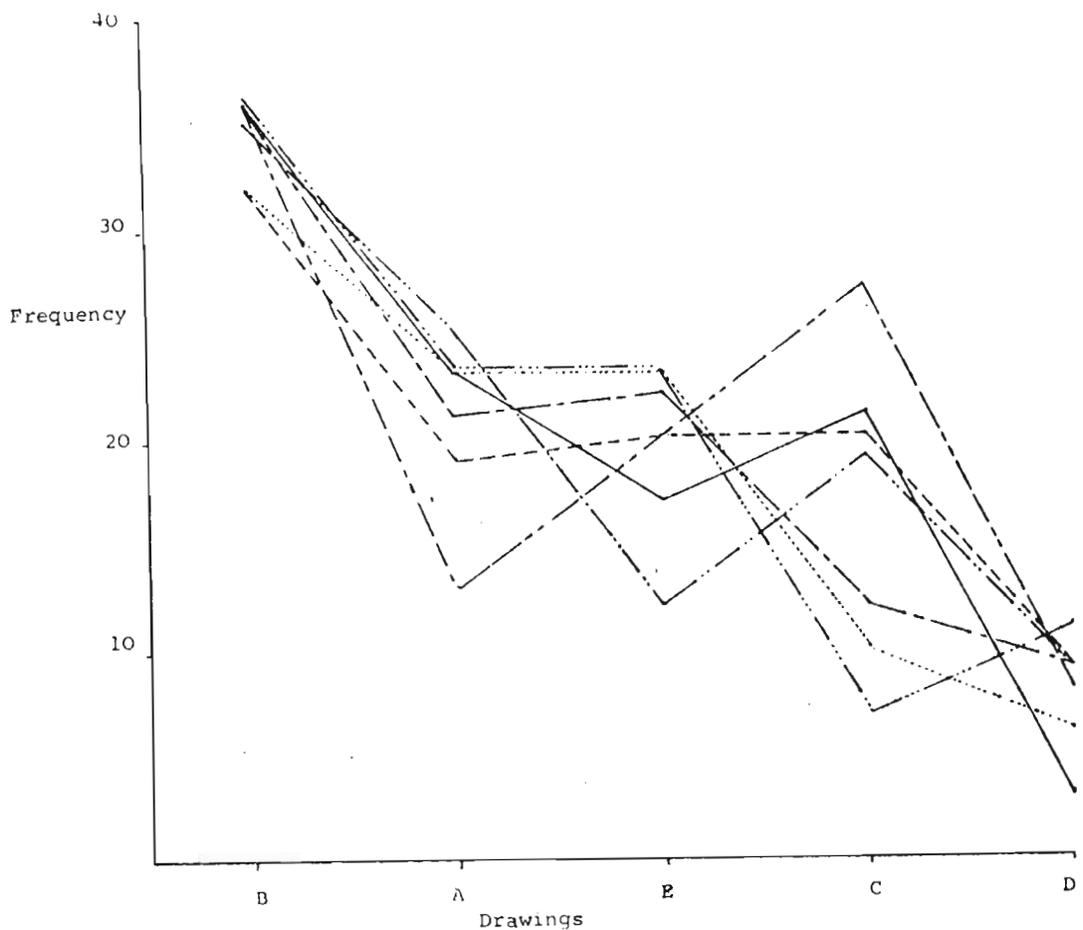


Fig. (xx) Frequency of Drawing Choice - Most to Least Preferred
 Where:
 6 years old —————
 7 years old - - - - -
 8 years old - - - - -
 9 years old -
 10 years old ————
 11 years old
 12 years old ————

A 3-way anova was performed on the frequency of drawing choice data, with age, sex and drawings as factors, and repeated measures on the drawing factor.

The results were:

- (i) No main effects reached significance.
- (ii) There were significant interactions between
 - (a) age and drawing ($F = 2,569$ $df = 24$ $p = 0,01$)
 - (b) sex and drawing ($F = 3,241$ $df = 4$ $p = 0,05$)

It is interesting to note from the above figures, that although there are distinct preferences, on average, for certain drawings across age groups, when each age group is plotted separately, the picture is less clear. There are also very large fluctuations within individual age groups, particularly the 10 year olds¹. In order to locate the point of interaction a simple main effects analysis was used, with age, sex and drawing as factors.

The simple effects analysis showed:

- (i) A significant interaction between drawing choice and age, for every level of the age factor ($F=6,37-17,68$ $df=4$ $p<0,01$)
- (ii) That the significance of the age/drawing interaction seems mainly due to differences between ages for Drawing A ($F=2,12$ $df=6$ $p=0,05$) and Drawing C ($F=6,72$ $df=6$ $p<0,01$).

In examination of the latter, Tukey's Test² showed that for Drawing A the significant difference was between ages 10 and 12 ($p=0,05$) and for Drawing C between:

- (i) 6 and 9 ($p<0,01$)
- (ii) 7 and 9 ($p<0,05$)
- (iii) 8 and 10 ($p<0,01$)
- (iv) 9 and 10 ($p<0,01$)
- (v) 6 and 11 ($p<0,05$)
- (vi) 10 and 11 ($p<0,01$)

1. However, computation of the Kendall Tau Rank Correlation Coefficient to ascertain the measure of agreement between judges showed the ratio to be significant for all age groups i.e within each age group there was internal consistency in terms of the frequency of choice of individual drawings between subjects.

2. Where $q=4,60$ at $p<0,01$ level
and $q=3,86$ at $p<0,05$ level.

It would appear therefore that Drawings A and C were responsible for the interaction of age and frequency of drawing choice, where Drawing A gave rise to one significant difference between the older ages of 10 and 12 years, whereas Drawing C gave rise to significant differences between a wide range of ages, with however no evident trend.

To conclude it may be said that for the older subjects there was less agreement as to preference of Drawing A and that individual differences within groups influence the preference for Drawing C.

That the age of the subject had any influence on picture preference in general is acceptable since there is a significant interaction between frequency of drawing choice and age, at every age level ($p < 0,01$).

To examine the above more closely it will be necessary to look at each age group separately, and to look for possible trends which would explain the nature of this age influence.

6 - year olds:

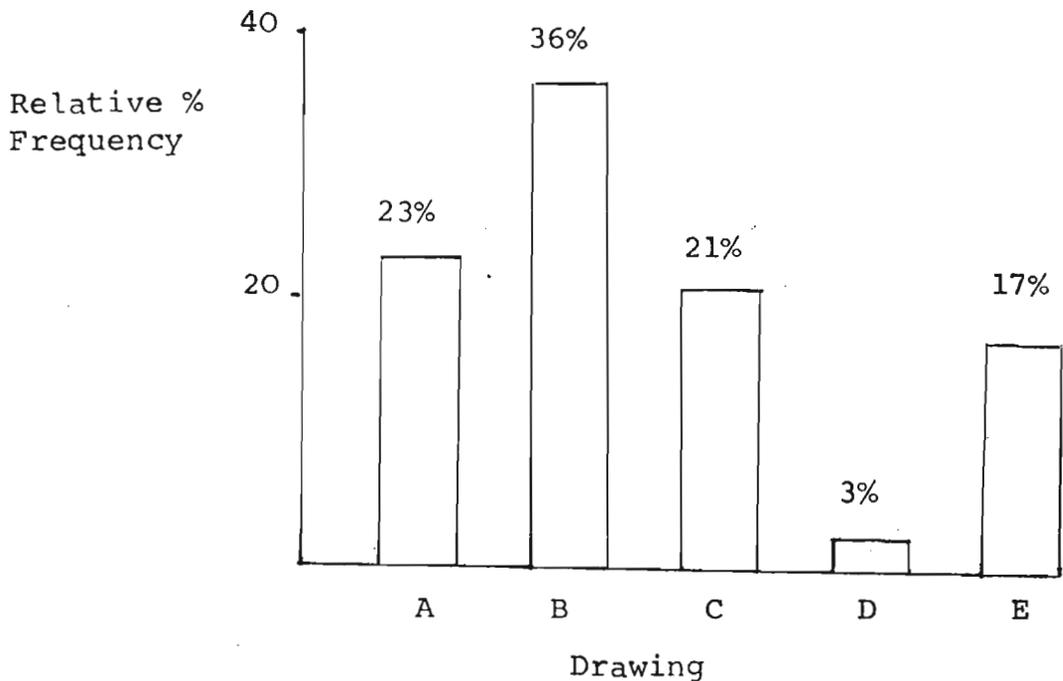


Fig. (xxi) Drawing Choice for Six Year Olds

Findings :

- (i) Largest difference between Drawings B & D ($q = 22,07$)
- (ii) Smallest difference between Drawings C & A ($q = 0,64$)
- (iii) Significant differences between B and all other drawings; and D and all other drawings ($p < 0,01$)
- (iv) No significant difference between A & C and C & E, but just significant at 0,05 level between A & E.

Therefore there are clear preferences between certain drawings for the six year olds, with B the most preferred and D the least; and no appreciable preferences between A, C & E.

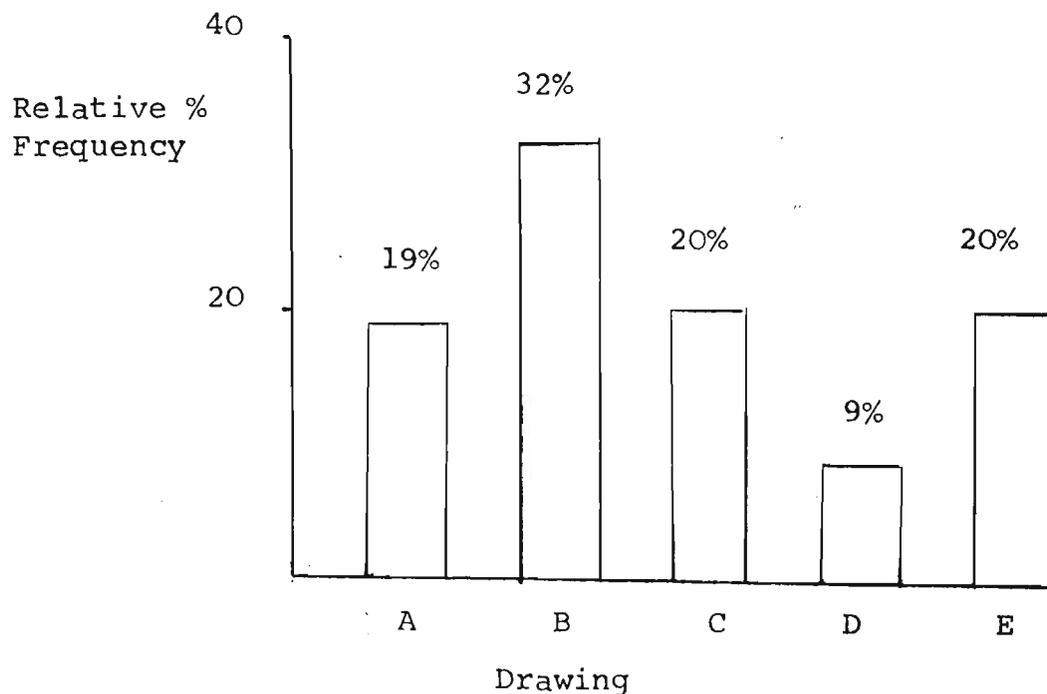
7 - year olds:

Fig.(xxii) Drawing Choice for Seven Year Olds

Findings :

- (i) Largest difference between Drawings B & D ($q = 14,93$)
- (ii) Smallest (no) difference between Drawings C & E ($q = 0$)
- (iii) Significant differences between B and all other drawings; and D and all other drawings ($p < 0,01$)

- (iv) No significant differences between A & C; A & E and E & C.

Therefore there are distinct preferences for certain drawings for the 7 year olds, with B the most preferred and D the least; and no appreciable preferences between A, C & E.

8 - year olds:

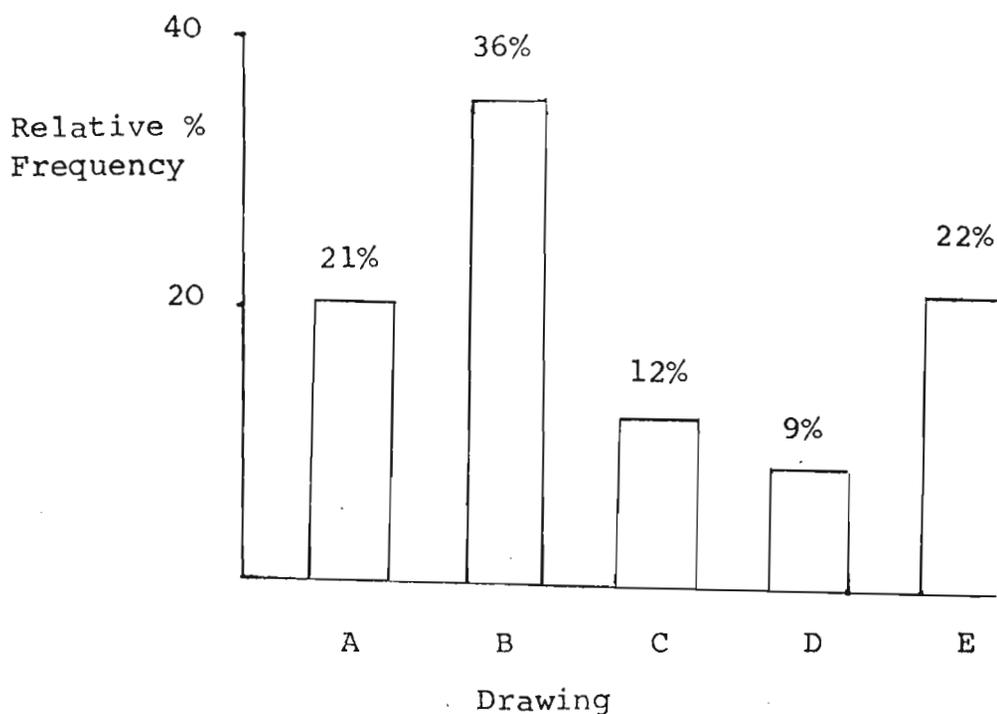


Fig.(xxiii) Drawing Choice for Eight Year Olds

Findings :

- (i) Largest difference between Drawings' B & D ($q = 16,88$)
- (ii) Smallest differences between C & D and A & E ($q = 1,29$ for both)
- (iii) Significant differences between B and all other drawings ($p < 0,01$)
- (iv) No significant differences between A & E and C & D.

Therefore, for the 8 year olds, there is a distinct preference for Drawing B, and non-preference for Drawing D. Order of preference for A, C & E varies between subjects.

9 year olds :-

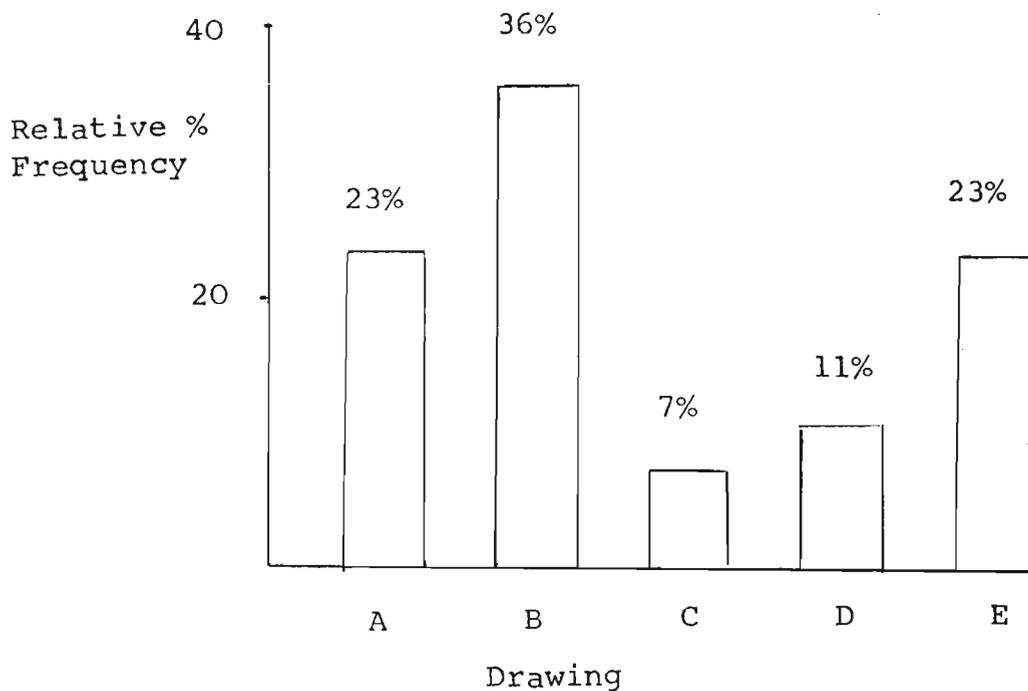


Fig.(xxiv) Drawing Choice for Nine Year Olds

Findings :

- (i) Largest difference between Drawings B & C ($q = 18,83$).
- (ii) Smallest difference between Drawings A & E ($q = 0,0$).
- (iii) Significant differences between B and all other drawings ($p < 0,01$).
- (iv) No significant differences between A & E and C & D.

For the 9 year olds therefore, there is a distinct preference for Drawing B over all other drawings, and that preference for A & E supercedes that for C & D.

10 - year olds :

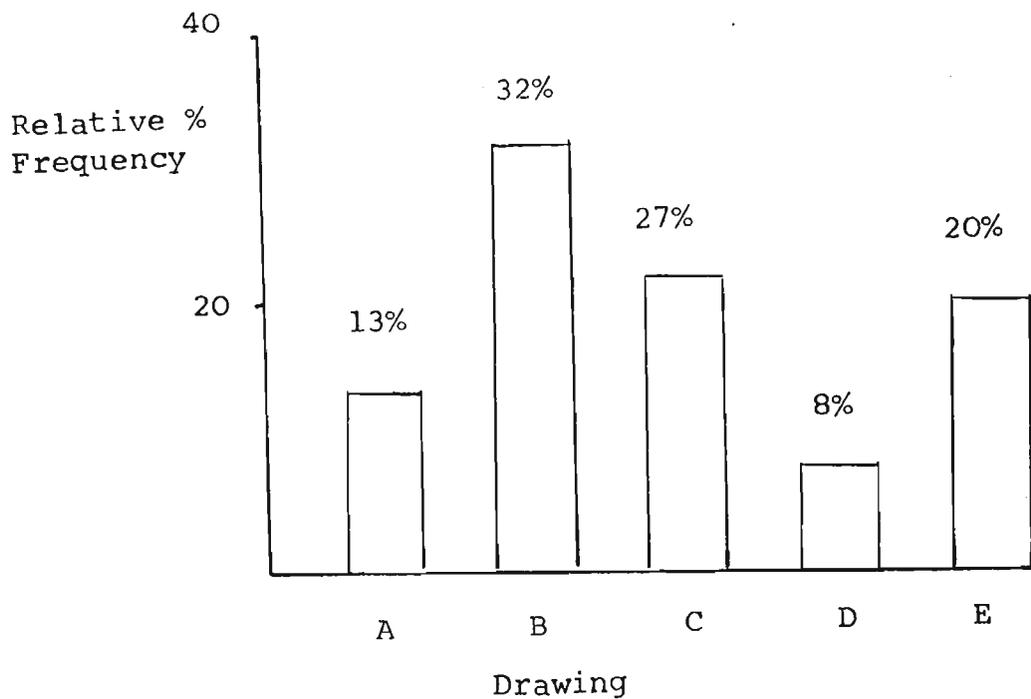


Fig.(xxv) Drawing Choice for Ten Year Olds

Findings :

- (i) Largest difference between Drawings B & D ($q = 15,58$).
- (ii) Smallest difference between Drawings A & D and C & B ($q = 3,24$ for both).

The ten year old subjects, although preferring B the most, do not appear to have as distinct preferences between the other Drawings. They were also the only age group which showed significant non-preference for Drawing D.

11 - year olds :

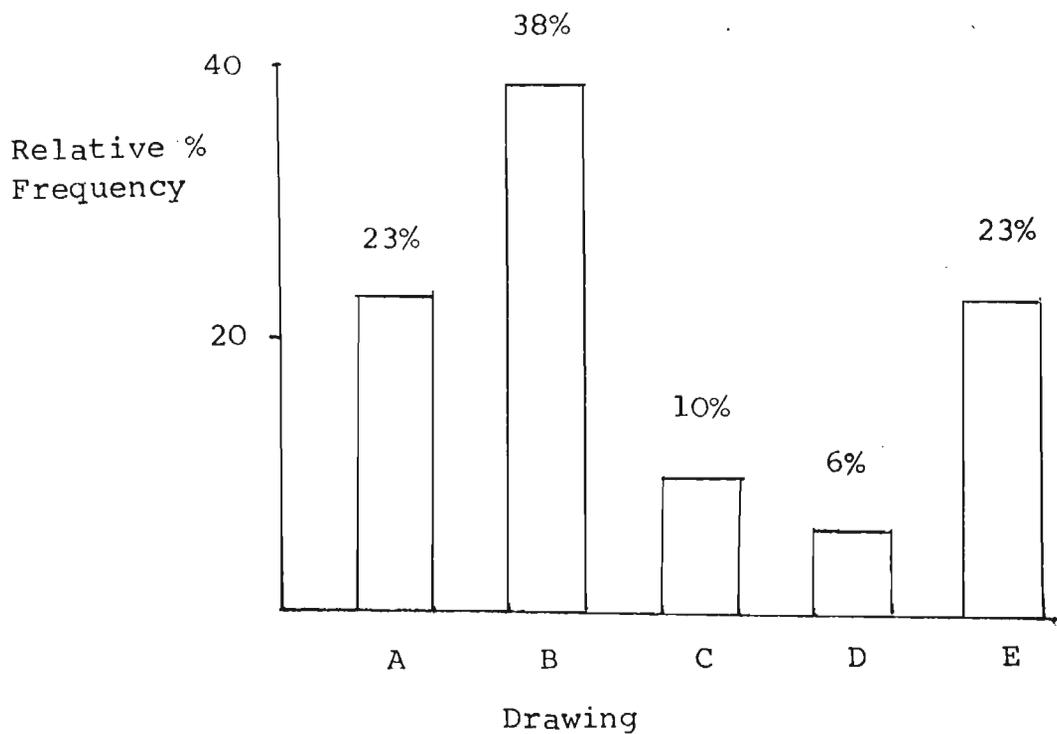


Fig.(xxvi) Drawing Choice for Eleven Year Olds

Findings :

- (i) Largest difference between Drawings B & D ($q = 21,42$).
- (ii) No significant differences between A & E and C & D.
- (iii) Significant difference between B and all other drawings ($p < 0,01$).

The above findings are comparable with those of the ten year olds, where although there is a clear preference for B over all the other drawings, the order of preference, declining toward D, gives rise to no significant differences between the other drawings with the exception of A & C and C & E.

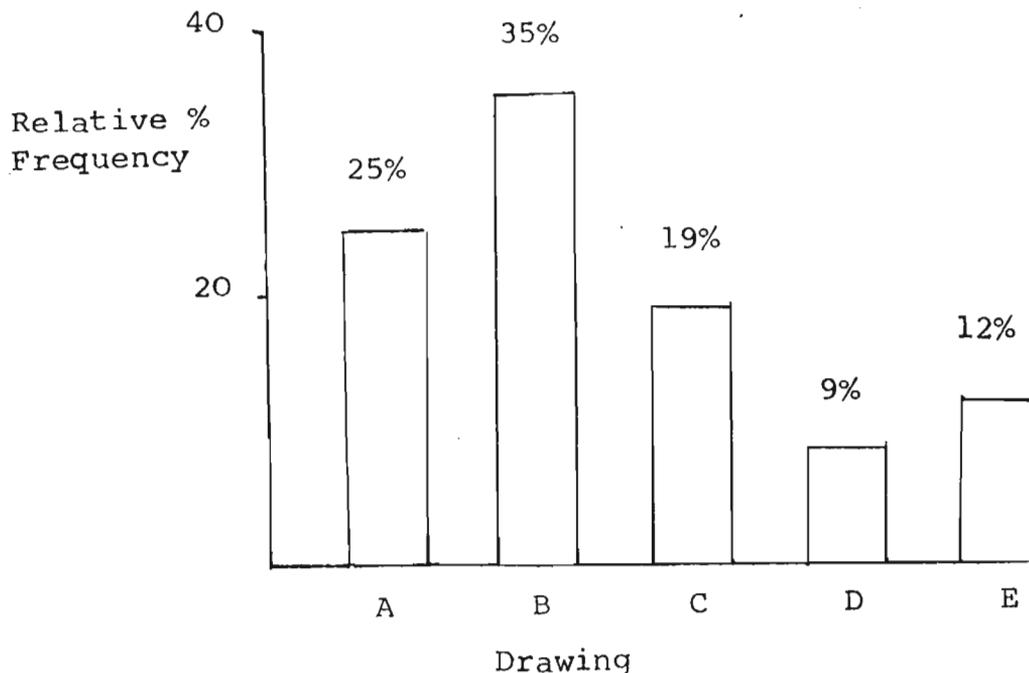
12 - year olds :

Fig.(xxvii) Drawing Choice for Twelve Year Olds

Findings :

- (i) Largest difference between Drawings B & D ($q = 16,88$).
- (ii) Smallest difference between Drawings D & E ($q = 2,59$).
- (iii) Significant differences between B and all other drawings ($p < 0,01$).
- (iv) No significant differences between D & E and C & E.

Also comparable with the 10 and 11 year olds is the above where although preference and non-preference, at the extremes, is between B & D, there are no consistently significant differences in the frequencies of choice of the remaining drawings.

The following general conclusions can be reached from the above micro-analysis :

- (i) For all ages there was a significant difference ($p < 0,01$) between the frequency of choice of Drawing B as preferred and all the other drawings, and, with the exception of the 9 year olds, this difference was the most significant

between Drawings B and D. For the 9 year olds the difference was greatest between Drawings B and C. The difference between Drawings C and D for the nine year olds was however so insignificant that this exception may be ascribed to chance factors.

- (ii) There was a higher frequency of significant differences between drawings for the younger subjects than for the older, with this change taking place at the 8 and 9 year old level and maintained until the 12 year old.

3.5.3. Influence of Sex on Drawing Choice

TABLE X : RELATIVE % FREQUENCY OF DRAWING CHOICE:
FEMALES AND MALES

Drawing	Females	Males	Total
A	47,6	52,4	100
B	46,1	53,9	100
C	50,0	50,0	100
D	50,9	49,1	100
E	57,7	42,3	100

The above may be represented graphically as follows :

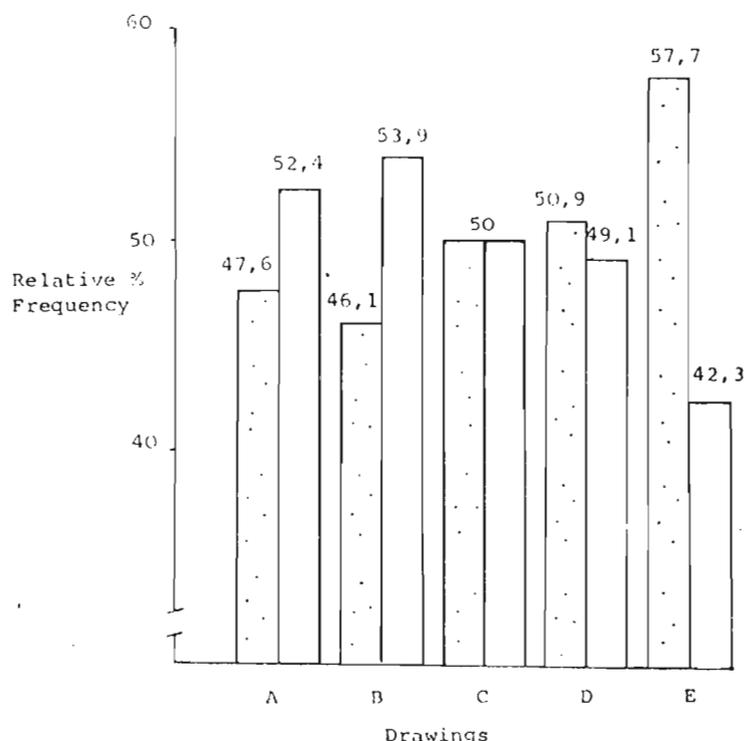


Fig. (xxviii) Drawing Choice for Males and Females
Where:
Females 
Males 

It was found that,

- (i) there was a significant interaction between sex and Drawings B and E ($p < 0,01$) with male subjects choosing B significantly more frequently than females, and vice versa for Drawing E. Characteristics of the drawings may be responsible for this difference between the two sexes.
- (ii) within each sex there were very large significant differences between the mean frequencies of choice for all drawings, except between Drawings C and E for the male subjects. These highly significant differences between the frequencies of choice within the sexes is compatible with the finding that over all subjects, regardless of sex, there were significant differences of preference for the drawings when compared with each other.

To summarize, drawings A and B were relatively more preferred by the male subjects, drawings D and E by the female subjects, and that there was no significant difference between males and females for Drawing C. This finding is most interesting in that Drawing C ("House on Fire") can be considered to depict stereotypically male subject matter, yet there were no sex differences in the frequency of choice, as preferred, overall. Within age groups, there did exist sex differences, however.

In order to fully understand why age and sex may have influenced the judgements, it is necessary to examine :

- (i) popular drawings for each age
- (ii) preferred drawings for either sex
- (iii) the categories associated with these preferred drawings, and arrive at
- (iv) the criteria used by various ages and the two sexes.

An examination of the above aspects leads to the following general conclusions :

- (i) For all age groups the most popular choice was Drawing B, followed by A, E, C and D, although within age groups this order varied.

Drawing B has associated with it a high percentage of criteria which refer to subject matter. Therefore, popularity of a drawing, across all ages, depended upon the degree to which the subject could relate to the subject matter.

- (ii) For both sexes, Drawing B was the most preferred, therefore the above explanation holds true for sexes i.e. that regardless of the sex of the respondent, if a drawing contained subject matter with which the male or female subject could identify, this influenced judgement positively.

3.5.4. Predominant Categories Associated with Individual Drawings

TABLE XI : CATEGORIES ASSOCIATED WITH INDIVIDUAL DRAWINGS.

Drawing	Categories:					Totals	
		1	2	3	4		5
A	R.S	11	10	52	5	8	86
	%	12,8	11,6	60,5	5,8	9,3	100
B	R.S	49	42	37	20	26	174
	%	28,2	24,1	21,3	11,5	14,9	100
C	R.S	32	8	6	3	4	53
	%	60,4	15,1	11,3	5,7	7,5	100
D	R.S	14	11	4	2	6	37
	%	37,8	29,7	10,8	5,4	16,2	100
E	R.S	23	27	19	12	10	91
	%	25,3	29,7	20,8	13,2	11,0	100

Category Codes for the above table, and for all subsequent figures :

1. Empathetic Content
2. Other Content
3. Colour
4. Technical Aspects
5. Miscellaneous

(i) Drawing A - Entitled : The Rainbow

Description: A very brightly coloured picture, the predominant element being a large multicoloured rainbow which arches from the left corner, up to the top of the page, across to the right corner. Under the rainbow is a clump of trees and what appears to be a human figure. The sky is coloured bright blue and covers the entire background but for the ground which serves as a baseline. There are large stylistically rendered birds flying about. Representative of 6-7 year old drawing.

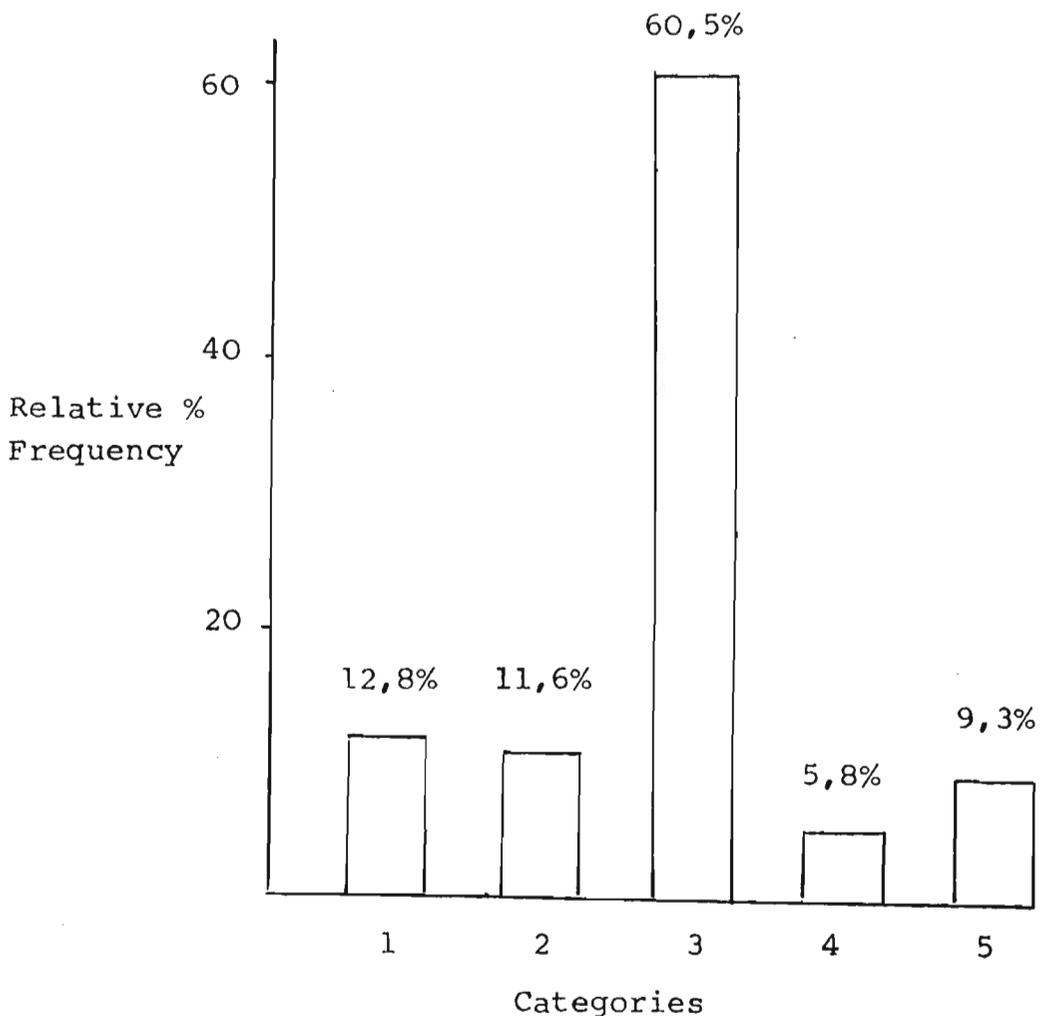


Fig.(xxix) Categories Associated with Drawing A

Colour influenced the choice of Drawing A as preferred more than any other criteria.

It is not surprising that, when justifying their preference for Drawing A, which is a highly colourful picture, the subjects used colour as a criterion substantially more frequently than any other.

This was noted to occur for all ages, and there appeared no differences between the sexes.

(ii) Drawing B - Entitled : The Horse.

Description: The central element is a horse, with saddle and reins, tethered to a tree stump. The horse is standing in strict profile on a solid base line of grass, behind are simplistically illustrated hills and foliage. The sky is completely coloured, and there is a striking red "sun" in the centre. Colours are for the most part accurate but dull. Realism is striven for in the drawing. Representative of 10-12 year old drawing .

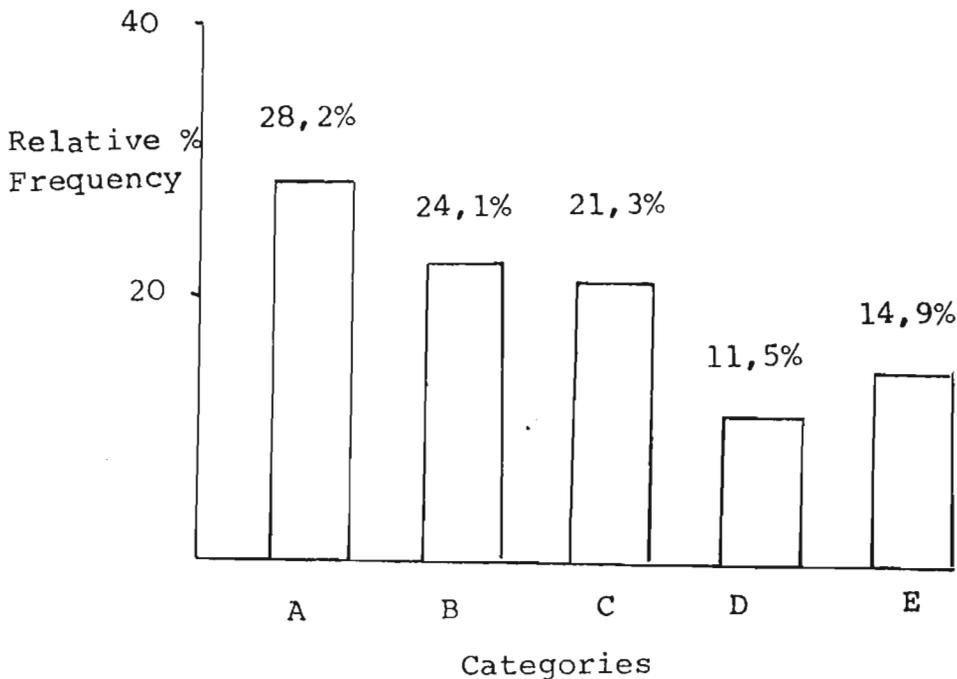


Fig.(xxx) Categories Associated with Drawing B

The above figure shows that a wide range of criteria are used by the subjects when justifying their preference for Drawing B, the most popular drawing of all those viewed.

The above suggests that Drawing B is particularly conducive to providing cues for the identification of criteria which can be assigned to the three categories most frequently used.

By definition, Empathetic Content would be evidenced if the subjective proceeded to make a story about the depicted scene. A drawing of a solitary horse, standing with saddle and reins appeared to provide stimulus for such narrative material.

In that the drawing was more or less realistic, the central element (horse) could very easily be identified, and therefore used as a reference point when justifying preference in terms of the definition of Other Content.

It has been noted that the younger age groups resorted to simply naming the predominant elements in a drawing when required to justify their preference, and this contributed toward the relatively high frequency of criteria of the category Other Content when looked at across all ages.

The figure below shows the above trend for Drawing B.

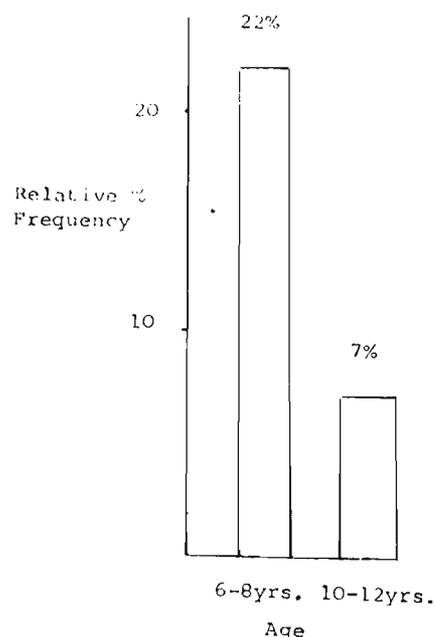


Fig. (xxxii) Frequency of Other Content Category for Younger and Older Age Groups for Drawing B.

Although Drawing B cannot be considered particularly colourful when compared with Drawing A¹, it is interesting to note that colour as a reason for preference occurred as 25% of the categories of response; almost as frequently as Empathetic Content being 29,7%.

Individual differences between subjects as to what they like about a drawing may be taken to explain this observation.

TABLE XI : SUBJECTS' USE OF CATEGORIES

	No. Subjects
Subjects who referred to subject matter	42
Subjects who referred to colouring	21
Subjects who referred to both subject matter and colouring	7

The table above shows that 30% of the sample referred only to colour when justifying their preference for Drawing B. It is suggested that it is the responses of these subjects which have an inflationary influence on the frequency of colour as a criterion and not those of subjects who refer to both colour and subject matter i.e. subjects appeared clear about which picture they liked and why.

In conclusion it can be said that both the subject matter and the colouring of Drawing B influenced the judgement, with subject matter predominating over colouring.

(iii) Drawing C - Entitled : House on Fire.

Description: A somewhat untidy drawing of a house, covered in fire and smoke with a fire engine and firemen with hoses in the

1. In a sample of 20 adult judges, 100% indicated Drawing A in answer to the question "Which drawing do you think is more colourful?" and not Drawing B.

foreground. There are also onlookers. The paper is covered in detail, however much of this is line, with little block colouring. Representative of 8-9 year old drawing .

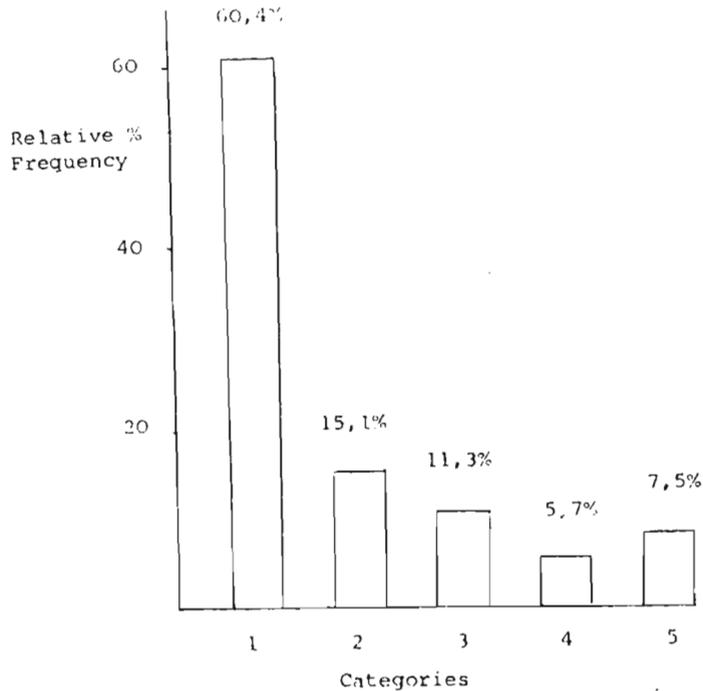


Fig.(xxxii) Categories Associated with Drawing C

For Drawing C the subject matter can be seen to influence the judgements most strongly. It is the nature of the references to the subject matter that is of particular interest.

The drawing stimulated a wide variety of narrative descriptions of the depicted scene. It could be said that such a drawing was particularly conducive to the creation of stories, i.e. subjects, could easily identify with the depicted action.

Although there existed no significant difference between males and females in the number of times they chose Drawing C as preferred, it is interesting to note that there did exist sex differences in the justifications for preference with 62,5% of the category Empathetic Content being evidenced for male subjects, while only 37,5% was evidenced for the female subjects. Related to this is the fact that females, in .

referring to the subject matter, without further elaboration, did so 7 out of the 8 recorded instances for the whole sample. This suggests that male subjects could identify more closely with the action depicted - they produced elaborate stories about the picture, whereas such identification was not as strong for the female subjects, who simply gave a name to the depicted action in the drawing.

In conclusion it can be said that the subject matter of Drawing C influenced the judgements most strongly (as opposed to other categories for Drawing C), but males and females preferred it for different reasons.

(iv) Drawing D No Title.

Description: A drawing representative of 5 - 6 year olds, with elements placed haphazardly over the page.

Since Drawing D was the least preferred of all drawings, very little was offered by the subjects in their justifications. It is felt that closer examination of the categories associated with the drawing is futile in that reasons for preference were sought in the present study and not reasons for non-preference i.e. the data is regarded as too limited to justify closer examination.

It is suggested Drawing D was chosen as preferred by subjects who felt they had to make changes in their selection¹, or by subjects who did not fully understand the situation, who were insecure and hence chose at random to satisfy the examiner, or who just did not take the examination seriously at all.

1. See Section 2.2.2 (iii) for discussion.

(v) Drawing E - Entitled : "Flowers".

Description: A highly stylized rendition of long stemmed flowers, which slant toward the right, filling in all space from side to side and top to bottom. The background was not coloured at all. Colouring of the flowers did not follow any pattern or attempt for realism. There was a strong base-line from which the flowers appeared to be growing. Difficult to place in terms of representational level in general, because of the somewhat abstract nature of the drawing - it was however done by a 12 year old.

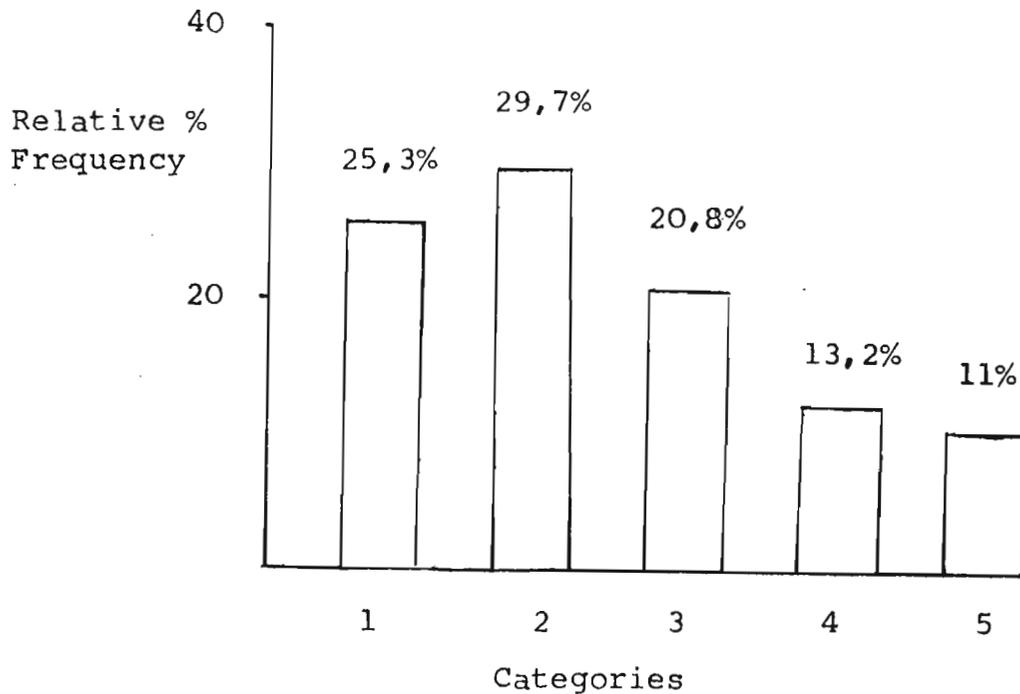


Fig.(xxxiii) Categories Associated with Drawing E

The above figure shows there to be no marked influence of any category on the justifications. It does however show that subject matter and colouring are more important than the technical aspects - this is interesting in that the abstract nature of the drawing may be considered conducive to using technical aspects. However being not readily part of a child's

concern when drawing¹ such may also not be part of his responses in the art appreciation situation.

There also appear to be sex differences in reference to colour, with females as to males being 73,7% as to 26,3%.

To conclude, justifications of preference for Drawing E do not appear to be influenced markedly by any one feature of the drawing. It would appear that children, when viewing such a drawing, may draw upon a wide range of criteria, and these being influenced, in the main, by the child's individual response to the presenting situation.

3.5.5. Individual Categories Associated with Drawings

In order to bring some cohesion to the above, and attempt to summarize the discussion, it will be necessary to examine the distribution of categories over all drawings. This will however be a cursory examination, in light of the fact that analysis of the categories of response has been presented earlier in the study.

-
1. "From this (childhood experimentation) to making of 'works of art' there is no division but only a difference of degree - the degree of planning, complexity, insistence on unity. Very young children do not attain this and are not interested in doing so. Older children may go a long way toward it, though distinction in it can only be expected at a fairly mature age."
Reid (1969) p.278.

This section augments the preceding analysis by providing information of general trends in terms of the relative appearance of individual categories separately for each drawing.

TABLE XII : APPEARANCE OF INDIVIDUAL CATEGORIES
ACROSS DRAWINGS.

Category	1	2	3	4	5
Drawing					
A	8,5	10,2	44,1	11,9	14,8
B	38,0	42,8	31,3	47,6	48,2
C	24,8	8,2	5,1	7,1	7,4
D	10,9	11,2	3,4	4,8	11,1
E	17,8	27,6	16,1	28,6	18,5
Total	100	100	100	100	100

(i) Subject matter - Categories Empathetic and Other Content.

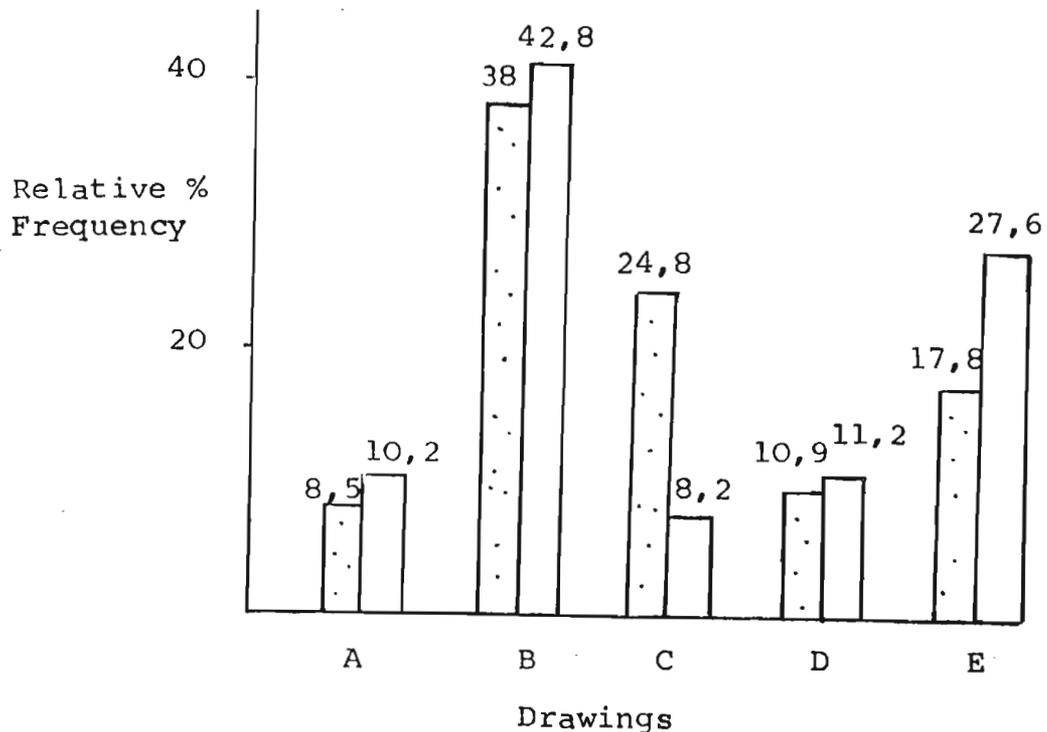


Fig. (xxxiv) Distribution of Empathetic and Other Content Categories

Where:

Empathetic

Other

The above figure shows :

- (a) The highest frequency of references to subject matter was associated with Drawing B ("The Horse"), decreasing from Drawing E, through C and A to D.
- (b) Only for Drawings C and E did the nature of reference to the subject matter differ substantially.
- (c) That Drawing C was associated with the largest difference between the two types of reactions to subject matter.
- (d) That only for Drawing C did the frequency of Empathetic Content exceed that of Other Content.

As a general summary it can be said from the above that although the subject matter of a drawing does appear to be the most compelling aspect, and hence to influence the judgement of preference substantially, subjects respond to the subject matter in two qualitatively different ways. This differential response, it is suggested, can be ascribed to individual differences between subjects. It can also, but to a lesser extent, be ascribed to intrinsic characteristics of the drawing, where some drawings stimulate one kind of response and not another.

The latter is suggested by the data associated with Drawings C and E. These two drawings show the largest differences between the two types of reference to subject matter, suggesting that they have characteristics which the other drawings do not have, which give rise to greater consistency of one type of response than another on behalf of the subjects. Particularly here, it can be seen that although these drawings contribute to the greatest variations in reference to subject matter, they do so in different ways - Drawing C appears to stimulate more story-telling while Drawing E ("The Flowers") appears to give rise to more references to subject matter in and for itself.

By examining the relative frequencies of individual categories for particular drawings it can be seen that

- (a) For Drawing C the highest frequency was for Empathetic Content
- (b) For Drawing E the highest frequency was for Other Content.

These complementary results, the categories across individual drawings and then across all drawings, suggest that some aspects of the drawings stimulate certain responses and not others to the subject matter.

(ii) Category : Colour

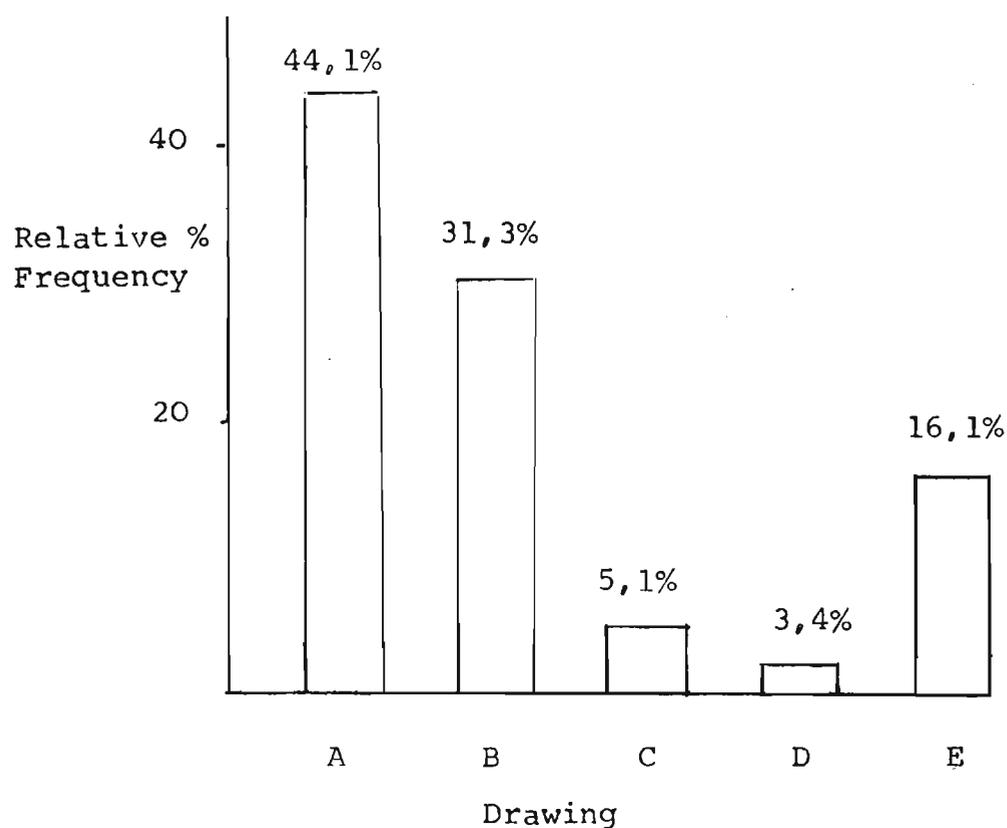


Fig. (xxxv) Distribution of Colour Category

Fig. (xxxv) shows there to be large differences in reference to colour, with Drawing A giving rise to the highest frequency, followed by Drawing B.

It can therefore be concluded that it was intrinsic characteristics of the drawing itself, as opposed to individual differences, which gave rise to the high frequency of references to one particular characteristic i.e. in this case, the highly colourful nature of the drawing.

(iii) Technical Aspects.

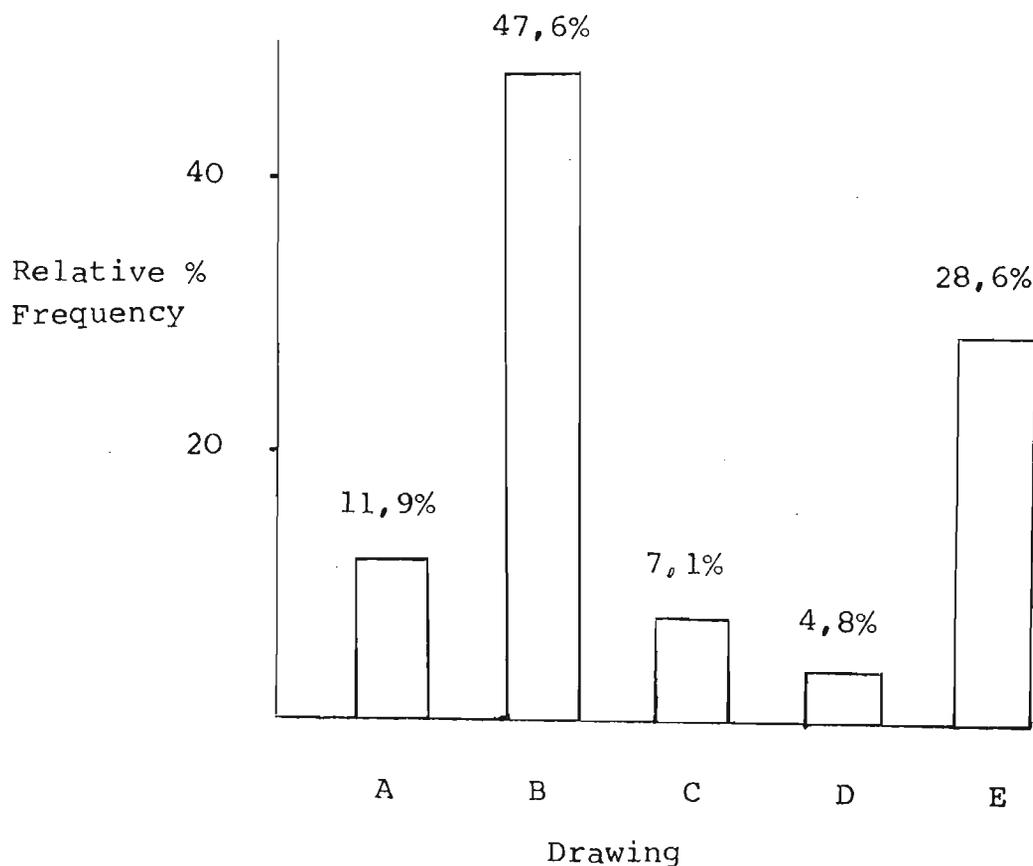


Fig.(xxxvi) Distribution of Technical Aspects Category

The above figure shows that "technical" criteria were offered far more frequently for Drawing B than any other drawing.

This would suggest quite strongly that the preferred drawing, in addition to being preferred for its subject matter, is also chosen because it is representative of some degree of technical proficiency.

(iv) The "Miscellaneous" Category.

Although this category was essentially a "dumping ground" for all criteria which failed to satisfy the definitions of other categories, it is interesting to examine with which drawings the higher frequencies of such unqualified responses were associated, and to offer some very tentative explanations. It must be borne in mind that the explanations are essentially speculative hypotheses as to what may have given rise to such observations.

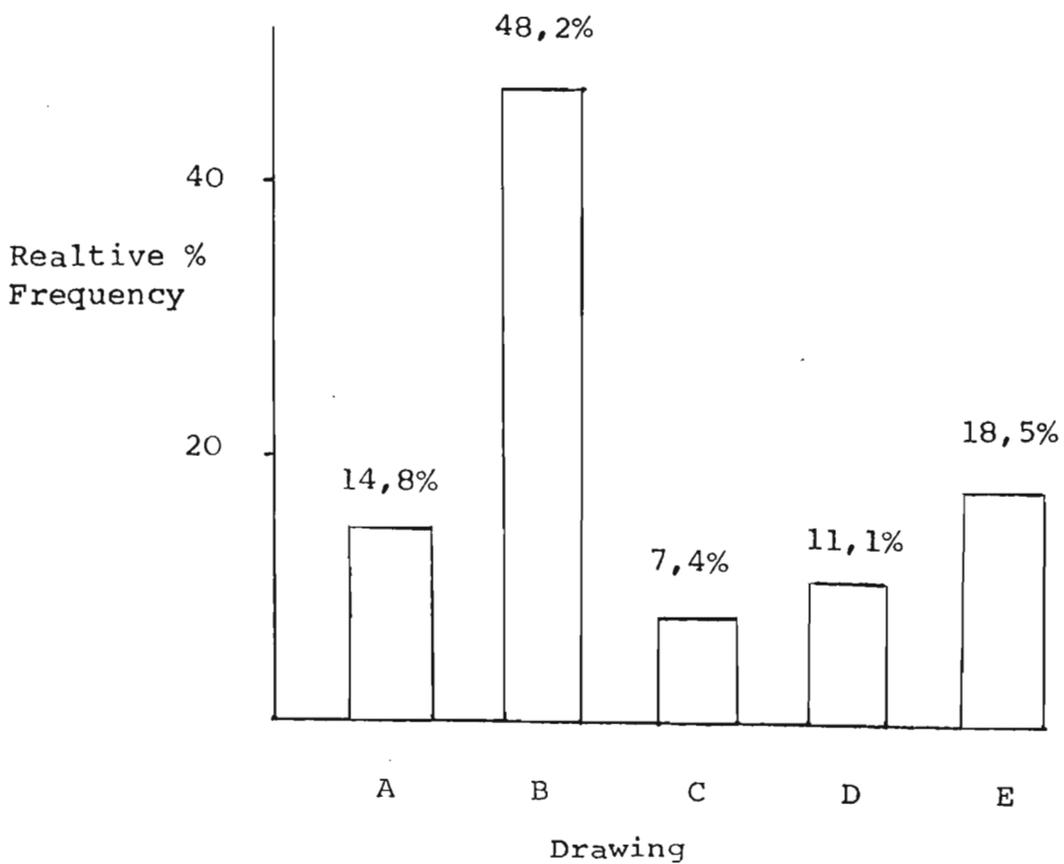


Fig.(xxxvii) Distribution of Miscellaneous Category

Drawing B was the most popular. Some subjects, although sure that they preferred the drawing over the others, were not sure as to why they did viz. although, according to Gardner (1973), the child can be regarded as a fully

accomplished "audience member", he is not accomplished as "critic". Therefore, because of the task demands, where the examiner requires justifications for preference to be offered, the child resorts to generalizations of a totally non-committal nature e.g. "It's lovely" or "I just like it". Drawing B, being popular, therefore has associated with it a relatively high frequency of such justifications - it is chosen often, and the child must justify this choice equally often.

3.5.6. Conclusion

To conclude the following summary points can be made:

- (i) Children, regardless of age and sex, have definite likes and dislikes when it comes to other childrens' work.
- (ii) These preferences appear to be tied to the characteristics of the drawing and to personal characteristics of the child.
- (iii) The type of drawing which is most popular with children must contain three properties. These are:
 - (a) it must be indicative of some degree of technical proficiency
 - (b) it must represent its subject matter as clearly and realistically as possible.
 - (c) it must be scenic or pictorial, and not abstract or pure pattern, as the child uses the depicted scene as the starting point for a "story", which is indicative of his or her empathetic involvement with the content of the drawing.

PART IV GENERAL DISCUSSION

4.1 Introduction

In addition to examining the status of child art in psychology, the literature review developed around diverse topics.

However, the pivotal and primary issue was understanding the way children think about art. It is in the light of this issue that the findings of the present study may best be interpreted.

A secondary, and complementary issue will be briefly dealt with here. This issue concerned the question "Do children produce works of art"? From the definition offered by Berlyne (1974)¹ it was concluded that childrens drawings may, to a degree, be considered "works of art". It was, however, emphasised that whether or not all younger children were "artists", was not capable of a single, simple answer - and if such was given, harm may be done not only to our understanding and judgement of their work, but also to the children themselves (Reid 1969). This, it is felt, emphasises the highly qualitative nature of research in this area in general and the present study in particular. It certainly must be seen to caution against the making of categorical assertions and a too quantitatively simplistic approach to such an understanding.

The general discussion of the present study will proceed according to:

- (i) the questions which guided the study and which were posed both in the preamble and the introduction to the results and ;

1. See section 1.4.3 pp 18-21

- (ii) the subsection plan of the section discussing the way children think about art.

4.2 Questions Addressed and Answered.

4.2.1 The Dominating Factors.

By far the most important factor was the subject matter of the drawing, followed by the colouring. Both, however, were referred to in qualitatively different ways.

In the main, the kind of subject matter would be that which promoted an identification therewith. Children were inclined to prefer drawings whose subject matter was more or less realistically rendered, and about which they could offer narrative stories. Of primary importance was the degree to which this could be achieved in determining which drawings they preferred. Of secondary importance was the childrens' choice of the subject matter, in and for itself, as a determinant of picture preference.

The influence of colour was less strong, appearing to be more influential than subject matter in the individual case only - and these cases did not supercede those where both subject matter and colour, or subject matter alone, were important. Nevertheless, it was noted that, in the main, when colour was used as a justification of preference, it was usually in terms of intensity of individual colours, or variety of colours in general, with the former being more important than the latter.

Whether or not colours were used appropriately was not important, but it can be inferred from the importance of accuracy of representation in general, that it may have been.

Technical aspects, or rather the more objective merits of a drawing, were not important - atleast not by direct reference.

However, that realism was one of the sub-categories of this category, implies that the drawing should be indicative of some technical proficiency if it is to be preferred over others. Only by examining the "artistic characteristics" of those drawings not preferred, may one approach a clearer understanding of the influence of technical aspects in the choice of preferred drawings. This however is beyond the scope of the present study since justifications of preference and not those of non-preference were examined here.

4.2.2 Influences of Age and Sex.

The age and sex of the child did appear to have some influence upon their judgement. These factors did however work independently of one another, and in two different ways.

The age of the child appeared influential in so far as the repertoire of responses became extended as the child became older. It did not appear to be associated with a shift from one or a particular set of responses, to another.

However, it is suggested that this particular study would have been more appropriate had the subjects been divided into developmental levels of one kind or another, as opposed to chronological age. Some curiously anomolous situations were associated with the nine and twelve year olds. In these age groups there was less distinction between the dependence upon the "popular" categories i.e Content and Colour, and the "unpopular", i.e Technical and Miscellaneous. That possible psychological changes at these ages gave rise to these findings is not being dismissed altogether, but it is suggested that caution should be exercised when interpreting the findings in this light only.

The sex of the child did have a significant interaction with the categories of response. Overall, it appeared that the female subject would be more inclined to offer justifications based on the subject matter per se, and the colouring, whereas male subjects offered more narrative stories centered around the subject matter, and referred more frequently than females to the technical aspects of a drawing.

It can be concluded therefore that children of different ages, and different sexes, appear to relate to other childrens' drawings in different ways, and to offer qualitative different justifications of preference according to their age and sex.

4.2.3 Distinct Preferences for Certain Drawings.

That children have clear ideas as to which types of drawings they prefer above others is without doubt. They show clear preferences for drawings which satisfy the following criteria:

- (i) Clear and more or less accurate representations of their subject matter.
- (ii) More often than not, a way in which the child can identify with the subject matter, and can produce stories which centre around this subject matter. Each story however will be characteristically different for each child, indicative of their personal involvement with the subject matter.
- (iii) Colour enhancing the subject matter or taking precedence over it if the subject matter is either conducive to rich and varied colour, or is somewhat "abstractly" rendered in terms of vivid colouring.
- (iv) Neatness of production, high contrasts of colour, and, to a far lesser degree, compositional aspects should be more present than absent in the preferred drawing.

It would appear that children do not like drawings which are untidy, poorly composed, somewhat abstract or without subject matter with which they can identify.

In general, differences between ages, is given rise to by particular drawings, but there did not appear to be a change in preference from one kind of drawing to another, with age.

Sex as an influence on drawing choice operated in so far as the male subjects appeared to be more in agreement as to which drawings they liked than did female subjects.

4.3 Understanding the Way Children Think About Art

In the interests of clarity the separate contributions made to the above area, and discussed in Section 1.3, by the following writers will be considered:

- (i) Lowenfeld (1970)
- (ii) Piaget (1969)
- (iii) Gardner (1973).

These writers have been chosen as they are predominantly concerned with children's reactions to art, as opposed to their active productions, i.e. insofar as the present study selectively presented their writings.

4.3.1 The Contribution of Lowenfeld (1970).

The major thrust of the argument offered here was that art is not the same for a child as it is for an adult and that aesthetic criteria used by adults as indices of excellence follow what they consider art to be concerned with e.g. external beauty. The criteria used by the child will follow what he sees art to be concerned with.

In response to this the findings of the present study suggest that children see art as concerned with their personal

perceptions of their environments, and their individual likes and dislikes within that environment. This suggests that children are not using an arbitrary scale used by adults when evaluating art, but one which is tied to their level of development of both aesthetic and critical capacities. Above all, it suggests that one may accept the conclusion reached by Lowenfeld when he stated:

"There are no set standards or rules that are applicable to aesthetics, rather the aesthetic criteria are based on the individual, the particular work of art ... and the intent or purpose behind the art form" (p. 31).

That children also have definite likes and dislikes for particular drawings and these are influenced by the subject matter of the drawings, substantiates the claim that they see art as concerned with what interests them personally - and that they are not particularly concerned with the objective merits or "external beauty" of art.

4.3.2 The contribution of Piaget (1969).

Piaget appeared to be primarily concerned with the inappropriateness of the superimposition of adult criteria onto children's art, in that adults are operating at quite a different level of cognitive development.

For the child to "detatch" himself from the drawing i.e. view it objectively, make comparisons and think logically about possible other modes of representation, the child must be free of an egocentricism which restricts his repertoire of responses. It was noted here that there did appear to be an increase in the repertoire of responses with age. Therefore the child's justifications of preference appeared constrained according to his level of cognitive development - just as

level of cognitive development constrains the child's thinking in the problem solving situations examined by Piaget.

4.3.3 The contribution of Gardner (1973).

Children, it would appear, are accomplished critics of work done by their peers. Gardner's (1973) theory, in attempting to link developmental questions and aesthetics, comes closest to a synthesis of the findings of the present study and their broader relevance and application.

Children "know" what they like, and why they like it. They are "full participants in the artistic process", and as such their responses in the present situations may be accorded a place in Gardner's view that "participation in the arts is so natural and integral a part of human growth that an understanding of this process should provide important clues to many pivotal questions of human development".

4.4 Conclusion.

In its exploratory nature the present study threw light upon aspects of the way in which children judge the artistic endeavours of other children.

Many areas could valuably be extended, and some, although not bearing any direct relationship to the title of the work, are deemed necessary in that they both enhance and elucidate some key issues raised.

The degree to which the findings of the present study may contribute to the knowledge and understanding in the area of the psychology of childrens art was alluded to in that it illustrated where contributions have and could be made.

A P P E D I X

APPENDIX (A)

TABLE I : RAW SCORES AND RELATIVE PERCENTAGE FREQUENCY OF APPEARANCE OF CATEGORIES (SHOWING SEPARATE "TECHNICAL" CATEGORIES) WITHIN AGE GROUPS.

A	CATEGORIES										T
		E.C.	O.C.	Co.	O	TECHNICAL CAT.					
						R	Cl.	Ct.	S		
6	R.S	18	27	32	16	0	6	0	0	99	
	%	18,2	27,3	32,3	16,2	0	6,1	0	0	100	
7	R.S	13	8	6	5	0	0	0	0	32	
	%	40,6	25	18,8	15,6	0	0	0	0	100	
8	R.S	29	17	18	6	5	1	5	0	81	
	%	35,8	21	22,2	7,4	6,2	1,2	6,2	0	100	
9	R.S	8	17	17	9	0	5	3	4	63	
	%	12,7	27	27	14,3	0	7,9	4,8	6,3	100	
10	R.S	23	12	10	4	0	0	2	0	51	
	%	45,1	23,5	19,6	7,8	0	0	3,9	0	100	
11	R.S	25	6	19	7	0	0	2	0	59	
	%	42,4	10,2	32,2	11,9	0	0	3,4	0	100	
12	R.S	13	11	16	7	1	1	5	2	56	
	%	23,2	19,6	28,6	12,5	1,8	1,8	8,9	3,6	100	

Key to Abbreviations:

- A = Age in years for group S (N = 10)
- R.S = Raw Score
- % = Relative Percentage Frequency
- T = Total
- E.C = Empathetic Content
- O.C = Other Content
- Co. = Colour
- O = Other
- R = Realism
- Cl. = Clarity
- Ct. = Contrast
- S = Style

Measure of Agreement between Judges

TABLE II Kendall Test.

All Subjects $n = 5$ $m = 10$

Age	Z
6	64,6*
7	34,1*
8	58,6*
9	59,1*
10	49,6*
11	69,6*
12	52,6*

df = 14,06 *significant at 0,01 level.

TABLE III Female S. $m = 5$
 $n = 5$

Age	J	A
6	52	0,04
7	54	0,08
8	66	0,32*
9	52	0,04
10	64	0,28*
11	68	0,36*
12	61	0,22*

df = 22,2

*significant at 0,01 level

TABLE IV Male S. $m = 5$
 $n = 5$

Age	J	A
6	86	0,72*
7	60	0,20*
8	70	0,40*
9	90	0,80*
10	74	0,48*
11	84	0,68*
12	74	0,48*

APPENDIX (C)Tukey's Honestly Significant Difference

TABLE V (a) : Sex at levels of Drawing - Females.

Drawing	A	B	C	D
B	59,4			
C	14,86	74,32		
D	52,70	112,16	37,83	
E	14,86	44,59	29,72	67,56

TABLE V (b) : Sex at levels of Drawing - Males.

Drawing	A	B	C	D
B	74,32			
C	25,67	100,00		
D	71,62	145,94	45,94	
E	24,32	98,64	1,35	47,29

All highly significant except E and C for Males.

TABLE VI : Drawings at levels of Sex.

Drawing A	q = 9,69
B	q = 23,03
C	q = 0
D	q = 7,27
E	q = 25,45

All significant except difference between Males and Females for Drawing C.

APPENDIX (D)

TABLE VII : FREQUENCY OF DRAWING CHOICE FOR SAMPLE

AGE	SEX & DRAWINGS									
	FEMALE					MALE				
	A	B	C	D	E	A	B	C	D	E
6	2	4	2	0	2	3	4	2	0	1
	3	3	1	0	3	2	4	3	0	1
	1	3	2	2	2	3	4	2	0	1
	2	3	3	0	2	2	4	2	0	2
	3	3	2	0	2	2	4	3	0	1
	11	16	10	2	11	12	20	12	0	6
7	1	3	3	1	2	0	3	4	1	2
	3	3	2	0	2	2	3	3	1	1
	2	4	0	1	3	3	3	2	0	2
	3	3	2	1	1	1	4	0	2	3
	2	2	1	2	3	2	4	3	0	1
	11	15	8	5	11	8	17	12	4	9
8	2	4	0	1	3	3	4	2	0	1
	3	4	2	0	1	3	4	0	1	2
	2	3	1	2	2	0	4	3	1	2
	2	2	1	2	3	2	3	0	2	3
	0	4	3	0	3	3	4	0	1	2
	9	17	7	5	12	11	19	5	5	10
9	2	4	1	0	3	3	4	0	1	2
	2	2	2	4	0	2	4	0	1	3
	2	4	1	0	3	3	4	0	1	2
	3	2	2	1	2	2	4	0	1	3
	1	4	0	2	3	3	4	1	0	2
	10	16	6	7	11	13	20	1	4	12

Table VII continued

AGE	SEX & DRAWINGS									
	FEMALE					MALE				
	A	B	C	D	E	A	B	C	D	E
10	1	4	3	0	2	2	2	4	1	1
	0	1	3	2	4	2	3	3	1	1
	0	4	2	1	3	2	4	3	0	1
	2	4	0	1	3	1	3	3	2	1
	2	3	3	0	2	1	4	3	0	2
		5	16	11	4	14	8	16	16	4
11	1	4	3	0	2	3	4	1	0	2
	3	4	0	1	2	3	4	0	1	2
	2	3	0	1	4	2	4	1	0	3
	2	4	2	0	2	2	4	0	1	3
	2	3	2	1	2	3	4	1	0	2
		10	18	7	3	12	13	20	3	2
12	2	3	3	1	1	1	4	3	2	0
	4	0	1	2	3	3	4	2	0	1
	3	4	1	0	2	2	4	1	1	2
	1	4	2	0	3	3	4	1	2	0
	3	4	2	1	0	3	4	2	0	1
		13	15	9	4	9	12	20	9	5

BIBLIOGRAPHY

- Alschuler, R. & Hattwick, L. (1969) Painting and Personality
Chicago: Univ. of Chicago Press.
- Arasteh, A.R. & Arasteh, J.D. (1976) Creativity in Human
Development. New York: John Wiley & Sons.
- Arnheim, R. (1954) Art and Visual Perception: A Psychology
of the Creative Eye. Berkeley: Univ. of
California Press.
- Arnheim, R. (1970) Visual Thinking. London: Faber & Faber.
- Bailey, K.D. (1978) Methods of Social Research. New York:
Free Press.
- Berlyne, D.E. (1965) Structure and Direction in Thinking.
New York: John Wiley & Sons
- Berlyne, D.E. (1971) Aesthetics and Psychobiology. New York:
Meredith & Corporation.
- Berlyne, D.E. (1974) Studies in the New Experimental
Aesthetics: Steps Toward an Objective
Psychology of Aesthetics.
New York: John Wiley & Sons
- Burt, C. (1921) Mental and Scholastic Tests.
London: King & Son.
- Cantor, G.N. & Kubose, S.K. (1969) Preschool Childrens' Ratings
of Familiarized and Non-familiarized
Visual Stimuli.
J. Exp. Child Psychology, 8: 74-81
- Carothers, T. & Gardner, H. (1979) When Childrens' Drawings Become
Art: The Emergence of Aesthetic
Production and Perception.
Devptl. Psychology, 15: 5, 570-580
- Di Leo, J.H. (1973) Childrens' Drawings as Diagnostic Aids.
New York: Brunner/Mazel.
- Ducasse, C.J. (1948) Art, the Critics and You.
New York: Hafner Publishing Co.
- Eysenck, H.J. (1940) The General Factor in Aesthetic
Judgements. Brit. J. Psychology, 31: 94-10

- Freeman, N. (1976) Childrens' Drawings: Cognitive Aspects.
J. Child Psychology & Psychiatry,
17: 345-350
- French, J. (1952) Childrens' Preferences for Pictures of
Varied Complexity of Pictorial Pattern.
Elementary School J. 53: 90-95.
- Gaitskell, C.D. & Hurwitz, A. (1958) Children and Their Art.
New York: Harcourt, Brace, Jovanovich Inc
- Gardner, H. (1973) The Arts and Human Development.
New York: John Wiley & Sons.
- Golomb, C. (1973) Childrens' Drawing - Effects of Task and
Medium on Representation of the Human
Figure.
Gen. Psych. Monographs, 87: 198-251.
- Gombrich, E.H.; Hochberg, J. & Black, M. (1972) Art, Perception
and Reality. Baltimore: John Hopkins
University Press.
- Goodnow, J. (1977) Childrens' Drawings.
London: Open Books Publishing Ltd.
- Goodnow, J. (1978) Visible Thinking: Cognitive Aspects of
Change in Drawings.
Child Devpt., 49: 637-641.
- Goodenough, F.L. (1926) Measurement of Intelligence by Drawings.
New York: Harcourt, Brace & World.
- Granger, G.W. (1979) Psychology of Art. In Psychology Survey
No.2 K. Connolly (Ed,)
London: George Allen & Unwin
- Greenberg, C. (1967) Complaints of an Art Critic.
Art Forum, 6: 2.
- Harris, D.B. (1963) Childrens' Drawings as Measures of
Intellectual Maturity.
New York: Harcourt, Brace & World.
- Hartt, F. (1976) Art: A History of Painting, Sculpture
and Architecture.
London: Thames & Hudson.

- Katz, E. (1944) Childrens' Preferences for Traditional and Modern Paintings.
New York: Bureau of Publications,
Columbia University.
- Kellogg, R. (1969) Analyzing Childrens' Drawings.
Palo Alto, Calif.: National Press.
- Kivy, P. (1973) Speaking of Art.
The Hague: Martinus Nijhoff.
- Lark-Horovitz, B. (1937) On Art Appreciation of Children:
I. Preference of Picture Subjects in
General. J. Educ. Res., 31: 2, 118-137.
- Lark-Horovitz, B. (1938) On Art Appreciation of Children:
II. Portrait Preference Study.
J. Educ. Res., 31: 8, 572-598.
- Lascaris, P.A. (1928) L'education esthetique de l'enfant.
Paris: Alcan.
- Lawler, C.O & Lawler, E.E. (1965) Colour-mood Associations in
Young Children.
J. Gen. Psych., 107: 29.
- Lowenfeld, V. & Brittain, W.L. (1970) Creative and Mental Growth.
New York: Macmillan.
- Luquet, G.H. (1927) Le Dessin Infantin. Paris: Alcan.
- Machotka, P. (1966) Aesthetic Criteria in Childhood:
Justifications of Preference.
Child Devpt., 37: 4, 877-885.
- Machover, K.A. (1949) Personality Projection - In the Drawing
of the Human Figure.
Springfield, Ill.: C.C. Thomas.
- Meili-Dworetzki, G. (1957) Des Bild des Menschen in der Vorstellung
und Darstellung des Kleinkindes.
Bern: Hans Huber.
- Mellinger, B.E. (1932) Childrens' Interest in Pictures.
New York: Bureau of Publications,
Columbia University.

- Piaget, J. (1954) The Construction of Reality in the Child.
New York: Basic Books.
- Piaget, J. (1973) The Child's Conception of the World.
London: Paladin.
- Piaget, J. & Inhelder, B. (1969) The Psychology of the Child.
London: Routledge & Kegan Paul.
- Pickford, R.W. (1948) "Aesthetic" and "Technical" Factors in
Aesthetic Appreciation.
Brit. J. Psych., 38: 135-141.
- Read, H.E. (1961) Education Through Art.
London: Faber.
- Reid, L.A. (1969) Meaning in the Arts.
London: George Allen & Unwin Ltd.
- Roubertoux, P. (1970) Personality Variables and Interest in Art.
J. Pers. & Soc. Psych., 16: 4, 665-668.
- Roubertoux, P.; Carlier, M. & Chaguiboff, J. (1971) Preference for
Non-objective Art: Personal and
Psychosocial Determiners.
Brit. J. Psych., 62: 1, 105-110.
- Schwartz, L. (1953) Quelques Remarques sur l'Attitude des
Enfants de la Campagne Devant les Oeuvres
d'Art. Enfance, 6: 249-261.
- Silver, R.A. (1978) Developing Cognitive and Creative
Skills Through Art Programs for
Children with Communicative Disorders
or Learning Disabilities.
Baltimore: University Park Press.
- Stone, P.J.; Dunphy, D.C.; Smith, M.S. & Ogilvie, D.M. (1966) The
General Inquirer: A Computer Approach to
Content Analysis in the Behavioural Sciences
Cambridge, Mass.: M.I.T. Press.
- Subes, J. (1958) l'Appreciation Esthetique d'Oeuvres d'Enfant
par les Enfants. Enfance, 11: 115-130.
- Sully, J. (1901) Studies of Childhood.
New York: Appleton.
- Thorndike, E.L. (1913) The Measurement of Achievement in Drawing.
Teachers' College Record, 14: 5.
- Vernon, M.D. (1958) The Development of Perception in Children.
In Human Development I.J.Gordon (Ed.)
Chicago: Univ. of Chicago Press.