AN INVESTIGATION OF THE BASES OF

THE EDUCATION DEPARTMENT'S

ART SCHEME (TENTATIVE).

1945

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W. S. BARRETT

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PLATE

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CHAPTER 1.

INTRODUCTION.

PROBLEM:

To investigate the bases of the Education Department's Art Scheme. (Tentative).

TO EXAMINE THE HYPOTHESES:

(1) That there are important personality differences which tend to show in children's drawings, and that these differences are total personality differences.

(II) That these differences may be interpreted in terms of

(a) Jung's typology.

(b) Gestalt Psychology.

(c) and aspects of the Rorschach Test, measuring introversion-extraversion.

(III) That an enquiry into teacher response will show a new awareness of these differences.

EXPERIMENTAL WORK:

The experimental work has been as follows:

(a) A study of 1145 drawings of a man by children between the ages of 7 and 15 years and an adult group of students.

(b) The testing of each of the 35 subjects by means of the Rorschach Ink Blots.

(c) A study of 35 cases, each supplying a minimum of two drawings.

(d) A statement of colour preference from each of the 35 subjects tested.

1. Lark-Horovitz, Barnhart & Sills. p.3 (19).
(e) A questionnaire to teachers and headmasters of 27 Christchurch schools. (Appendix A.)

PRELIMINARY ELABORATION OF THE EXPERIMENTAL WORK.

(a) The drawings of a 'man' were obtained from primary and secondary school children in Invercargill, which happened to be the home town of the investigator. These drawings were collected during September 1947. The adult group of approximately 130 students was an Education Class (Stage I) from Canterbury College.

(b) The Rorschach Ink Blots (see p. ) a set of ten cards with either black and white, or coloured shapes of an abstract symmetrical nature were shown to the 35 subjects individually. Before this was done, however, the investigator carried out preliminary tests in order to gain some knowledge of the practical administration of the test and the method of scoring. The 35 cases were made up as follows :

(a) 6 Std. 2 girls and boys.
(b) 28 Secondary school girls and boys ranging from Form III to Form VI.
(c) 1 Adult art school diploma student.

This test was used to indicate introversion-extraversion.

(c) The same 35 subjects this time supplied two drawings each.
(a) "The trees stood stately and tall". This subject
In addition, the secondary school pupils' class work is fully known to the investigator, and was used as a check against the classification. The drawings were classified as being introverted or extraverted according to Herbert Read's Classification, based on Jungian typology, after preliminary practice on several hundred drawings from H.S. and primary schools, and also the drawings as reproduced in Read's book "Education Through Art".

(d) The questionnaire to teachers was designed to gauge their attitude to the Education Departments: (tentative) Art Scheme which is based on individual differences in ability and personality. The questionnaire was distributed to 27 schools in Christchurch, and took three forms:

(a) A questionnaire to Head Masters.
(b) A questionnaire to Teachers.
(c) A questionnaire to Specialists in Art.

The 27 schools constitute the group in which the new art scheme has been in operation over the last three years. (See pages 102 for the questionnaire details.)

ACKNOWLEDGEMENTS.

The writer wishes to thank all those who have so willingly co-operated with him in the collection of data. In particular the Senior Inspector of Schools for Canterbury and the Headmasters and Staff of the 27 Christchurch Schools, for the

3. IBID p.145 (33)
questionnaire section of the work. The Supervisor of Art Education for the use of photographs illustrating personality styles, and for his encouragement, but for which this work could not have been undertaken.

To the Lecturer in Psychology at Canterbury College for his assistance in the use of the Rorschach Technique.

Finally to the Headmasters and Staff of the Invercargill schools for their co-operation in obtaining the 'drawings of a man'.
CHAPTER II.

HISTORICAL SURVEY OF THE CHILD ART MOVEMENT.

INTRODUCTION.

It is of the greatest importance to realise at the outset that the child art movement is not 'new'. There has been an unfortunate tendency to talk of the 'new art' since its introduction to New Zealand. Child art is exactly that and nothing more or less; it must therefore be as old as the race itself. No stretch of the imagination is required to visualise a boy or girl of past ages, passing through exactly the same stages as the present day boy or girl does as he or she draws, at first with crude scribbles, then symbolically and finally with realism.

Rather, we should look on the approach as being new or recent, and even then it dates back to the last century to James Sully and Ebenezer Cooke in England. The date in the case of Cooke was 1885. These writers did not invent a new art. They tended rather to see a value in children's drawing as such, and saw in this drawing a valuable means of expression.

The more recent introduction of this enlightened approach to the New Zealand scene, makes necessary a study of the background leading up to such a change in emphasis, and also the reasons why the change came so late.

EBENEZER COOKE.

Cooke owes his first inspiration to Ruskin who published

1. Sully J. Ch. XII (34)
2. Cooke E. (10)
in 1867 'The Elements of Drawing' and in this work Ruskin saw the educational possibilities of drawing, even if he had in mind the production of artists.

Other writers have followed Cooke in fairly large numbers, thus making it necessary to select those who appear to be the outstanding figures over the past sixty years.

There can be little doubt that Cooke was early influenced by Rousseau's writings and in particular in his cry of 'go to nature'. Cooke3 not only went to nature for his study, but as he writes - 'it should include the nature that goes also'.

'No line can be drawn without imagination. Every fact passes through it, between the seeing eye, and the doing hand. Both are alike injurious if the teacher is merely the instrument of the system, not a living teacher knowing the child.'4

and further

'The choice is between accuracy and interest, technical skill and child nature. Agreed that truth must be had, but relative. The moral of the whole thing is rather how to get it. The nature of the child can no more be altered by us. We must study, sympathise and conquer by obeying it.'5

He urged that art instruction be made to conform more nearly with the mentality and interests of the child.

This would appear to be the first important statement of the problem and it is perhaps significant that Cooke was a practising teacher when he became aware of the need for natural expression in art rather than adult formalism.

4. IBID
5. IBID.
Read points out that even before this time Cooks had established relations with Jas. Sully and together they had discussed the significance of children's drawings.\textsuperscript{6} Here we have the union of teacher and psychologist, an arrangement only recently arrived at in this country, in the determination of the art syllabus for schools. However, there was no organised attempt to implement such a philosophy. Rather it was the work of a few interested parties. Yet his article did have an influence on educational practice.

SULLY:-

It was Sully's 'Studies in Childhood' 1895 which first attempted to give a coherent theoretical explanation to the gathering volume of evidence.\textsuperscript{7} His attempted explanation was revolutionary, and perhaps this was conditioned by the times. As this work was unavailable to the writer, he has made use of another work 'Childrens Ways' 1898, which gives a similar picture of Sully's approach.

Sully regarded art as play in the young child.\textsuperscript{8} Consequently he studied children from about the age of two or three to six, and observed their tendencies towards art production.

In addition, he was apparently influenced by the fact that parents' interference alters the childish manner of drawing.

He observes aimless scribbling and the attempts to make the lines meaningful. Human figures and animals were the two

\begin{tabular}{ll}
6. & Read H. p.116 (33) \\
7. & IBID p.116 (33) \\
8. & Sully J. p.237 (35) \\
\end{tabular}
subjects observed, and it is interesting to note that nearly all subsequent investigations have used the human figure, mainly because it is the object most frequently drawn by young children.

Other important aspects of his work may be listed as follows:

1. That children's drawings were spontaneous.
2. He defined stages of development in art.
3. The 'schema' was a term first innocently used by Sully, and later used to describe the schematic or symbolic representations by children of people or things which they drew.

\[\text{FIGURE 1}\]

Other writers who refer to the 'schema', are Kerchensteiner, Hilga Eng, and Mary L. Northway who defines it as 'what the subject makes, creates, or develops from the given material or situation.' And again, 'it is the expression of a developing process based on past experience.'

4. There are parallels between children's scribble and schematic utterance with the first drawings of untutored savages.

5. Children's drawings aim at selecting and presenting what is characteristic and valuable.

'Among children it is bone which makes the artist.' Sully apparently recognised, as one of the earliest investigators, that all children are potential artists.

9. Sully Jas. ch. XII (34).
10. Read H. p.120 (33).
At this stage it seems to be rather better to state the lines of investigation followed by the various writers and then at a later stage to discuss some of the more contentious issues under their relevant headings.

CIZEK.

It is just fifty years since Franz Cizek opened his Juvenile Art Class in Vienna. Here, however, was an art educator who believed that his system of art education was suitable for the gifted child and that it was not possible to extend his method to take in the whole school population. 12

Perhaps the most important aspect of his work therefore may be called 'free expression for gifted pupils'. His teaching method was based on question and answer, on leading the child to more accurate observation and expression solely by this means. It does not seem unfair to say that he 'sold' his personal appeal so well that the results were a mirror of Cizek. Yet there appears to have been much of value in his teaching. His pupils had a love for their work that would be difficult to achieve with the more formal methods of the day and even of the present day in some places.

However, it may be as well to leave Cizek as his scheme was eclectic rather than universal. If he could discover one little genius in 100 children he would dismiss the rest.

KIRCHENSTEINER (1905), ROUMA (1913) 13, BURT (1922) 14.

These three writers would appear to be the links in the development between Sully and the present day writers. There

12. DENGLER P.L. p.236-7 (11)
13. GOODENOUGH F. p.5, (16)
14. READ H. p.117 (33)
are many others who carried out individual research into children's drawings and the related psychological problems. However all seem wedded to the idea of a gradual development and the concept of stages in the process.

The amount of research has been quite large, Kirchensteiner collecting 100,000 drawings for his survey while Rouma worked for ten months with children between the ages of seven and eleven for half an hour per week.

Points that appear significant may be listed:

(1) These workers used young children i.e. before puberty.

(2) That children are not interested in drawing from life or objects.

This was tested with a Standard I class, who were given a toy rabbit to draw. The results were as varied as they would have been without any model.

(3) That coaching or training does not alter the ability of the subject or his performance.

(4) That the drawings of subnormal children resemble those of younger normal children.

(5) That a stage of 'repression' was inevitable. This point will be criticised later, but it is sufficient to say for the present that the idea of 'repression' was generally accepted at this period.

(6) That the development was treated biologically without any appreciation of temperament. Personality styles will be developed under HERBERT READ in this chapter, and in the chapters dealing with the experimental work on personality. (Ch. IV & V).
This work set out to determine to what extent the nature of the drawings made by children in their early years is conditioned by intellectual development.

The experimental work carried out by the writer on Chapter 3, on art ability groups, tends to show that Goodenough was only partially valid, because she did not assess the aesthetic side of art work and consequently makes no reference to the importance of temperament. The Goodenough system was devised to measure intelligence by drawings, and it seems to do this quite well up to the age of 10 years, an age up to which nearly all children do actually develop in art ability (see Figs. 2, 3, 4). The drawings were 'marked' according to a preconceived adult 'man' with only a partial realisation of the point that all children cannot reach a resemblance style of representation. These points will become clearer in the light of the experimental work of the later sections.

However, Goodenough did a service in that she —

(1) did study young children's drawings;

(2) saw the gradual development related with mental development up to the age of ten years.

(3) 'That the child draws what he knows rather than what he sees'. This point will be amplified under the Gestalt section.

(4) Like other investigators, Goodenough found the human figure the most popular at all ages up to the age of 10 years.
That sex differences usually favor boys. This is also noted by other investigators, and has been noticed by the present investigator over a period of years. These differences however must be assessed on a strict basis with respect to the more limited fields of portraiture and painting. Girls show at least equal aptitude in some fields of art but once again this point must be left over until the section on personality has been developed.

LARK-HOROVITZ, BARNHART and SILLS. (1939)

An American investigation using 10,000 drawings and carried out in Cleveland U.S.A. This work has been used as the basis for the next chapter on Art Ability Groups.

The chief value of the investigation lies in its objective approach to the problem, where formerly investigators had preconceived adult standards of what a child should draw at a certain stage. These investigators set out to show that those stages may be determined by the child's own work. The very nature of this study shows that certain individuals will never develop beyond a certain level of representation, and this will be easily appreciated from the three sets of figures given in Ch.III. (a) The original research, (b) The work carried out for the Education Department's scheme (c) The present investigation.

Further details of procedure appear in the next Chapter.

READ HERBERT. (1943)

Read puts forward the thesis that 'art should be the basis of education'. He admits that the idea is not new but that it was explicitly formulated by Plato many centuries ago. What is new, however, is Read's attempt to translate this platonic idea into terms which may be directly applicable to our present needs and conditions.

The whole work is set on a psychological foundation with educational implications. The Jungian typology is translated into a corresponding personality classification. Once again the idea of personality styles in art form is not new. Other well known workers Binet and Ballough, have put forward similar classifications, while Joan Evans put forward a similar case from the appreciatonal point of view.18

It is worth noting that Read makes no reference to the Cleveland investigators cited, although he does refer to earlier workers such as Cooke, Sully, Cizek, Bart. He does not attempt to use the art ability groups in conjunction with his personality classification.

Another point of importance, and one that is also noted by Eysenck, is that Read's system is built up on the work of Jung in a subjective way.19 Read would appear to have set children's drawing to psychological types by a process of reasoning. This is not quite a true evaluation (see p.50). The present investigator will attempt to justify Read's work by experiment.20

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18. Evans J  
19. Eysenck H.J.  
(20. Read H. p.141)
The chapter on Personality Styles (Ch. IV) will set out the reasons for, and the details of Read's system.

LOHENFELD - (1939 and 1947). 21

Viktor Lowenfeld's works deal specifically with children who are either blind or weak sighted. It is sufficient at this stage to point out that the earlier investigators (i.e. before Read) could not build an eight fold classification of art styles as they did not take account of the Kinaesthetic or haptic group. (Read calls this group HAPTIC). When Read reached his final classification he made use of this extra group to complete the cycle.

These works of Lowenfeld's were directed to the separation of the visual from the non-visual experiences of children. He was mainly interested in art as expression and therefore saw creative expression existing in as many forms as there were individuals.

A quotation from Lowenfeld may help to show the importance of his line of investigation.

'all previous writers agree that the development of realistic representation occurs only in a certain number of pupils - those for whom VISUAL EXPERIENCE provides the starting point for their work.' 22

A change of creative type - only apparent - there must be a basic visual talent if a visual type develops. 23

ALSCHULER and HATWICK, 1947.

This investigation, only recently carried out in Chicago uses pre-school children, makes a particularly detailed

22. Lowenfeld V. p.80 (21).
23. IBIID p.129 (21).
study of their painting methods, their colour preferences, their home environment and claims through the very individualness of its approach to be able to give a picture of the child's personality.

The importance of this work to the present investigator lies mainly in its reference to the Rorschach Psychology. Here is the only reference in all the available literature dealing with art to this projective technique of assessing personality differences, and gaining a picture of total personality.

Although the references are meagre and indicate that only a small amount of work has as yet been done they do indicate agreement between the two methods of assessment.

'We venture to suggest that perspecture on children's paintings may be further heightened by knowledge of the findings derived from such specialised techniques as those used by psychoanalysts and Rorschach workers.'

'Findings have been supported and increased progressively as a result of our present investigation.'

'Some rather striking similarities between Rorschach responses and painting tendencies in particular have been found.'

When the present investigation was started, using Ink Blots in an attempt to discover similarities between children's paintings and their personalities, and to find some method of assessing these differences, the above correspondences were not known to the investigator. However, in general terms, they showed a measure of agreement which was later found to exist in the experimental work carried out, and which is set out in Chapters IV and V and in Tables A, B, C.

NEW ZEALAND EDUCATION DEPARTMENT.

The Syllabus of Instruction 1929.

This syllabus shows the beginnings of appreciation of the problem when it talks of individual styles of drawing and personality differences and that a certain breadth of outlook is required when it comes to art instruction. Yet it makes no practical attempt to get over the old system when it writes as follows:

'Objects set up for drawing should be carefully placed against a background of suitable tone and colour, and lighted so that colour, form and mass are pleasingly displayed.' 25

In addition it mentions such things as methods of shading, training in relative proportions, perspective and foreshortening.

On the other hand it speaks of character training, and asks the teachers to encourage self expression and the development of individuality.26

From this it would appear that it does allow for original and imaginative work, and yet it shows a lack of appreciation of recent trends in art education with respect to implementing this policy of self expression.

However, other countries, although they have developed schemes and philosophies for art education have not preceded New Zealand by any great length of time. The better known English art educators are contemporary and their work has only achieved recognition with a struggle.

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25. Education Department. 'Syllabus of Instruction' 1929. 125-6
26. Education Department. Ibid p.65 (23)
An essential difference between England and New Zealand in this respect has been the absence of a dominant figure in the child art field until the last fifteen years. Those who have worked hard for art education have been rather mild imitators of other people's work.

The most recent and only published work giving any line on art education based on a different approach is the Tentative Art Scheme for Primary Schools 1945 under the chairmanship of Gordon Tokey. 27

This art scheme is an attempted synthesis of two main fields of work mentioned previously -

(1) The Cleveland study on Art Ability Groups.
(2) "Education through Art" by Herbert Read, and based on Jungian typology.

The work in this thesis is an investigation of these basic aspects of the art scheme.

Therefore this historical survey has attempted to sift the relevant investigations, in order to gain some knowledge of the present arrangement in this country and the reasons for adopting such an approach.

We may safely conclude then that the work is not new, that it has attracted reputable investigators over a period of sixty three years and that it is a rapidly growing field of investigation.

27. N.Z. EDUCATION DEPARTMENT 'An art scheme for Primary Schools' (Tentative) Wellington 1945 (27)
Finally it would be safe to say that, although lagging somewhat behind the main lines of educational research, it has not become divorced from them. The field of psychology has perhaps played the dominant role in this work, but there is a rapidly increasing application of the work educationally.
CHAPTER III.

ART ABILITY GROUPS

A. PREVIOUS INVESTIGATIONS.

The original investigation on which this chapter is based was carried out in Cleveland, U.S.A., in 1939, and used 10,000 drawings by children between the ages of six and fifteen years.¹

A New Zealand investigation using 700 cases selected² as a cross-section of a New Zealand city and its surrounding districts was made by Gordon Tewey in 1944. The findings from this investigation may be found in the Education Department's Tentative Art Scheme.

The Cleveland investigation was originated to satisfy the need for an objective method of classifying children's drawings. Previous studies have tended towards a subjective evaluation of children's drawings in relation to a preconceived adult standard of what the drawing or object should look like. That is, we, as adults, have tended to demand a photographic likeness, when comparing children's work with the original.

However, in this investigation, the standards have been derived in an empirical way³ from characteristics of the

³ See Appendix C for an Explanation of Method, and also p.2. (19).
drawing typical of each age. Hence the ability of an individual may be inferred from the product he creates, in comparison with the product or standard which is normal for children of his age.

'It is our opinion that a realistic estimation of the drawing ability of the child must be based on a thoroughgoing analysis of the graphic products of children.'

These investigators then proceeded to set up 'an empirical basis for evaluation on the extent to which certain characteristics of the drawings were typical of each age.'

The experimental work on the 10,000 drawings by children from 6 - 15 years revealed a wide range of qualities or characteristics ranging from representational to decorative.

An analysis of these drawings was carried out and the occurrence of these characteristics tabulated. Norms were then established for the occurrence of each characteristic at each age level, and the result of this investigation led them to set out five broad stages in the development of drawing ability.

2. Primitive Schematic.
5. True to Appearance.

Description of the Above Stages.

(1) **Scribble Stage.**

Here we have scribbling by the child usually from 2-4 years in which he attaches names to his scribble. That is,
he invests the scribble with meaning. Other investigators, Sully\(^5\), Rouma\(^6\), Read\(^7\), start with the children's scribble, and Sully notes the play urge and states that play is art in the young child\(^5\). The scribble is the tendency toward art production and would appear to be universal. It is important to note that different children use different scribbles to represent the same thing. For instance, "a man".

![A](image1) ![B](image2) ![C](image3)

**Fig. 1a.**

II. **Schematic Stage.**

These schema or schemata may be also called symbols or diagrams, and describe the representation of objects by such symbols or patterns.

This use of "schema" is not new. Some writers give the word a psychological connotation—a racial disposition or urge, a hormic force working out in graphic representation.

5. Sully, J. CH.XII. (34)
Oakley notes the schemata as 'the passing of play', and a greater contact with reality. However, as Read points out, the word would appear to have been used in the first instance by Sully and later taken up by Kerchensteiner.

The Schema has been divided into
(a) Primitive Schema: 4-5 years.
The outgrowth of the Scribble. See pp. 25-6.
(b) Schematic: 6-9 years.
Here the child tends to draw what he knows to be present; clothes are shown, see p. 24. The drawing is usually on one plane; perspective is not shown in the conventional sense, rather do we see the use of "stand lines" to represent distance.

III. MIXED SCHEMATIC STAGE.
This is a transition stage, and may best be described as a mixture of II and IV. Proportions become more correct, although shapes are still inaccurate, and the parts join correctly. Perspective if attempted is usually incorrect and overlapping is used. 10-12 years. See p. 26.

IV. TRUE TO APPEARANCE.
This is the final stage and is usually reached by the child at 12 if he has the necessary ability. Here we find correct proportions and shapes, one viewpoint, perspective

9. Read, H. p.120. (33).
correct, if used, and overlapping is frequent. This is what is commonly accepted as "correct" drawing although it is quite often not used or attained by recognised artists, Picasso, Van Gogh, Matisse. See p. 27.

The material used by the Cleveland investigators was obtained from four drawings.10

A. What you like best to draw.

B. A man.

C. Your schoolroom.

D. What you would like to do next Summer.

Uniform directions were issued and in the case of B the children were allowed, (1) ten minutes, (2) the use of a pencil, (3) a standard size of paper, and (4) the instructions "draw a picture of man."

Drawing C was studied mainly from the point of linear perspective which was found to occur very infrequently before 12 years. (See Frequency).

One very important point arising from the four drawings is that although a child's drawing of a man may be in group III his drawing of a tree could quite easily be in groups IV or V. However, this factor does not affect our taking only one of the above drawings, B, as the norms for each of the four drawings tend to show a similar spread of ability.

---

10. n.2 (19)
FIVE ABILITY GROUPS

1. SCRIBBLE
   15'

2. PRIMITIVE SCHEMA - HUMAN
   16

3. SCHEMATIC
   17
V. RESEMBLANCE
CLICHE

TREES

20

21

2 & 3

4

5
C. COLLECTION OF DATA.

Sources.

The drawings for this part of the investigation were obtained from
(a) Primary and Secondary Schools in Invercargill. The following schools, North Invercargill, Stds. 1-4, South Invercargill, Stds. 1-4, Middle, Std. 1-4, Tweedsmuir, Fl-2 are representative of the primary school population, while the secondary schools, Southland Boys' High School, and Southland Girls' High School, supplied drawings to build up the numbers in the 14 and 15 year groups.
(b) The Institute for the Blind, Auckland, supplied 4 cases.
(c) An adult group has also been used in order to show the general continuity of the earlier levels, and these drawings were collected from the students of Education (Stage I) at Canterbury University College. This group would naturally appear to be a selected group as far as I.Q. is concerned, and additionally with respect to a certain number of art school students taking the Education I course. However, the material collected here should show the general trend even if the figures are not representative of a normal sample of the adult population.

With respect to the selection of Invercargill as the source of the drawings for the age range 7-15 years, it happened to be the home town of the investigator and was therefore a suitable place to obtain the data. In addition, however, it was felt that a fairly representative sample
would be gained from a city of this size, being intermediate to the larger cities and the rural areas. Further it did away with the need for statistical correction of the sample.

The drawings from the primary and intermediate schools were collected during the first week of the third term 1947, and from the secondary schools and university students during the first term 1948.

**Validation of Subject.**

In this investigation we shall use the second subject used by the Cleveland Study - a man - for the following reasons.

I. It is used in the New Zealand Scheme.
II. Most children draw human figures in preference to all other subjects, especially before puberty.\(^{11}\)
III. Other investigators, Sully and Goodenough have used the same subject.
IV. The Cleveland investigation uses 'a man'.

**General Instructions.**

The following directions were issued to all teachers concerned with the supervision of classes supplying drawings.

1. Draw "a man".
2. Use a pencil.
3. Time allowed - approximately 10 minutes.
4. Size of paper - approximately 100 square inches.
5. State age and sex of subject.

\(^{11}\) Lark-Horovitz, Barnhart & Sills. p.12 (19).
(6) The surname or the initial letter of the surname.

(7) In the case of the Intermediate School pupils, state I.Q. and Form classification.
D. METHOD OF INTERPRETATION.

(a) The drawings were first sorted into groups each representing one year chronologically.

(b) The sexes were separated.

(c) This meant in every case that there were more girls' drawings than boys' or vice versa.

(d) To obviate weighting of scores it was decided to discard drawings from the larger group until the number of boys' drawings were equal to the girls' or vice versa.

   e.g. 63 Boys - 8 years

   71 Girls - 8 years - Discard 8 girls' drawings.

The method used was alphabetical, in that the last letters of the alphabet were discarded until the correct number was reached. For example, Z Y X W - working forwards.

(e) When the groups were balanced the next step was to take each group separately and sort the drawings into their respective ability groups - see the groupings used, pp.

(f) At first there was some doubt as to which group certain drawings belonged, as there naturally tended to be gradual change from what was typical of one group to what was typical for the next, either upwards or downwards in the scale. However, after practice and several readings of the original investigation, these difficulties tended to disappear, and in order to safeguard an even standard each group was re-checked and adjusted if the need was present.

(g) This procedure gave a numerical distribution for each sex, and also a numerical and percentage distribution.
E. STATISTICAL EVALUATION.

(a) Cleveland Norms.

(b) Education Department Norms.

(c) Norms of Present Investigation.

(a)

| DRAWING II. | REPRESENTATION | FREQUENCY OF OCCURRENCE OF CHARACTERISTICS BY AGE. | \hline
| Groups      | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 10,000 CASES | \hline
| Primitive   | 25  | 12  | 6   | 2   |     |     |     |     |     |     |             | \hline
| Schema      |     |     |     |     |     |     |     |     |     |     |             | \hline
| Schematic   | 73  | 86  | 90  | 85  | 72  | 60  | 54  | 49  | 41  | 33  |             | \hline
| Mixed Schema| 2   | 2   | 4   | 11  | 25  | 35  | 33  | 37  | 35  | 30  |             | \hline
| Resemblance | 2   | 3   | 5   | 8   | 14  | 24  | 37  |     |     |     |             | \hline
|             | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |             | \hline

Fig. 2


PERSPECTIVE CORRECTLY USED THROUGHOUT = 10,000 CASES.

<table>
<thead>
<tr>
<th></th>
<th>11 yrs.</th>
<th>12 yrs.</th>
<th>13 yrs.</th>
<th>14 yrs.</th>
<th>15 yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. For Drawing I, &quot;What You Like Best to Draw&quot;</td>
<td>-</td>
<td>4%</td>
<td>6%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>2. For Drawing II, &quot;A Man&quot;</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>3. For Drawing III, &quot;Interior of School Room&quot;</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Fig. 2a.
### (b) REPRESENTATION.

**FREQUENCY OF OCCURRENCE OF CHARACTERISTICS BY AGE.**

<table>
<thead>
<tr>
<th>Age, in years</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primitive</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Schematic</td>
<td>20</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Schematic</td>
<td>80</td>
<td>83</td>
<td>84</td>
<td>76</td>
<td>62</td>
<td>47</td>
<td>37</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>Mixed Schematic</td>
<td>-</td>
<td>-</td>
<td>11</td>
<td>19</td>
<td>33</td>
<td>42</td>
<td>43</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Resemblance</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>20</td>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>Per cent</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Fig. 3

### (c) DRAWING OF A MAN. 1948.

#### (1) FREQUENCY OF OCCURRENCE.

<table>
<thead>
<tr>
<th>Style</th>
<th>Age: 7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primitive</td>
<td>B 13</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schematic</td>
<td>G 6</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% (17)</td>
<td>(11)</td>
<td>(6)</td>
<td>(12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schematic</td>
<td>B 40</td>
<td>60</td>
<td>61</td>
<td>52</td>
<td>39</td>
<td>34</td>
<td>21</td>
<td>x</td>
<td>x</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>G 41</td>
<td>61</td>
<td>62</td>
<td>47</td>
<td>43</td>
<td>35</td>
<td>22</td>
<td>24</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>% (31)</td>
<td>(31)</td>
<td>(31)</td>
<td>(34)</td>
<td>(37)</td>
<td>(35)</td>
<td>(39)</td>
<td>(29)</td>
<td>(21)</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>B 1</td>
<td>1</td>
<td>11</td>
<td>12</td>
<td>21</td>
<td>33</td>
<td>29</td>
<td>x</td>
<td>x</td>
<td>22</td>
</tr>
<tr>
<td>Schematic</td>
<td>G 1</td>
<td>1</td>
<td>9</td>
<td>17</td>
<td>20</td>
<td>35</td>
<td>28</td>
<td>29</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>% (2)</td>
<td>(17)</td>
<td>(13)</td>
<td>(22)</td>
<td>(32)</td>
<td>(45)</td>
<td>(43)</td>
<td>(42)</td>
<td>(41)</td>
<td></td>
</tr>
<tr>
<td>Resemblance</td>
<td>B 1</td>
<td>4</td>
<td>9</td>
<td>8</td>
<td>x</td>
<td>x</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G 1</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>16</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>% (1+)</td>
<td>(4)</td>
<td>(9)</td>
<td>(15)</td>
<td>(22)</td>
<td>(29)</td>
<td>(23)</td>
<td>(22)</td>
<td>(21)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>% 100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>B 64</td>
<td>69</td>
<td>76</td>
<td>66</td>
<td>64</td>
<td>74</td>
<td>58</td>
<td>x</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G 54</td>
<td>69</td>
<td>76</td>
<td>66</td>
<td>64</td>
<td>74</td>
<td>58</td>
<td>68</td>
<td>55</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>138</td>
<td>152</td>
<td>132</td>
<td>128</td>
<td>148</td>
<td>116</td>
<td>68</td>
<td>55</td>
<td>100</td>
</tr>
</tbody>
</table>

**TOTAL NO. CASES:** 1145. x 14 year and 15 year Groups - GIRLS ONLY.
(II) GRAPHICALLY.

FIG. 5.
D. A COMPARISON OF DATA FROM TWO GROUPS IN AN INTERMEDIATE SCHOOL.

1. (a) The Top Ability Group. Form II I.Q. Range 103-120 = 134
(b) The Lowest Ability Group. Form II I.Q. Range 65-80 = 94

<table>
<thead>
<tr>
<th>Schematic</th>
<th>&quot;a&quot;</th>
<th>&quot;b&quot;</th>
<th>DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;a&quot;</td>
<td>&quot;b&quot;</td>
<td>No. of Cases</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>18</td>
<td>26</td>
</tr>
<tr>
<td>Mixed Schematic</td>
<td>25</td>
<td>7</td>
<td>64</td>
</tr>
<tr>
<td>True to Appearance</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

N=39 N=26 100 100

FIG. 6.

II. AGE RANGE 12 - 14 YEARS.

<table>
<thead>
<tr>
<th>DISTRIBUTION OF AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
<tr>
<td>13 - 14 Yrs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&quot;a&quot;</th>
<th>No.</th>
<th>12</th>
<th>13 - 14 Yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>54%</td>
<td>46%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&quot;b&quot;</th>
<th>No.</th>
<th>12</th>
<th>13 - 14 Yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>15%</td>
<td>86%</td>
<td></td>
</tr>
</tbody>
</table>

FIG. 8.
(I) **GRAPHICALLY.**

```
\[\begin{array}{ccc}
& 0\% & 20\% & 40\% & 60\% & 80\% \\
S & & & & & \\
M & & & & & \\
R & & & & & \\
\end{array}\]
```

"a" ___
"b" ----

**ABILITY GROUPS.**

**FIG. 7.**

---

**EVALUATION OF NORMS FOR THE TWO GROUPS.**

Certain interesting features become obvious when we compare the distribution of the two groups.

(a) The age of the "b" group is approximately a year greater than that of the "a" group.

(b) There is a large difference in I.Q. The difference between the medians of the two groups is 40 points.

(c) The largest group of the "a" group (64%) falls in the **Mixed Schematic** section of the graph, and

The largest group of the "b" section (69%) falls in the **Schematic** of the graph.
Hence we see that the older group (CA) "b" which is considerably lower as far as M.A. is concerned when compared with the "a" group is also generally at a lower stage of art ability.

This would appear to indicate that a slower rate of art ability development is linked with a slower rate of mental development. However this is apparent only in a broad summing up as it is also obvious that there is a True to appearance case (aged 12) in the "b" group. All teachers are aware of the child who can draw "well" and/or copy in the adult sense, and is yet of low mental endowment; these cases are the exception rather than the rule however.

(d) One other fact of importance is the very high percentages 64 and 69 shown by these groups with respect to one particular section of the classification. However it must be noted that both groups are highly selected with respect to intellectual capacity and other factors, and that they both deviate considerably from a mean I.Q. of 100.

There is no reason to suppose that the lower group is ineducable with respect to art. The difference is one of degree and if this knowledge of the differences within and between these two groups is wisely used by the teacher or specialist within the school, there is every reason to suppose that both groups should benefit from their art courses and produce expression work of the highest quality. Expression wisely guided is a creative process; imitation hardly ever.

Appendix B, page 114 refers briefly to blind and partially sighted children, their level and styles of representation.
B. EVALUATION OF WHOLE EXPERIMENT.

There is a reasonably good correlation between the three sets of results. While a and b tend to divide into "thirds" at the 15 year old level, c is rather high in the mixed schematic group. This may be due to several factors:
(a) that the group sampled is not a true sample
(b) that the final grading between groups has not been clearly distinguished,
(c) that the original classification does not set out to distribute the three groups evenly,
(d) that the New Zealand investigation also shows a higher % in the mixed schema,
(e) that the 14 and 15 year old level in "c" is wholly female owing to a shortage of numbers in boys' drawings in the 14 and 15 year groups,
(f) that the High School pupils are slightly above the mean I.Q. of the population,
(g) that the adult group is not a true sample as noted previously.

However the results do show that there are three large groups which differ from each other in level of art ability. Compare the 'typical' Schematic man with the Resemblance man pp.

When we consider the distribution of 1263 cases for their drawings of a man it becomes obvious that there is a gradual development from one age group to the next up to the 13 year level. The Schematic and Mixed Schematic groups
tend to level off at this age and the True to Appearance increases but slowly. It is interesting to note that Goodenough measures intelligence by using the drawing of a man and noting the amount of detail used. However, although she obtained a good correlation with other intelligence tests, her method is recommended only up to 10 years. This is approximately the end of the main schematic group, but it must be noted however that many of these children who use the schematic utterance will tend to do so for the rest of their lives. In fact, about 30% of the population (21% in our case) will continue to use this level of representation, while their mental age will no doubt have continued to develop until the 15-16 year level which is generally regarded as the mean for the adult population.

The adult group was used for this very reason (supra). If some adults are capable of a maximum artistic output at the 10 year level, then it seems absurd to ask for True to Appearance representation from school children en masse. When we look at the 1929 Syllabus of Instruction we note that Form II pupils are asked to tackle (a) object drawing, and (b) True to Appearance representation. In the first instance, the Cleveland figures for linear perspective are very low even at the 15 year level. (see Fig. 2a). In the second, the percentage naturally endowed with this ability is 15% in the present investigation (c) at the 13 year level, and 20% in the Education Department figures. (d) Further, the Cleveland investigation points out that those in the highest ability group may not use perspective at all. This is indeed very true.

as the writer has seen children with very high drawing
ability (group V) fail to render perspective correctly
until the reason for that particular error was demonstrated.

It must also be noted that the mixed schematic group (iv),
which is a still larger group numerically, will also encounter
exactly the same difficulties as the schematic group (iii).
The difference is only one of degree.

It would therefore appear that there is a gradual
development in art ability from one age group to the next,
and that this development can carry through to the final
stage (v) if the subject is endowed with the requisite ability.
This means that we are therefore able to select or notice
those pupils whose artistic utterance is superior, average,
or retarded by means of this classification. For example,
if the eight year old boy or girl draws a man in the mixed
schematic group we can fairly safely say that he is in the
best 2% of the population, and will continue to hold this
position, if he develops his latent or native talent.
On the other hand if a 12 year old pupil is still drawing a
very average schematic "man" (8-9 years) we can predict
that this schematic utterance will probably be his maximum
level of development, and from this we are able to give
this child work in the art course that is suited to his ability.
It does not mean that there is no place in the art course for

13. N.Z. Education Dept. p. 185-6. (28)
this child; in fact he or she may be quite capable of excellent design and craft work, and also expression work or painting that will be highly satisfying to the creator if he is allowed to develop his art in an unselfconscious way without fear of adverse criticism.

The older art schemes did not allow for the significance of individual differences to the extent that is shown by the figures in Table C. Of course, teachers and educators realised that these differences did exist, as there are as many varieties of drawing as there are people, but they also saw differences in other subjects, and their chief aim was to maintain an even standard. Children were all pushed through the same mill (and still tend to be with respect to personality differences) irrespective of differences in ability and personality. So far we are dealing with differences of ability; in the next chapter we shall commence a study of personality differences.

The "Now" Art Scheme (1945) (the scheme is not new as we can readily realise from the information in the previous chapter) has aimed at replacement of this mass instruction and conformance to rigid rules. Instead, the teacher must approach the work from the point of view of the individual child. For example, in a standard II which is one of the most homogeneous in ability we shall still have a distribution over groups ii, iii and iv with the largest group, about 80%, in iii. (The problem is partly psychological, partly educational). The teacher or specialist must be able to
recognise these differences readily and give what help and encouragement is considered necessary. From experience, it will generally be found that those children in need of assistance, i.e., who are aware of their lack of ability are to be found in the mixed schematic group.

Some writers 15 claim that art as pure expression tends to cease at 10 years. Before this (i.e., 10 years) it is spontaneous and uninhibited but that about this level there develops a lack of confidence and a "drying up" of artistic output for the majority and its total abandonment in favour of linguistic expression. It is during this period (6½ - 10 years) that the child attempts to express himself to himself.

This conclusion reached by Paulsson, has been only too true. But it is invalid to assume that it must necessarily remain so as if it is a natural law. The reasons would appear to be these - that there has been no care taken of this expression which is so self-evident at this early level. That this expressive ability and power has been rudely trampled on and inhibited by an unsympathetic school environment. The writer can show many drawings from children of average schematic ability, drawn at ages in excess of 10 years, that are pure expression. In addition see Plate No.14 by a Mixed Schematic 16 year old. ♠

The reason for this "drying up" is directly related to the type of art education set out in the 1929 Syllabus 16, and its 'art school' syllabus, a syllabus that largely caters for the artistically gifted in the academic sense.

15 C.A. Oakley (30) refers to Paulsson's 'Creature element in Art 1923 as noted at X.
Other recent writers, Lowenfeld and Pearson in particular, give many illustrations of creative art in their recent books, by subjects of only average ability and at ages far past adolescence.

Art and also music is a universal expression language and with careful direction at the critical periods in the child's life there is no reason why it should not be a powerful factor in the release of nervous tension and the promotion of mental health.

CONCLUSION.

The present investigation has used this technique as a means of demonstrating the range of individual differences but not necessarily attainment in children's drawings, and their significance. In addition it serves as a useful check on the investigation carried out in 1944 by Gordon Tovey. There is a good measure of agreement which would tend to validate the use of this grouping as a basis for teaching method.

If these stages of development were the only observable differences in the field of child art representation, they would indict all previous N.Z. schemes and methods of art education. As it happens, however, there are other differences which are at least as important, and which will be dealt with in the next chapter.

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* This raises the question of teacher training based on the Art Scheme and the need for a common approach to this problem. We shall deal with this aspect in Chapter VII, 16, p.135-6 (28). 17. (21) (22). 18. (31).

* Plate 14 is a reproduction from the N.Z. Listener, illustrating interpretive work done at Hutt Valley High School.
CHAPTER IV.
PERSONALITY STYLES IN CHILD ART.

Historical.

As was indicated in Chapter II, Herbert Read is the exponent of the classification on which this work has been based. Before we come to Read's work it is necessary however to survey some of the earlier systems in order to gain an insight into the reasons for accepting such a method of classification.

Undoubtedly it is necessary to start with Jung's function types. There must be acceptance of this eightfold classification before any headway can be made. If one chooses to ignore the Jungian typology, there is no case for Read's classification as such.

First, it is necessary to show diagramatically what is meant by such a classification, and to explain the terminology involved.

The idea of introversion extroversion is not a new one; it is a concept which has enjoyed a wide and popular appeal. The introvert is the shy retiring person, one who finds his orientation within himself rather than directing his personality to things outside himself. The extrovert is this latter person who goes beyond himself and 'seizes' the object. Perhaps these complementary aspects may be described as subjective and objective aspects of the personality.

It would appear wise to recognise that some people do not
display either of these traits and that they are intermediate or ambiverted. They look both ways, to their inner world and to the world at large with equal facility. It is certainly not wise to think of one function without the other because they are rather conceived as bi-polar aspects of a whole.

One reads of Spranger’s types, Kretschmer’s types, McDougal’s Racial groups and so on. Furthermore, Galen expressed his classification of men as being, sanquine, choleric, phlegmatic and melancholic, and he was no doubt influenced by the various moods he saw in men and which he would if he was living today possibly attribute to glandular function.

Again, Cattell talks of surgency—desurgency, which is merely another way of saying extroversion—introversion; with Rorschach uses the terms extrotensive—introvertive.

In addition to the concept of introversion—extroversion Jung established 4 function types each of which could be either introverted or extroverted as the case might be. The types which he called Thinking and Feeling were labelled the Rational functions, and those named Sensation and Intuition the Irrational functions.
Splitting each function type into its introverted and extroverted function we now have an eightfold classification.

**VIZ.**

![Circle diagram with axes: Thinking, Sensation, intuition, and feeling, with introduction of positive (+) and negative (-) for each type.]

**FIG. 10.**

For the sake of convenience, Extroversion will be labelled + and Introversion −, and the function types by the appropriate capital letter; e.g. Sensation S in all diagrams and tables from here on.

Jung's eight function types were briefly distinguished as follows to indicate various people.

1. **THINKING +**: Collects facts to prove a theory.
2. " −**: Collects facts for their own sake.
3. **FEELING +**: A follower of fashion.
5. **SENSATION +**: Realistic, concrete enjoyment.
7. **INTUITIVE +**: Sees practical possibilities - politics.
8. " −**: Chases ideals - a voice in the wilderness.
By this, Jung does not mean that this alone is the explanation of his whole scheme. These types innately determined and express the total personality range. Some individuals tend to be fairly pure types, many others are mixtures of two or more but one tends to be dominant. Hence the whole idea allows for a great many variations.

It is on this point that Jung has been attacked. Present day investigators tend to look upon the distribution of the population as a normal curve, with most people

![Diagram of normal distribution curve](image)

**FIG. 11.**

as ambiverts. The Jungian idea was rather the idea of a bi-modal curve with the "typical" extrovert on one side and the typical introvert on the other.

![Bi-modal curve diagram](image)

**FIG. 12.**

This point will be returned to later when the statistical findings are examined in Chapter V.
Although Jung claims that the function type of the individual is fixed from the moment of conception, he also allows that the type fixed at that time may not be permanently stabilised till after adolescence, i.e., when thinking matures. Consequently he allows that most children and primitives will express themselves irrationally, that is through sensation and intuition, and that they will tend to alter their style of artistic expression later, only if their true function is a rational one — that is thinking or feeling. This point is evaluated in Table F.

In his "Psychological Types" Jung makes brief reference to the aesthetic attitude in relation to sensation and distinguishes between S+ and S− as follows:

"The concretisation of a flower for instance transmits not only the perception of the flower itself but also an image of the stem, leaves, habitat. It is also directly mingled with the feelings of pleasure or dislike which the sight of it provokes, or with the scent perceptions simultaneously excited or with thoughts concerning its botanical classification."

Abstract sensation on the other hand immediately picks out the most salient sensuous attribute of the flower e.g., its redness — abstract sensation is mainly suited to the artist. This is S−. By suited to the artist Jung appears to mean "subjective".

2. Jung C.G. P. 586 (17)
These are distinctions which are of the greatest importance to Read\(^5\) and the earlier investigators, Binet, Bullough\(^3\), Feasey\(^4\), who have attempted to separate the various classifications of temperament.

But first it will be necessary to follow through the main steps of the argument for a classification of art styles based on the right function types.

**ABSTRACTION AND EMPATHY.**

Worringer\(^6\) in 1912 in a theoretical treatment of the philosophy of art suggests that two distinctive forms of art arise according to whether man seeks to reproduce or to escape from his eidetic imagery. This eidetic imagery may be briefly explained in terms of differences in image perception which are related to differences in types of mind.

Therefore when man objectively identifies himself with the objects in the world we talk of empathy or "a feeling into". Man has identified himself with the object and therefore calls it beautiful. This is Jung's extroversion. On the other hand the tendency to abstraction is the subjective attitude of withdrawal into the self, where the image is invested with a less real meaning and a greater spirituality. If we call this introversion the dichotomy is complete. Worringer sees this tendency to dualism as an evolutionary process in the development of perceptual and conceptual processes.

3. Bullough E. pp.76–99 (8)
4. Feasey L. IBID (8)
5. Read H. Chapter IV (33).
6. Worringer W. p.15 (38)
VISUAL AND HAPTIC TYPES.

The work of Lowenfeld, and it is worth noting that it has an objective basis in experiment, also brings out two types, the visual and the haptic. Lowenfeld's work is based on blind and weak-sighted children, hence it is independent of the physiological facts of sight. The visual type is related to the empathetic type or integrative type. He starts from his environment and builds up from his visual experiences, while the haptic type on the other hand is above all concerned with projecting his inner world into the picture. Lowenfeld uses excellent illustrations particularly in painting and modelling to develop this point and there seems little doubt that his distinction is a valid one.

Now that it is possible to exclude sight from the question there appears validation of Worringen's contrasted attitudes to reality.

The most significant point from the work so far is that Lowenfeld split art production into two, the visual and the haptic. All other investigators split the visual into at least four groupings.

THE WORK OF BULLOUGH AND BINET.

The aim of this chapter to attempt a validation of pairing types of art with corresponding psychological types of human beings.

8. Lowenfeld p.4-5 (22).
Bullough made a classification based on subject reaction to single colours. With colour he certainly allowed for a wide range of response. This investigation revealed what Bullough called 'perceptive types'.

It is hardly necessary to describe the experimental details here, but rather to note that Bullough found four groups which apparently corresponded to four perceptive processes.

To these four types he gave the following names:

(i) The objective type,
(ii) The physiological type (intra-subjective)
(iii) The associative type
(iv) The character type.

Bullough draws attention in a later work to the parallelism between this classification above and the classification by Binet which was based on types of verbal description.

Bullough correlates the two classifications as follows:

(T) Objective = descripteur; érudit
(S) Intra-Subjective = observateur + émotionnel
(F) Associative = observateur + émotionnel + érudit
(I) Character = émotionnel + observateur

The letters in brackets represent Read's classification of Bullough to correspond to Jung's four main function types.

Bullough leans towards the idea of the quality of apprehension, rather than a definite aesthetic apperception.

9. Bullough E. pp. 406-63 (8a)
10. Ibid pp. 73-79 (8)
11. Read H. p. 93 note 24. (33)
Perhaps he means 'form'.

**LYNETTE FEASEY** experiment with blocks and found what she called

(1) Pattern Types (mainly objective)
(2) Picture Types (mainly subjective)
(3) Some mixed types.

Bullough's four types listed above were obtained only when simple shapes such as rectangles etcetera were used. When the more complex blocks were used in the second series of tests it seemed necessary to recognise seven classes of judgments.

The eighth would appear to be Lowenfeld's HAPTIC type. This is the necessary link, enabling Read to complete his link with Jung.

An important feature of this work is that the two types were found not only in the construction experiments but also in the observation of the arrangements made by others and further, that if a subject was a certain type in construction, he tended to be the same type in observation.

This is the thesis put forward by Joan Evans in 'Taste and Temperament' - that one identifies oneself with an artist whose type corresponds to one's own.

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12. Feasey L. p.76-99 B. J. P. (S)
13. Evans J. p.115 (13)

**READ.**

Although Read has been criticised by Eysenck for a
subjectively constructed theory, it is necessary to realise that he did make an empirical classification of children's drawings — in fact several thousands of them from all types of schools.

'I examined several thousands of drawings from all types of schools, and as I proceeded I gave a descriptive label to what, in each case, seemed on purely stylistic grounds to constitute a separate category. I eventually found myself with twelve categories.'

The categories first listed were

<table>
<thead>
<tr>
<th>Category</th>
<th>Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Hymrical</td>
<td>Mainly still lifes: delicate; more girl</td>
</tr>
<tr>
<td>3. Impressions</td>
<td>Impressionist school; atmosphere.</td>
</tr>
<tr>
<td>4. Rhythmlcal Pattern</td>
<td>Imposition of pattern on the observed objects.</td>
</tr>
<tr>
<td>5. Structural Form</td>
<td>Fairly rare; geometric, stylisation, pattern.</td>
</tr>
<tr>
<td>6. Schematic</td>
<td>The early 'schema' — elaborated as design</td>
</tr>
<tr>
<td>7. Haptic.</td>
<td>As defined by Lowenfeld. Tactual.</td>
</tr>
<tr>
<td>8. Expressionist</td>
<td>Objects treated as presented to artist's sensations.</td>
</tr>
<tr>
<td>10. Decorative</td>
<td>Colour and two dimensional form.</td>
</tr>
<tr>
<td>11. Romantic</td>
<td>Fantasy on life theme.</td>
</tr>
<tr>
<td>12. Literary</td>
<td>Imaginative; purely fanciful theme.</td>
</tr>
</tbody>
</table>

15. Read H. p.133-9 (33)
Read did not intend these categories to be exclusive nor precisely defined, and in many cases drawings exhibited two or more of the above categories. It was a matter of deciding which one was dominant. On reconsideration of his categories, he reclassified them into eight as follows:

1. Organic
2. Impressionist
3. Rhythmic Pattern
4. Structural Form
5. Enumerative
6. Haptic
7. Decorative
8. Imaginative

- 2 Aspects of Impressionism
- Organic
- S +
- Remains same.
- Haptic + Expressionist
- Previously Literary + Romantic.

No separate place for Schematic but included in three and four. Eliminated separate Lyrical category as comes into 1, 2, 3.
(Tovey uses Lyrical under S +)

There is little doubt that Read was directly attempting to reach an eight-fold classification corresponding to Jung's typology.

He next proceeded to test the categories against the types using the following threefold requirements:

---

16. IBID p.141 (23)
17. Read H. p.143 (33)
"1. A correspondence between the categories and Bullough's four apperceptive types.

2. A correspondence with Jung's four fold functions.

3. That they should express the extravert and introvert directions of these mental functions."

Perhaps the most readily interpreted assessment of Read may be arrived at by way of a chart showing all the relevant systems in comparison.
### PERSONALITY STYLES OR TYPES IN GRAPHIC FORM.

<table>
<thead>
<tr>
<th>JUNG</th>
<th>READ</th>
<th>TOVEY 18</th>
<th>BULLOUGH</th>
<th>BINET</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Thinking +</td>
<td>Enumerative</td>
<td>Realist 9</td>
<td>Objective</td>
</tr>
<tr>
<td>2.</td>
<td>Thinking -</td>
<td>Organic</td>
<td>Impressionist -</td>
<td>Partly Character</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Visual 2. Emotive</td>
<td>Partly Objective</td>
</tr>
<tr>
<td>3.</td>
<td>Sensation +</td>
<td>impressionist</td>
<td>Emotive 1 (+ Lyrical) 10</td>
<td>Intra-Subjective</td>
</tr>
<tr>
<td>4.</td>
<td>Sensation -</td>
<td>Haptic</td>
<td>Over Emphatic 8</td>
<td>Mil</td>
</tr>
<tr>
<td>5.</td>
<td>Feeling +</td>
<td>Decorative</td>
<td>Decorative</td>
<td>Partly Intra-Subjective</td>
</tr>
<tr>
<td>6.</td>
<td>Feeling -</td>
<td>Imaginative</td>
<td>Fanciful 6</td>
<td>Associative</td>
</tr>
<tr>
<td>7.</td>
<td>Intuition +</td>
<td>Rhythmic</td>
<td>Rhythmic 2 3</td>
<td>Character</td>
</tr>
<tr>
<td>8.</td>
<td>Intuition -</td>
<td>Structural</td>
<td>Structural 7X</td>
<td>Character</td>
</tr>
</tbody>
</table>

**FIGURE 13.**

X. Plate Numbers.

* Decorative and Haptic not allowed for by Binet & Bullough.

18. Education Department Art Scheme 1945, p.9 (27)
Read takes care to emphasise that 'none of these types is found in a pure state, at best they indicate a predominant attitude or tendency in the individual and there may be considerable overlapping, both in apprehension and expression.'

PLATES.

The plates representing the different styles have been carefully selected to represent as nearly as possible 'pure' styles, and also mixtures of styles. When a comparison of + and - types is made it soon becomes possible to 'see' the distinctive characteristics. With practice one becomes fairly sure of the classification. However it is most necessary to have made an adequate study of Read's plates, and a very large number of children's drawings before any degree of assurance is reached. The categories themselves give fairly obvious clues as to the style of painting implied. Plates 8, 9, 10, 11, 12 are of paintings done for the investigation, the others being supplied by the Education Department.

DESCRIPTION OF STYLES.

1. Extraverted Thinking - Realist or Enumerative.

Well shown by plate 9. This boy - case 10, has very high art ability and is a third year pupil in high school. Generally speaking this style is the photographic or reproducti art sometimes called academic, and represents an outgoing of

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19. Read H. p.148 (33)
In this case there is a minor intuitive function I - ,
showing a certain amount of structural or architectural
form. I - will be explained in plate 12.

(Read)

INTROVERTED THINKING. Impressionist or Organic.

Realism is now interpreted as a subjective attitude,
and this style has generally been termed impressionism,
originally a term of derision for those who painted their
"impressions".

Impressionism is the inner reflection of the external
reality, it is an organic relationship. In the
enumerative style the eye acts as a camera, but in the
organic style it acts rather as a channel of communication
between psyche and object. 20

Plate 5 a schematic man gives 'soul' to the more
photographic style in plate 9.

It should be noted that the T-grouping may be split
into two -

1. Visual impressionism one clearly defined object

2. Emotive impressionism general vagueness.

Fig. 14a and 14b.

Read puts this second group into S+, but of the cases
tested, seven in number in the T-grouping (see Table F),
six tested out with an EB 50 and the other case is referred

20. Read H. p.144 (33)
to in the Evaluation of the Rorschach Test.

3. **EXTRAVERTED SENSATION.** Emotive (Tovey)
   Impressionist (Read)
   but now EMPATHETIC, thus
   emphasising Extraversion.

   Plates 1 and 10 illustrate this style, plate 1 doing
   so rather better than 10.

   This style is generally recognised by an emphasis on
   bright colour, a somewhat inaccurate representation, which
   can be lyrical, but not rhythmical. An outgoing to the
   object and a sensational treatment of it.

4. **INTROVERTED SENSATION.** Overemphatic (Tovey)
   Haptic (Read)

   Illustrated by plates 8, and 13, often characterised by
   the use of much black but more often noted for the over
   emphasis of some particular organ, and the elongation of
   the human figure. The creator here makes very little use
   of visual impression, to all purposes he is blind. He has
   turned inward and represented the subject kinaesthetically.
   If the subject not portrayed is not purely ego-centric,
   the scene or object is often caricatured and distorted.

5. **EXTRAVERTED FEELING.** Decorative. (Both)
emphasis on symmetrical arrangement and a static quality in
the purely decorative style. Motifs tend to replace
realism, and the style is more frequently found with girls.
Is this tyle an abstraction? If so, but it seems
doubtful on the evidence, then it should be introverted.

6. **INTROVERTED FEELING.** Imaginative (Read)
   Fanciful (Tovey)

Shown by Plate No. 6.
This is a relatively rare style of expression but
nevertheless a highly significant one. It is the subjective
expression of feeling, of origination within the mind, from
spontaneous and strongly developed image - hence the name
'imaginative'.

Coleridge in poetry, and Blake in painting, are two
outstanding examples at the adult level, while the quality
of plate 6, is a powerful expression (at a much less mature
stage) of 'trees' invested with a mystical quality.

7. **EXTRAVERTED INTUITION.** Rhythmic Pattern (Both).

Plates two and three.

Pattern dominates this style, but it is rhythmic pattern.
The drawing imposes a pattern on the observed facts of
external reality. Plate 3 illustrates a variation in that it
shows angular rhythm. Both these examples are of a high order.
Plate 2 is a reproduction of a drawing obtained by the present
investigator from a Standard 3 girl who illustrated 'In the wood
'Writing patterns', a form of rhythmic border pattern using
handwriting, are an example of the application of this style.

3. **INTROVERTED INTUITION. Structural Form** (Both)

Plate 12 and plates 9 and 10 in the minor function.

The intuitive function in the introverted style tends towards good development of perspective, pattern divorced from reality - e.g. abstract composition as seen in Picasso, a perception of pattern in the natural form rather than mere use of the object to make a pattern. Plate 12 shows trees that are strongly rooted in the ground and grow strongly or structurally heavenward.

**NOTE.**

A point to note in the assessment of such categories is that it is most difficult to be certain that the classification is exact, especially where the two functions appear almost equally well developed. This emphasizes the need for use of several paintings rather than one, although it must be admitted that in cases such as plate 3, there would be very little chance of error in assessment from the one drawing. On the other hand the majority of cases show a blend of styles.

A further point of some importance is the personality style of the assessor. There is undoubtedly a tendency for work of the same style as the assessor's, to have some influence on him if a critical over-all view is not rigidly enforced.
Tovey has altered Read's classification for several reasons as follows:

1. The 'organic' category is renamed the 'impressionist' category, because it is felt that the two styles of impressionistic painting should be introverted styles whereas Read makes one T-, and the other S+. (see p.56 Figs. 14a and b, also Table F.)

2. Tovey calls the S+ category, Emotive and recognises it as an outgoing style of sensation tending to be dominated by colour and at times lyrical in nature.

3. The S→ Haptic group becomes the Over-Emphatic group with no real change in meaning. Over-emphatic perhaps describes more nearly the style of painting in this group Haptic, the reason for it. NB Plate 13 the long over-emphasised figures common to this style.
PLATE 1
STYLE S+
ED. DEPT.

PLATE 2
STYLE I+
SURREY PARK SCHOOL
INVERCARGILL
1944.

PLATE 3
STYLE I+
ED. DEPT.
PLATE 4
STYLE F+
ED. DEPT.

PLATE 5
STYLE T-
ED. DEPT.

PLATE 6
STYLE F-
ED. DEPT.
PLATE 7
STYLE E/ T+
ED. DEPT.

PLATE 8
STYLE 3-
EB. 61
CASE 26

PLATE 9
STYLE T+/ I-
EB. 20
CASE 10
PLATE 10
STYLE S+/I-
EB. 12
CASE 24

PLATE 11
STYLE T+/I+
EB. 40
CASE 25

PLATE 12
STYLE I-
EB. 55
CASE 7.
PLATE 13
STYLE S-
EB. 30
CASE 21

PLATE 14
HUTT VALLEY HIGH SCHOOL
GIRL 16 YRS.
EXPERIMENTAL SECTION.

INTRODUCTION.

The subjects used in this part of the investigation came from Standard II, from all levels of a co-educational secondary school, and a school of art, in the following numbers, 6, 28, 1, giving a total of 35 cases.

The six Standard II children were selected from a group of 22 children’s drawings supplied by the art specialist at the school. There were four boys and two girls.

The 28 secondary school boys and girls were volunteers for a Saturday morning art class, and while possibly of higher artistic ability than a cross-section of the school population, they carried out the work set most unselfconsciously.

The one art school student offered to carry out the necessary work for the investigation.

While the sample is not truly representative it does cover a wide age range (8 yrs. 5 mths. to 22 years), a wide range in artistic achievement and capacity, and gives a fairly good distribution of intelligence, the range being from 87 – 131 points of I.Q. (see FIGURE 25, p. 67) There are ten females, and 25 males.

INSTRUCTIONS.

The instructions to all subjects were the same –

1. Use paints.
2. Use the paper supplied – large sheets approx. 18” x 24”.
3. Time approximately 40 minutes for each painting.
4. Do not be influenced by other children’s work but use
your own ideas.

**SUBJECT. I.** 'The trees stood stately and tall'.

**SUBJECT. II.** A self portrait, either 'playing the violin, or the piano.'

In addition each child was asked to name his or her favourite colour, and if more than one colour was given to list those given in order of favouritism.

**ASSESSMENT OF THE EXPERIMENT.**

The next task was to take the material and separate it into the categories as set out previously by Read and Tovey.

At this stage it is fair to say that in the case of the secondary school pupils, if any doubt was felt that a true classification was not arrived at from the two paintings, that they were re-assessed in the light of other paintings done as part of their art course together with the two paintings set for the experiment. This would tend to increase the validity of the judgment rather than confuse the issue. This assessment was completed before the Rorschach Test was scored.

Table A lists age, sex, I.Q., the category assessed from the paintings, the art ability group as described in Chapter III, and the colour preference. In addition it lists Rorschach scores which will be explained in the next chapter.
I.Q. DISTRIBUTION.

<table>
<thead>
<tr>
<th>I.Q.</th>
<th>F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 - 90</td>
<td>5</td>
</tr>
<tr>
<td>91 - 100</td>
<td>10</td>
</tr>
<tr>
<td>101 - 110</td>
<td>12</td>
</tr>
<tr>
<td>111 - 120</td>
<td>4</td>
</tr>
<tr>
<td>121 - 130</td>
<td>1</td>
</tr>
<tr>
<td>131 - 140</td>
<td>1</td>
</tr>
</tbody>
</table>

N = 33

The six standard II children were not tested by their school, but were later tested with Schonell's "Essential Intelligence Tests".

I.Q.'s. are not available for cases 22 and 30.

It will be immediately apparent on referring to Table A that many of the 35 cases have not been classified as being a pure type but rather a dominant function over a minor function. However from the point of statistical evaluation they have all been assessed by the dominant function.

This classification of personality styles was checked by the Supervisor of Art Education and agreement reached in all cases but one. This case 30.3 has since been re-assessed in the light of many paintings done by this child over the last three years, and resulted in a reversal of minor and major categories. When the results of the next chapter are set out it will become apparent that the result is now an adequate one.
Summing the art ability groups in column 5 of Table A we get 10 Schematic
7 Mixed Schematic
18 Realistic

together showing the group as previously mentioned on p. to be rather heavily weighted in art ability. Yet it is not felt that this has in any way confused the issue but aided it from the point of view of spontaneity of creation.

On referring to Table B (Summary) there are seen to be 14+ and 20- cases while 1 is classified + = -. In this latter case (No.34) it was felt that the drawings exhibited an almost equal balance of S+; S-.

Of the ten female subjects, seven are classified as introvert, two as extrovert, and one as ambivert. Of the seven classified - , five fall into the I- grouping and the other two under T-. Because of the small number of cases it is impossible to generalise, but with the 35 cases treated as a group several interesting features become apparent.

Table F, which is a distribution of all the cases according to their dominant function within the eight sections of the Jungian cycle, offers an interesting study.

It will be observed that the majority of the cases fall in the S and I sections of the circle.
S + I = 21 cases  (using Tovey's
T + F = 14 cases  (classification of
S + I = 66%  (Impressionism.

S + I = 23 cases  Read's crossing.
T + F = 12 cases  (+ No's. 12, 15 - cases of
S + I = 66%.  emotive impressionism.)

FIGURE 16.

This is of interest in the light of Jung's statement that Sensation and Intuition tend to be the dominant functions in childhood or more specifically before the development of adult reasoning. Among the older cases e.g. 15 years plus, No.22, is T+, No.6 P+, No.10 T+,
No.16 T-, No.12 T-, No.2 T-, No.5 I-, No.34 S+, No.7 I-
thus giving six cases out of nine within the rational functions.

COLOUR PREFERENCE.

By far the greater number of the cases offer yellow and blue as their favourite colour. There are

14 Blue  9 Yellow  5 Red
1 Green Light  1 Green Dark  1 Dark Red
4 Nil.

FIGURE 17.

of those stating a colour (31), 23 prefer yellow or blue.

No other reference to colour preference as related to the introversion and extraversion dichotomy has been noted. But it was decided that while carrying out this investigation it might be interesting to correlate colour preference with personality classification.

In Table 5 the categories based on Tovey have been listed against the colour headings, light and dark colours
16 cases preferred bright colours
15 cases preferred dark colours
4 cases gave no preference.

The measure of agreement this gives with the art styles is significant.

There is agreement in 25 cases out of 35, giving a figure of .71. If we exclude the cases stating no colour preference the agreement rises to .80.

OTHER CONCLUSIONS.

(a) Case 21, a third form boy with I.Q. 131 falls into the S-, or over-emphatic grouping. This boy has the sight of one eye, yet to all appearances he does not use the sight of the other. His work is hasty. The drawings of the human figure are strongly emphasised in length, and the colour schemes are almost entirely blue, purple and yellow.

Here is a boy with very high intellectual capacity whose art reproduction is purely subjective.
(b) Both Tovey and Read say that the F- or imaginative grouping is fairly rare. In the 35 cases studied not one case falls into this category either as a dominant or a minor function.

(c) Of the 22 Standard II children's drawings most were of the sensation style. If all the drawings could have been included (time precluded this) the $S + I^+ \frac{1}{2}$ (see p. ) would have been considerably higher. As it happens the six children tested were $1 F+, 1 I+, 1 I-, 1 S-, 1 T+, 1 S+ = S-$ on the classification.

The distribution of the 22 cases was as follows:

$$
\begin{align*}
S+ & = 9 \\
S- & = 7 \\
\text{All others} & = 6 \\
\text{Total} & = 22
\end{align*}
$$

FIGURE 18.

If the six selected had been taken at random the chances are that there would have been a higher weighting of the S function in the total distribution than there is, but this would have served no more useful purpose than stating the distribution, supra, of the standard II group.

CONCLUSION.

The conclusions to be drawn will be stated both at the end of the next chapter and in the educational implications in the final chapter.
INTRODUCTION.

In order to test the validity of the Rorschach classification of personality styles, it became necessary to find some method of rating introversion-extroversion without the subject being aware of the purpose of the test.

With the drawing section of the test this was easily accomplished, but now it became more difficult to get the same rapport. The only test that appeared suitable was the 'Rorschach = Psychodiagnostik', a series of ten cards using bilaterally symmetrical ink blots, some black, others coloured (see p. 2). This test is known as a projective test because it allows the subject to project his total personality into the visual situation presented, and his response is his total reaction to this situation.

"The subject matter used in these procedures may profitably be thought of as a catalyst for the expression of personality".  

It is particularly important to recognise that no test can be looked on as being infallible, and that it is never the final pronouncement on the question. In this case the test has been used as an attempted psychological validation of an aesthetic classification of personality, based on psychology.

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2. Rapaport D. p.7 Vol.2 (32)
3. IBID p.39 Vol.2 (32)
The first step therefore was to gain some knowledge of the available literature on the subject. (1-6).

It is necessary to say that this has been done as thoroughly as possible in the limited time but that an adequate knowledge of Rorschach Technique could only be gained over a period of several years. Three months preliminary reading, testing, and interpreting is the background to this study. However a considerable amount of help and direction was given by the Lecturer in Psychology at Canterbury University College during this preliminary period, and later in checking methods of scoring. This, together with the fact that although the whole test was administered and scored in each case, only the sections directly relative to introversion-extroversion were evaluated. This latter idea of evaluating this part of the test against the Read classification, and in addition, against colour preference, was arrived at independently.

This test is standardised to the extent that there is a great mass of recorded results from years of administration, and "the fact that the results of a test will yield the same basic personality picture to all qualified interpreters is sufficient evidence of its standardisation." 7

4. Beck S.J. (4)
5. Bochner R. & Halpern F. (6)
6. Maslow P. (23)
7. Bochner R & Halpern F. p.x. (6)
Undoubtedly finer shades of meaning will be gained with experience.

Here then is a test which claims to indicate personality in the light of intelligence, the emotions, constitutional factors and the effects of the environment. It claims to be a dynamic portrait. This is important, as the paintings in the previous section were recognized as dynamic creation from an idea to be freely interpreted. There were no limiting factors, - it was the individual's own expression.

"Any picture of personality taken out of the 'stream of living' for purposes of analysis should reveal the structural basic to that living as well as the pervading tone of the moment." 8

"The use of projective tests assumes that the examiner is after something in the subject which the subject doesn't know about or is unable to communicate; otherwise the examiner would ask him about it directly. Projective tests use indirect questions and the responses are indirect answers, pertaining to the psychological structure of the individual, and their use implies a theory of personality which assumes that much of this psychological structure is not consciously experienced by the subject." 9

In effect the approach is psychoanalytic.

8. Bockner R & Halbem F. p.1X (G)
9. Rapaport D. p.9 (32)
Finally a word with respect to Gestalt psychology. Rapaport\textsuperscript{10} claims that the salient perceptual features of the ink blot initiate the perceptual process; this process pushes beyond these partial perceptual impressions and effects a more or less intensive organisational elaboration of the ink blot. Finally the perceptual potentialities and limitations of the ink blot act as a regulating reality for the association process itself.

PROCEDURE.
1. Each subject was tested individually.
2. It is most necessary to have good rapport and the informal atmosphere developed was distinctly helpful.
3. In 29 cases the subjects were well known to the tester, some for over two years.
4. The subject sat facing the examiner and held the card.
5. The examiner explained that the cards were a series of ink blots (and if the subject required further elucidation, how such ink blots could be made.)
6. Leading questions by a subject were all answered (as far as it was possible) in a non-committal manner.
7. The subject was told to tell the examiner what he saw in the ink blot. This was written down. Every word used by the subject was recorded. Each response was recorded separately. If the subject asked if he could look at the card from any direction he was told

\textsuperscript{10} IBID p.33 (32)
to do as he pleased, e.g. There are four ways of
looking at a rectangular card with a pattern on one side.

7. When the ten cards had been seen then they were
repeated and a record of the part of the blot used
for each response was taken. In addition the
subject was encouraged to give any additional responses-
there was no attempt to hurry the subject.

8. Sometimes when a subject made a bold statement such as
"There are two figures" as in card 2, it was necessary
to obtain elaboration as follows:

1. Describe the figures.

2. Is there anything noteworthy about the figures.

These questions being asked in this indirect way
allowed the subject to elaborate as to (1) whether he
saw human figures or animal figures, (2) if the
colour at the top was important, (3) if there was
movement.

If it became necessary to make the questions more
leading then it also became necessary to reduce the
value scored for the response - this will be indicated
in the next section.

**SCORING THE RESPONSES AND RECORDS.**

The responses with which this experiment was directly
concerned were those responses which indicated movement (M)
preference or colour emphasis (C). In brief these two
styles of response are supposedly indicative of
introversive tendencies in the case of M, and extravertive
tendencies in the case of colour responses. The terms used by Rorschach are respectively Introversive and Extratensive.

These two characteristics, colour and movement, are classified with others as Determinants in the Rorschach Psychology and lie at the core of the test and are its most crucial indicators of personality.

Consequently M responses have been scored for each subject and balanced against the C responses. A case in which there is 5 M : 2 C is one where the balance is towards the introverted attitude. This proportion is expressed by a ratio, then converted into a percentage and called the Experience Balance, or E.B.\textsuperscript{11}

\[(1) \text{ i.e. } \frac{\text{Sum M}}{\text{Sum M} + \text{Sum C}} \times \frac{100}{1} = \text{E.B.}\]

\[\text{e.g. } \frac{3}{3 + 2} \times \frac{100}{1} = 60\% = \text{Introverted.}\]

\[\text{FIGURE 20a.}\]

However, this case shows enough C responses in proportion to indicate ability for good extratensive adaptation.

It is felt that the expression of the E.B. could equally

well be left as a ratio without in any way affecting its interpretation and at the same time suggesting added flexibility of interpretation. However as an indicator, and no more than that, it will be retained in \( \% \) form.

The movement responses \( M \), refer to human or human-like movements. If the movement seen is that of animal or inanimate object they are scored respectively \( M \), and have a lower numerical value when it comes to assessment. In the E.B. only \( M \) and similarly \( C \) are used. A further ratio (2) \( FM + M : C + c \) (Figure 20b) is used where \( C \) indicates black and white used as colour e.g. coal or snow and the small \( c \) is indicative of shading producing the form.

Maslow writes that introverted children see many animal movements and humans only rarely. When human movements are greater than animal movements there is a more mature introversion.

The results of this ratio (2) have been used as a check in cases of doubt with the main \( M : C \) ratio.

In Table A there is listed under column 6, the E.B.; column 7 the results of ratio (2); and column 8 the sum of the responses from the last three cards (all coloured) over the total responses.

\[
\text{i.e.} \quad \frac{3 + 2 + 10}{R} \times \frac{100}{1} = \% \\
\text{e.g.} \quad \frac{7}{23} \times \frac{100}{1} = 25\% 
\]

**FIGURE 20c.**
This summing of the responses (R) to the last three cards is used as an indicator of colour responses. If the % is > 33% the subject has given more R to the last three cards and is therefore making outgoing R to colour.

If on the other hand the % is 25% or < 33% as in the example above, the subject is supposed to rather less attracted by the colour of the cards and is therefore displaying an introversion attitude.

As will be seen later this last section of the test shows a much smaller correlation with the rest of the results than would be expected. (see Table H).

**INTERPRETATION.**

Here then is an experimental technique which relates movement and allied responses to an introversion tendency, and colour with its related responses to an extraverted attitude.

Several short quotations at this point will serve to indicate the opinion held by the investigators studied.

**Maslow.** "The addition of colour to form signifies a closer more personal relationship to the outer world. The substitution of colour in place of movement means that the extravert is concerned in coming as close as possible to the external environment rather than building an inner world of his own." 14

"Introversion is based on abstraction (note Worringer) i.e. the ability to draw on direct experience and apply the principles observed to entirely different situations in his inner world. 15

---

14. Maslow P. p.17 (23)
15. Worringer W. p.15 (33)
16. Maslow P. p.6 (23)
"When an introvert looks at the ink blots his normal everyday procedure is to observe humans and draw within himself where they came to life according to the thoughts and actions supplied by the subject, e.g. he sees running, fighting, dancing etcetera." 17

"The subjects use of colour (C) tends to reflect his handling of affects, impulses and actions." 18

According to the Rorschach, the introversive subject tends to be rather more interested in cultural pursuits, and of higher intellectual endowment corresponding to his higher level of M Responses. If we compare in Table A the I.Q. figures in column 3 with the E.B. figures in column 6 we should therefore tend to find the Extraverts pairing with lower I.Q's. It must be immediately obvious that this is not so in this case.

Table C compares Read's classification with the E.B. of Rorschach. The agreement is very good indeed, 14 cases of extraversion corresponding, 19 of introversion, 1 of disagreement, while one case (No.34) was considered about equal + and - on Read's classification. This gives an agreement of .94.

The case of disagreement, No.15, is one of Emotive Impressionism which if classified according to Read's impressionism therefore becomes an S+ instead of T-19, and agrees with the E.B. of 40%. However on the other hand his colour preference is blue (indicating introversion ?) his FM + N : C' + c ratio is weighted on the introverted

17. IBID p.3 (23)
18. Rapaport D. p.213 (32)
19. Read H. p.139 (33)
side, while in the ratio of $\frac{9 + 9 + 10}{R}$ his $R$ is 19, indicating an introverted characteristic.

This case is the youngest of the secondary school pupils, and consequently less mature, his I.Q. is good, 116, and he indicates FM superiority over colour. Although he does not agree in this classification at present, the evidence would tend to indicate that he would do so if retested later. All this of course assumes that these two systems do measure extraversion-introversion with some measure of accuracy and consistency.

* Case 32, with E.B. 44%, shows a very good FM and is rated as a minus.

The other case, No. 34, is rather more difficult to evaluate, as $S+ = S-$, this being as sharp a classification as was possible. The rest of the results do not aid greatly in reaching a more definite conclusion as the E.B. of 40 indicates extraversion, while the FM ratio indicates introversion, and the $\frac{9 + 9 + 10}{R}$ ratio indicates introversion. The colour preference is blue. Once again, a retest of this case could later indicate a developed introversion.

Next making the comparison of colour preference with the Rorschach Ranking of the E.B. we obtain a similar result to the correlation of personality style with colour choice.

* If case 32 is treated on the other hand as a doubtful case, as is case 34, from the statistical viewpoint, then the figures for the summary of Table C, become

\[
\frac{32}{35} = .91
\]
This time the agreement is slightly lower (Table D) but still significant, .68 for the 35 cases and when the 4 cases indicating no colour preference are omitted the figure rises to .77.

CONCLUSIONS FROM CHAPTERS IV AND V.

It is first of all necessary to attempt to make some estimate of the value of the results of this experimental work. Although it has been carried out carefully and as accurately as possible in a new field, it is imperative to ask the question: "What has been measured by these experiments?"

Do they measure some factor that is common to both? To what extent is the factor representative of an individual personality? Is this factor of any importance to educational planners?

1. The first point is that both tests make provision for the concept of empathy and abstraction, and both recognise colour emphasis as a characteristic of extraversion. To this extent they are on common ground. Similarly both allow for the withdrawing from reality, for abstraction, and re-formulation of the old pattern in a new way.

2. The common factor is representative of total personality to the extent that both tests allow absolute freedom of expression. The one by verbal expression of a total reaction the other by normal expression which is the outlet for the same total reaction.

In addition the amount of statistical agreement is so high that it suggests common ground. Further, it seems
correct to state that the concept of introversion-extraversion is fairly commonly accepted. The stage that is not so frequently accepted is the division of the extraverted subjects into four groups and similarly the introverted subjects.

Yet is it illogical to recognize different styles of expression for a fundamental attitude? These styles, as has been indicated previously may not be rigidly defined, for in very many cases there is a balance between the two in the case of a + and a −, and in other cases a blending of the two as in the case of ++ or --, e.g. (a) case No. 1 (b) case No. 14.

For the sake of clearer description, a diagram may show a possible arrangement.

\[\text{Diagram:} \]

\[(a) \quad \text{Diagram:} \]

\[(b) \quad \text{Diagram:} \]

Instead of accepting the two-dimensional concept of the normal curve of distribution for the population, could there not be (c) a normal curve along each axis of the Jungian typology which when combined into a circle as at (d) (e) and viewed horizontally or sectionally as at b, c, d, e, with the resulting

\[\text{Figure 24}\]
figure in the shape of a ball i.e.: 3 dimensional?

It is perhaps drawing too much from the evidence to suggest the former, but it does appear to be not incompatible with the distribution of the cases as shown in Table E. As there were but 35 cases it is too much to expect a smooth curve of distribution yet it does appear that the majority of the cases lie within the 30 - 70% group - in fact 27 out of 35. Take for example the cases in the 60 - 70% group, 8 in number, all introverted, but most certainly not all the same art style. A three dimensional classification would allow for this.

"A trait continuum" is Eysenck's description of introversion-extraversion.

3. The educational importance of this factor must indeed be great if these wide differences of personality and therefore of expression are significant. The plates illustrating the differences of representation do show varying emphases. Compare plates 6 and 7, the one an introverted feeling type and the other extraverted; or 6 with 4 showing the same decorative style at a less developed stage.

And again No.8, the S-style, which may be found in the art of El Greco, e.g. Storm over Toledo, with No.6 an F-which at the adult level is representative of the work of William Blake, imaginative and fanciful. Both Introverted but so different in their interpretation, the one modifying reality, the other making the unreality of the imagination his expression to the world at large. Suffice it to say
here that if men of this calibre showed these differences
when they had the opportunity to express their innate
abilities, is there not scope for many more to do likewise
if the system of education is sympathetic to such differences?

The changes in art education methods and outlook will
be dealt with in the final chapter.
CHAPTER VI.

SOME PSYCHOLOGICAL ASPECTS OF PERCEPTION AND ART.

So far the problem has been studied from the angle of personality differences, as shown by Read and the earlier investigators, and by the Rorschach Technique.

Now a very brief look into the problem of perception may give some justification for the earlier approach through the concept of total personality.

Arnheim\(^1\) writes of perceptual abstraction, "a child draws a human head as a circle. This is not an attempt to reproduce the specific outline of a particular person's head but rather a general form quality of heads in general, viz., roundness."

If we ask three 5-year-old children to draw a head we may get these diagrammatic representations of that roundness which is common to the shape of heads.

**Figure 22.**

It is therefore important to note that although the circle is concrete, that the motivation of that circle is an abstraction. Native peoples use highly abstract forms in their art, and it is generally at a later stage in civilisation that we have a photographic art. This brings to mind the old statement "Children draw what they know rather than what they see."

---

1. Arnheim R. p.67 (2)
than what they see". It would seem that the child knows by perception and experience - not forgetting that for some their 'knowing' is haptic.

These images tend to be simplified within the mind. The reaction is therefore a dynamic one and when the subject is asked to draw 'an apple' he reproduces the altered image or abstraction plus his own personal experience of such. Kohler defines perception as "a field theory - located in a continuing medium - influenced part to part - depending directly on the properties of both in their relation to each other". 2

In other words, although the correlate of a percept may be said to have a circumscribed local existence, it has as a dynamic agent an extension into the surrounding tissue, and is consequently represented beyond its circumscribed locus. 3 Therefore such a percept nucleus may lead to further events of which we are not directly aware.

For example, let us consider three subjects being asked to draw a certain bridge, known to all, from memory. Diagrammatically this may be expressed as follows

Stage I

Figure 23.

The three subjects look at this particular bridge and physically see it to all appearances as in the diagram.

2. Kohler W. p.47 (18)
3. IRID p.63 (18)
Stage 2. Within the mind or 'apprehensive mass' of these observers we should, if they are of different art styles T+, S+, I+ (cf. Read) - have three diagrammatic representations of how the original bridge has influenced them.

![Figure 24](image1)

These lines represent different paths traced out by the experience and when these subjects are asked to reproduce the bridge we should therefore have three art styles represented.

![Figure 25](image2)

If the art teaching allows for this expression everything should be satisfactory; but the resulting confusion is not hard to imagine if, instead of Stage 2, the teacher, who is a T-, says that this is how the bridge is to be drawn, and immediately superimposes on B & C his own bridge as the 'correct' bridge (thus - in the case of B, an S+).

![Figure 26](image3)
Again with respect to copying, the same process would occur, although possibly with less harmful results as it is a conscious effort, and an unconscious acceptance of the situation.

Both Kohler and Arnheim are putting the case for Gestalt Psychology as does the Rorschach Test in its concept of total personality reaction when tested.

Consequently Arnheim\(^4\) calls art (i.e., Realist) 'substitute living' because of its divorce from abstraction during the Renaissance.

Various art educators, including Pearson\(^5\) have consequently returned to abstract symbolism as a very necessary teaching method. All those investigators who have recognised the 'scribble stage', Sully, Horovitz, Read, Tovey\(^6\) to name some, as a natural developmental stage in artistic and therefore personal development see in it a teaching method.

Tovey has stressed it as a method which allows for dynamic release of energy and for a wide field of interpretation by children and also adults.

As an experiment, the investigator who has used this method for the last seven years, asked a class to name a certain abstract symbol made from scribble shapes and then coloured. The class which numbered more than twenty, gave nine different objects that could be seen in the symbol.

\(^4\) Arnheim R. p.77 (2)
\(^5\) Pearson R.M. (31)
\(^6\) Tovey G. p.6-7 (27)
Quite a large group called the symbol a rabbit, and described the characteristic parts.

For the child who is endowed with less 'art' ability than the Realist Group, here is a method which allows for an amount of expression and development that is not possible if he is asked to reproduce at the representation level.

Here then in brief is a link between Gestalt Psychology and the style of art education under investigation.

"The organism not only aims at equilibrium, to quote Kohler, but strives to obtain a maximum of potential energy."7

It is this approach to art education which is being pursued in New Zealand with the further qualification that the potential be used in the field of experience, to further creation. Art, far from being a luxury must be considered rather as a biologically essential tool8 both to the child and to the primitive.

7. Kohler W. p.79 (13)
8. Arnheim R. p.77 (2)
<table>
<thead>
<tr>
<th>No.</th>
<th>Age</th>
<th>Sex</th>
<th>IQ</th>
<th>Style</th>
<th>Ability</th>
<th>Group</th>
<th>Ratio</th>
<th>E.D. (2)</th>
<th>R</th>
<th>C' &amp; C.</th>
<th>Colour Preference</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>14-7/12</td>
<td>F</td>
<td>94</td>
<td>I+/F+</td>
<td>S+</td>
<td>56</td>
<td>2:3</td>
<td>133</td>
<td>50</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>16-9/12</td>
<td>F</td>
<td>58</td>
<td>T-/F+I+</td>
<td>R</td>
<td>67</td>
<td>4:3</td>
<td>50</td>
<td>31</td>
<td>Blue</td>
<td></td>
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<td>14-7/12</td>
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<td>37</td>
<td>T-</td>
<td>S</td>
<td>58</td>
<td>3:2</td>
<td>31</td>
<td>23</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>16-5/12</td>
<td>M</td>
<td>92</td>
<td>I-/I+</td>
<td>S</td>
<td>56</td>
<td>5:1</td>
<td>29</td>
<td>25</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
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<td>106</td>
<td>T+/I+</td>
<td>R</td>
<td>33</td>
<td>1:6</td>
<td>29</td>
<td>22</td>
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<td></td>
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<tr>
<td>6.</td>
<td>16-8/12</td>
<td>M</td>
<td>101</td>
<td>I-/S+</td>
<td>R</td>
<td>55</td>
<td>9:3</td>
<td>29</td>
<td>29</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>13-8/12</td>
<td>F</td>
<td>110</td>
<td>I-</td>
<td>S/3</td>
<td>56</td>
<td>4:1</td>
<td>45</td>
<td>40</td>
<td>Leaf Green</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>16-0/12</td>
<td>M</td>
<td>106</td>
<td>S+Lyric</td>
<td>R</td>
<td>40</td>
<td>1:2</td>
<td>40</td>
<td>35</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>16-9/12</td>
<td>M</td>
<td>103</td>
<td>T+/I-</td>
<td>R</td>
<td>20</td>
<td>1:6</td>
<td>23</td>
<td>23</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
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<td>93</td>
<td>S+Lyric</td>
<td>R</td>
<td>40</td>
<td>0:2</td>
<td>35</td>
<td>35</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>16-0/12</td>
<td>M</td>
<td>89</td>
<td>T-(EI)*</td>
<td>R</td>
<td>56</td>
<td>6:5</td>
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<td>35</td>
<td>Yellow</td>
<td></td>
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<td>13-10/12</td>
<td>M</td>
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<td>S+/S-</td>
<td>R</td>
<td>0</td>
<td>2:6</td>
<td>34</td>
<td>34</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
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<td>14-3/12</td>
<td>M</td>
<td>111</td>
<td>S+I+</td>
<td>R</td>
<td>30</td>
<td>3:3</td>
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<td>37</td>
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<tr>
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<td>T-(EI)</td>
<td>S/3</td>
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<td>3:2</td>
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<td>19</td>
<td>Yellow</td>
<td></td>
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<tr>
<td>15.</td>
<td>16-7/12</td>
<td>M</td>
<td>104</td>
<td>T+/F+</td>
<td>R</td>
<td>67</td>
<td>3:1</td>
<td>33</td>
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EI = Emotive Impressionism
TABLE 13!

COMPARISON OF COLOUR PREFERENCE WITH INTROVERSION - EXTRAVERSION
AS DETERMINED BY READ'S CLASSIFICATION.

Legend:
- indicates Introversion,  + indicates Extraversion
- indicates Dark Colours,  + indicates Bright Colours.
++ --- ++ indicates degree of agreement between colour
preference and extraversion-introversion.
35 cases.

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4 Mil.
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Excluding 'Mil'.

1 + = - Read.

= \( \frac{25}{35} = 0.71 \)

= \( \frac{25}{31} = 0.80 \)
**TABLE 1.C.**

A COMPARISON BETWEEN INTROVERSION - EXTRAVERSION AS MEASURED BY
(a) THE RORSCHACH TEST, (USING SUM M & SUM C) and
(b) HEBERT READ'S CLASSIFICATION BASED ON JUNG'S TYPOLOGY.

Ind.:  
M indicates Movement Responses. + indicative of Introversion.  
C indicates Colour Responses. + indicative of Extraversion.  
* indicates Extraversion. - indicates Introversion.  
++ = ++ indicates measure of agreement between (a) and (b)  
N = 36.

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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total   | 16  | 19  | 14  | 20  | 14  | 19  | 1   |

**Summary.**

Table C - 35 Cases.

<table>
<thead>
<tr>
<th></th>
<th>+</th>
<th>=</th>
<th>++ = 1</th>
<th>N</th>
</tr>
</thead>
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<td>Rorschach Read</td>
<td>16</td>
<td>19</td>
<td>=</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>20</td>
<td>1</td>
<td>35</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>++</th>
<th>=</th>
<th>++ = 1</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure of Agreement</td>
<td>14</td>
<td>19</td>
<td>1</td>
<td>34*</td>
</tr>
</tbody>
</table>

**Agreement** = \( \frac{33}{35} = .94 \)
TABLE D

A COMPARISON OF COLOUR PREFERENCE WITH INTROVERSION-EXTRAVERSION AS DETERMINED BY THE RORSCHACH TEST.

Legend:
(-) indicates introversion as measured by the Rorschach Test.
(+) indicates extraversion as measured by the Rorschach Test.
(=) indicates Dark Colour.
(+) indicates Bright Colour.
(+ +, ++, +++ indicates measure of agreement between colour preference and the Rorschach Test.

<table>
<thead>
<tr>
<th>Case No</th>
<th>Int. or Ext.</th>
<th>Dark Col.</th>
<th>Bright Col.</th>
<th>++</th>
<th>+++</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>+</td>
<td></td>
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<td>10</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>12</td>
<td>-</td>
<td></td>
<td></td>
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<td>13</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>-</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N11 N11
<table>
<thead>
<tr>
<th>Case No.</th>
<th>Int. or Ext.</th>
<th>Dark Col.</th>
<th>Bright Col.</th>
<th>+</th>
<th>←</th>
<th>→</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>25</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>26</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>27</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>28</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>29</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>30</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>31</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>32</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>33</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>34</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
</tr>
<tr>
<td>35</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>←</td>
<td>→</td>
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<tr>
<td>Total</td>
<td>19</td>
<td>16</td>
<td>16</td>
<td>15</td>
<td>11</td>
<td>13</td>
</tr>
</tbody>
</table>

**Summary.**

(1)  
<table>
<thead>
<tr>
<th>+</th>
<th>←</th>
<th>→</th>
<th>NIL</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>19</td>
<td>-</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>15</td>
<td>4*</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

(2)  
<table>
<thead>
<tr>
<th>+</th>
<th>←</th>
<th>→</th>
<th>Others</th>
<th>N</th>
</tr>
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<tbody>
<tr>
<td>11</td>
<td>13</td>
<td>7</td>
<td>4*</td>
<td>35</td>
</tr>
</tbody>
</table>

* No colour preference.

**AGREEMENT**  

\[
= \frac{24}{35} \ldots \ldots (1)
\]

\[
= .68
\]

**Excluding 'Nil'**  

\[
= \frac{24}{31} \ldots \ldots (2)
\]

\[
= .77
\]
TABLE E.

E.B. %

N = 35

DISTRIBUTION OF RORSCHACH SCORES SHOWING E.B.% FROM RATIO (1)
TABLE 'F'.

\[
\begin{array}{c|c}
\text{T} & \text{F} \\
\hline
108.20 & 28.67 \\
92.56 & 37.50 \\
86.50 & 28.56 \\
94.40 & 116.40 \\
95.0 & 104.67 \\
82.0 & 101.67 \\
94.56 & 105.40 \\
92.56 & 93.40 \\
101.55 & 95.0 \\
110.56 & 111.20 \\
113.67 & .24.44 \\
112.50 & 107.67 \\
106.13 & 107.55 \\
110.40 & 106.62 \\
& 131.80 \\
& 100.62 \\
& 96.61 \\
& 122.67 \\
\end{array}
\]

\[S + I = 21 = 60\%\]
\[T + F = 14 = 40\%\]

Distribution of 35 cases showing the greater number of cases in the S and I functions (After Tovey's Classification)

1st Fig. = I.Q.
2nd Fig. = E.B.
e.g. 94 (I.Q.), 56 (E.B.)
TABLE 61.

COMPARISON OF COLOUR PREFERENCE WITH \( \frac{2+9+10}{100} \times 100 \) (11)

+ 33% should correlate with Bright Colours.
- 33% should correlate with Dark Colours.

On the basis of these subjects preferring colour to movement being extraverted and therefore scoring 33% or more on ratio (11)

<table>
<thead>
<tr>
<th>(11)</th>
<th>Bright or Dark</th>
<th>Agree</th>
<th>(11)</th>
<th>Bright or Dark</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>DK</td>
<td>*</td>
<td>31</td>
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<td>DK</td>
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<tr>
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<td>D</td>
<td>*</td>
<td>30</td>
<td>D</td>
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</tr>
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<td>22</td>
<td>D</td>
<td>*</td>
<td>34</td>
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<td>*</td>
</tr>
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<td>39</td>
<td>D</td>
<td>*</td>
<td>35</td>
<td>D</td>
<td></td>
</tr>
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<td>35</td>
<td>B</td>
<td>*</td>
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<td></td>
<td></td>
</tr>
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</tr>
<tr>
<td>45</td>
<td>B</td>
<td>*</td>
<td>44</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>B</td>
<td>*</td>
<td>24</td>
<td>B</td>
<td>*</td>
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</tr>
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<td>33</td>
<td>B</td>
<td>*</td>
<td>38</td>
<td>Nil</td>
<td></td>
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<tr>
<td>33</td>
<td>D</td>
<td></td>
<td>54</td>
<td>B</td>
<td>*</td>
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<td>B</td>
<td>*</td>
<td>44</td>
<td>B</td>
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<td>27</td>
<td>Nil</td>
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<td>D</td>
<td></td>
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<tr>
<td>19</td>
<td>D</td>
<td>*</td>
<td>31</td>
<td>D</td>
<td>*</td>
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<tr>
<td>24</td>
<td>D</td>
<td></td>
<td>13 Agree</td>
<td></td>
<td>9 Agree</td>
</tr>
</tbody>
</table>

\[ \frac{22}{35} \text{ cases agree} = .63 \]

If 'Nil' excluded = \[ \frac{22}{31} = .71 \]
TABLE III.

QUESTIONNAIRE

DATA

A. QUESTIONNAIRE TO 37 HEADMASTERS. 11 Replies = 41½

1. Do children generally enjoy the 'new' art more than the old type?
   9 YES  1 NO  1 DONT KNOW

2. What are your recollections of drawing when you attended school?
   2 INTERESTING - WELL TAUGHT  9 UNPLEASANT  1 NOT STATED

3. As far as your experience goes with younger teachers does the present period of training two years prove sufficient preparation for the teaching of the new art?
   6 YES  3 NO  2 DONT KNOW

4. In the short time in which the scheme has been in operation is there a better level of taste, of personal tidiness?
   4 YES  4 NO  3 DONT KNOW

5. Do the pupils seem to need any spur to effort e.g. marks stamps etc. besides interest in the work itself?
   0 YES  9 NO  1 DONT KNOW  1 NOT NECESSARILY

6. Do spontaneity and/or creativeness differ in the teacher-dominated class, from one where the teacher withholds him or herself more? If so, in what way?
   5 YES  1 NO  2 DONT KNOW  2 NOT ANSWERED

7. Is there as great a range of attainment with the 'new art' as previously with the old system?
   10 YES (Greater)  0 NO  1 DONT KNOW

8. Is this art scheme extreme in its aims and treatments?
   0 YES  3 NO  2 DONT KNOW  1 NOT ANSWERED
B. **QUESTIONNAIRE TO 100 TEACHERS.** 33 REPLIES.

1. Do children generally enjoy the 'new art' more than the old type?
   - 30 YES.
   - 0 NO.
   - 1 INDEFINITE.
   - 2 NOT NECESSARILY.

2. What are your recollections of drawing when you attended school?
   - 3 PLEASANT.
   - 26 UNPLEASANT.
   - 4 NOT TAUGHT.

3. In the short time in which the scheme has been in operation, is there a better level of taste, of personal tidiness etc.
   - TASTE: 10 YES
   - 15 NO.
   - 6 DON'T KNOW
   - TIDINESS: 4 NO.

4. Do pupils seem to need any 'spur' to effort e.g. marks, stamps, etc. besides interest in the work itself.
   - 1 YES.
   - 30 NO.
   - 2 INDEFINITE.

5. Is there as great a range of attainment with the 'new art' as previously with the old system?
   - 30 YES (GREATER).
   - 3 NO.
CHAPTER VII.

GENERAL CONCLUSION.

THE EDUCATIONAL IMPLICATIONS OF ART EDUCATION
AS INDICATED BY (a) THE PRESENT INVESTIGATION.
(b) OTHER WORKERS.

A. The two main experimental sections of the work, art ability grouping, and the personality classification developed by Read, become the first point for evaluation.

Have they either singly or jointly shown themselves unsound? From the experimental results the answer is in the negative, both experiments showing a large measure of agreement with the previous research. Further, the Rorschach test substantially agrees with Read's dichotomy, and better still with Tovey's classification.

The scheme under consideration \(^1\) therefore goes further than any previous scheme in that it unites the two sections mentioned above. Not only does it recognize the various levels of art ability but also allows for eight styles of presentation at each level of ability; it looks at the school population as being composed of widely differing personalities, each entitled to its own most natural means of expression up to the limit of its ability. Previously the trend was to emphasize the realist style and to attempt to force all children through this channel.

Further, although this thesis deals specifically with art,

---

\(^1\) Education Department. (27)
it should be remembered that Read in his opening paragraph puts forward the platonic thesis that art should be the basis of education. If this is valid, is it not also true that we should take cognizance of the fact that John who is an S- or F- personality in art will also be an S- or F- personality for arithmetic or English expression?

While it must be admitted that our class teaching methods have changed greatly in recent years, it would also seem significant that men of the calibre of Winston Churchill who were comparative failures at a school based on Realist (T+) teaching, could reach such prominent positions in later life when they had the opportunity to develop in their natural way. Further, to refer to Churchill once again, it is only necessary to refer to his paintings to appreciate his natural personality style - it is certainly not the extroverted thinking style.

The primary school art scheme therefore must be judged sound with respect to this first point, its breadth of outlook based on empirical findings.

As this first point has been accepted as valid it therefore follows that the Jungian typology is not necessarily false, but rather that it be accepted with some caution, even if Table E shows a somewhat bimodal curve, because many of the art styles in the 35 cases do not pair as polar opposites e.g. T+ F-, T- I+ etcetera but quite frequently as 3+, T+.

This point would make an interesting problem for another thesis but cannot be dealt with more fully here.

2. Read H., p.1 (33)
Jung urged caution in the rigid interpretation of types - he gave 16 types at one stage - and Tovey does likewise. It would appear that a training in this scheme should not be a means for the teacher to classify rigidly. Rather it should lead to an understanding of these differences and the reasons for them.

Two further points arise from this:

1. Teacher Training.
2. Marking of art work.

1. To implement such a scheme, trained lecturers are necessary who are wholeheartedly prepared to assist in its insemination. As in all creative work it is the attitude to the idea that counts for much. The headmasters' replies as noted in Appendix A rather uncritically accept the philosophy of the scheme as good or state that they consider students adequately trained after two years. Certainly these students can accumulate sufficient method for the work in this time and can gain an adequate philosophy of such a scheme in two years. It would appear in some cases that young teachers have methods, and a knowledge of technique that goes far beyond the needs of the primary school (* this is specialist work) without adequate understanding of the bases of the scheme. As a line of investigation the subject of training college preparation for art education would serve a most useful purpose. At the secondary level, there is no training in art education in any shape or form. Little wonder that some investigators have spoken of a period of 'repression'.

---

3. Part C. p.119 (33)
Herbert Read in his conclusion, in an attempt to explain why results varied so much from one school to the next, writes as follows:

"Good results depended on the creation in the school or class of a sympathetic atmosphere, and to a certain extent I still think this is true. But if by 'atmosphere' one means the amenities which money can buy, it is not true. The right atmosphere can exist in a village school, or in a dingy barracks in some industrial city. The atmosphere is the creation of the teacher, and to create an atmosphere of spontaneity, of happy childish industry, is the main, and perhaps the only, secret of successful teaching."

One sees too much art work that is not creative, but rather the stilted expression of a teacher, coming forth from a teacher-dominated class.

The art scheme urges caution in marking and uses a qualitative form of assessment. This seems to be a wise course. If the bases of the scheme are accepted as being sound, and they have still to be disproved, how then does one 'mark' drawings on a numerical scale?

Agreed, that it is possible for a child to be a good schematic S+, or a poor schematic S+, but the former case may be one of insincere utterance, while the latter is expressing himself to the limit of his capacity. It would therefore seem that assessment must judge sincerity, and in addition discard numerical rating for expression work.

The therapeutic effect of this work can be very great; a system of marking based on representational drawing has no place in this scheme."

4. Read H., p.233 (33)
Even in 1936 this was realised by C.I. Thomson who states:

"From the point of view of art education there appears to be little justification for the teaching of representational drawing." Yet within more recent years a certain school has awarded its dux medal on total marks including drawing! The old system is certainly slow to die.

OUTCOME.

The work to be undertaken in this country is very great, both in magnitude and in importance. Joan Evans writes:

"...but I strive to interpret the most recent serious classification of Human Temperaments in terms of the visual arts, in the hope that such studies pushed further by others may perhaps lead to a theory of art that will prove fruitful in its application."

This was in 1939. Read's 'Education Through Art' went further in 1943, and Tovey's scheme further still in 1945. The task now is still one of application.

The very great influence of the familiar - poor almanacs, atrocious plaster animals, chocolate box covers of 'pretty-pretty style' - upon children's taste should be noted.

If this scheme is well implemented the present generation of school children should be better qualified to choose well. C.I. Thomson writes, "Very young children have a keen simple sense of aesthetic values."

5. Thomson C.I. p.45 (36)
6. Evans J. p.29 (13)
7. IBID p.42 (36)

* "The imaginative drawing (I-) is much more suggestive of introversion than the sensorial drawing (S+). There is accordingly, an implication that the child, whose drawing of a man obtains a good score when marked by the final scale, is likely to be more extraverted than the child whose drawing is highly imaginative."
A system of art education that fails to improve standards of
taste, and at the same time allow for dynamic expression
which is a vital part of experience, cannot be considered
sound. It is felt that the bases of the present scheme
allow for both. No judgment can be expressed at this stage
as to whether they are being achieved in any measure.

8. As a final section, various extracts and ideas from
overseas art educators, which seem to bear out the findings
already expressed, will be stated. If the Americans merit
a rather large share of this final summary it is certainly
not proportional to the amount of valuable psychological and
experimental that has been done elsewhere.

Lismer, when in New Zealand in 1937, spoke forcefully
on the subject of art education.

Instead of art as 'an occupation for the few and a
refuge for Bohemians', Lismer sees in the attitude to art,
'a new and more rational outlook, a more human need for
participation'. It is this emphasis on participation for all
that is valuable, art being a record of aspirations and
experience. Art is here and now as well as there and then.

Again, definitions of art are numberless and as easily
discarded as the clothes we wear. - What is art? - To attempt
the elucidation of the mystery is the essence of life. -
Art is life and growth.

'Art as Experience', by John Dewey, which puts forward
the pragmatist goals of growth and experience is remarkable

8. Education Department p.4 (27)
9. Lismer p. (30)
10. Lismer p.27 (20)
11. EBD p.118 (30)
for its complete omission of the question of aesthetics and child education. The New Zealand Art Scheme would appear to place heavy emphasis on experience in the art field as being necessary to a fully developed personality.

Baxey - "Experience occurs continuously, because the interaction of live creative and environmental conditions is involved in the very process of living". 13

and Lister - " - commence early in the life of the child to give him ideals through art as well as scientific facts". 14

Pearson, who has an art workshop, rather than a studio, has tapped this creative force at all ages, and the work of the 'pupils' shows a sensitivity and power of expression that no school could achieve under the older restrictive methods. Briefly his aims may be put as follows: 15

1. Freedom from formalism.
2. Design and creation.
3. Vitality.
4. Expression first and technique second.

The second aim which refers to design has an important link with the scheme being studied. For those children who lack adequate ability in the representational field, design, that is creative design, (originating from freely created motifs based on abstract scribble shapes which are the very first style of representation attempted), is an excellent additional method. Many of the designs may later be used in applied form. This is especially valuable as a method to prevent any 'drying up'
of creative output after the first emotional creative period which tends to end at the schematic stage and which the great majority of children reach. (see p. 36.5% schematic at 10 years).

Once again this serves to re-emphasise the necessity for adequately trained teachers with an over-all view of the needs of the individual child.

"It is what art does to the child that matters, not what the child does to art."
Table 'H' sets out the responses of Headmasters and Teachers to a Questionnaire composed of the questions listed in the appendix.

Questionnaires were sent to 27 schools in the Christchurch area which have been working on the Departmental scheme for the past three years. Replies were received from 11 Headmasters a 41%, and from 33 teachers or 33%. Some Headmasters indicated that Junior teachers on their staffs did not feel competent to express opinions.

The general trend of the replies indicate a favourable attitude to the art scheme that is being developed but certain replies seem to indicate lack of knowledge both of what the scheme intends and what is the appropriate method for certain parts of the work.

Form I and II teacher:

(a) "Low I.Q. children are prone to puzzlement about what to draw, and they find the way out by copying". Question 1.
(b) No. I do find however that if left to their own designs children will prefer to copy from some pattern which has taken their eye, rather than attempt to illustrate originally." Question 4.

Surely both these answers show lack of method on the teacher's part rather than lack of creativity on the part of the children. Then again this teacher has Forms I and II, which are at the so-called age of 'repression' which is easily overcome by correct method, and approach.
One standard 4 teacher goes to the extent of indicating that he or she rates 86% of the drawings as below 'good' on a 6 point scale.

A headmaster's answer to question 7 must suffice to indicate this lack of understanding -

"Yes - and probably more. The gulf between the best and the worst becomes more apparent when the work requires imagination and self-expression."

No appreciation of personality styles is shown but rather a tendency to criticise children's drawings on the old basis of realism or photographic likeness. Of the eleven replies from Headmasters, two gave some indication as to why they considered the 'greater range', - which all stated to be evident - as due to the scheme itself. In this they appear to have allowed for personality styles, in so far as one mentions the near impossibility of assessment, and the other draws attention to the design side of the scheme for those less gifted on the representational side.

However, with the specialists working in these 37 schools, when they were asked to express an opinion on this question (No.7), all showed appreciation of the reason for this apparent wider range and the value of art as an expression language.

Perhaps it is only fair to state that the question was specific; yet the specialists and two Headmasters, saw the wider implication. From replies to other questions some Headmasters would appear to attribute this 'wider range' to an easing off in demand by the teacher, - to a more easy going attitude of self-expression.
Yet, and this is important, the response to question 8 is affirmative. Some replies indicate in their acceptance of the scheme, a wholehearted appreciation of the inherent possibilities.
BLIND AND PARTIALLY BLIND CASES.

The Institute for the Blind has forwarded four drawings of a 'man' executed by pupils with the following ages 11, 7, 9, 9 years.

Although these drawings are greatly below the usual level for their respective age groups, there is a recognisable tendency to represent 'man' in a similar primitive schematic way, to children with normal sight. This would tend to emphasise that the schema is not bounded by nationalities and frontiers. Rather it is influenced by the level of intellectual and emotional maturity. Perception is very important for all children's drawings but this does not necessarily mean physical seeing. It is visual imagery which is important, and in the case of kinaesthetically motivated people the image is generated from within. Hence a blind child may draw either (a) visually - by relating himself to the external object, or (b) haptically - by bodily sensation.

* Maori children tend to be retarded by one year in these groups.2

1. Tovey G. Address to Teachers in Christchurch 1948.
2. Ibid.
APPENDIX C.

This section is appended in order to explain more fully the developmental stages in the art ability grouping as set out in Chapter III.

The characteristics that the Cleveland investigation lists as being important are:
1. Size relationship. For example, the schematic stage shows markedly incorrect proportions.
2. The ability to represent motion.
3. The use of colours.
4. The number and selectivity of details.
5. Purposeful and accidental distortion.
6. Space arrangement.

THE HUMAN FIGURE.

1. Position. (a) Standing - 1st.
   (b) Sitting - later.
   (b) Recumbent position exceptional.
   (c) Front View - 1st.
   Profile - later.
   (d) Flexibility late in the resemblance stage.

2. Details. The number of details at the resemblance stage is less important than the number shown at the schematic and mixed schematic stage. 'Surroundings' are significant in 'man' when 'man' is the only thing asked for.
In all, the case histories appended, list 52 characteristics, under Representation (the section which is used in this investigation,) and in Section II of the work, on Aesthetic Means and Technique, a further 21 characteristics. This latter section is partly an attempt at classification of personality style from a detailed analysis of characteristics, but it has not been used in the present investigation.

The section dealing with perspective is of interest, and the figures given in Tables 2A, B, C, show very clearly to what extent perspective is a natural development at all ages from 6 - 15 years. These figures have been placed with the other norms on art ability groups. See Figure 2a 'Respective Norms', but only from 11 - 15 years.

Some short quotations from the text throw light on various aspects of the investigation.

"A full development of representation in space does not seem to occur without outside help, either from teachers or through the study of pictures and photographs."

Some qualities appear to remain constant through all ages - decorative qualities tend to improve - some actually decrease in frequency at the older ages, after an increase from the earliest years. "These qualities differ also in the extent of their occurrence and some of them never become widely used even by children of the older ages. For instance subtle line increases slightly, but never more than 10% at any age. Bold colour usage on the other hand remains fairly constant through all age levels."
R.R. Tomlinson sets out three stages of representation in children's drawings:

1. Manipulative.
3. Pseudo-Realism.

The Cleveland writers consider these stages inadequate in the light of their investigation.

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8. Lark-Horovitz, Barnhart, & Sills. p.8 (13).
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17. New Zealand Education Department, "An Art Scheme for Primary Schools," (tentative) WELLINGTON, 1945.


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